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FEDERAL REGISTER

Vol. 90 Friday,

No. 232 December 5, 2025

Pages 55997–56656

OFFICE OF THE FEDERAL REGISTER

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Contents

Federal Register

Vol. 90, No. 232

Friday, December 5, 2025

Agriculture Department
See Farm Service Agency
See Forest Service
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56124–56125

Antitrust Division
NOTICES
Proposed Settlement Agreement, Stipulation, Order, and Judgment, etc.:
United States of America et al. v. RealPage, Inc. et al., 56286–56335

Appraisal Subcommittee of the Federal Financial Institutions Examination Council
NOTICES
Hearings, Meetings, Proceedings, etc., 56127–56128

Census Bureau
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
National Survey of Children's Health, 56128–56130

Centers for Disease Control and Prevention
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56149–56159

Centers for Medicare & Medicaid Services
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56160

Children and Families Administration
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
ORR-6 Performance Report, 56160–56161

Civil Rights Commission
NOTICES
Hearings, Meetings, Proceedings, etc.:
District of Columbia Advisory Committee, 56128

Coast Guard
RULES
Special Local Regulation:
Marine Events Within the Captain of the Port Charleston, 56001
PROPOSED RULES
Draft Guidance for Industry and Staff:
Assessment Framework and Organizational Restatement Regarding Preemption for Certain Regulations; Withdrawal, 56076

Commerce Department
See Census Bureau
See Foreign-Trade Zones Board
See Industry and Security Bureau
See National Oceanic and Atmospheric Administration

Commodity Futures Trading Commission
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Registration Under the Commodity Exchange Act, 56137–56138

Education Department
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
DC School Choice Incentive Program, 56138

Energy Department
See Federal Energy Regulatory Commission
NOTICES
Request for Information:
Partnerships for Transformational Artificial Intelligence Models, 56138–56139

Environmental Protection Agency
RULES
Air Quality State Implementation Plans; Approvals and Promulgations:
Texas and Oklahoma; Texas Regional Haze Plans for the First and Second Implementation Periods and Five-Year Progress Report; Oklahoma Regional Haze Plan for the First Implementation Period, 56001–56009
National Emission Standards for Hazardous Air Pollutants for Coke Ovens:
Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Rescission of Extension of Compliance Deadlines for Coke Oven Facilities, 56010–56013
NOTICES
Environmental Impact Statements; Availability, etc., 56144–56145

Farm Credit Administration
PROPOSED RULES
Loan Performance Categories and Financial Reporting, 56066–56070

Farm Service Agency
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Emergency Relief Program Phase 1 and Phase 2, 56125–56126

Federal Aviation Administration
PROPOSED RULES
Airworthiness Directives:
Airbus Helicopters Deutschland GmbH Helicopters, 56070–56072
Airbus SAS Airplanes, 56072–56076
NOTICES
Airport Property:
Malden Regional Airport and Industrial Park, Malden, MO, 56248–56249
Random Drug and Alcohol Testing Percentage Rates of Covered Aviation Employees for the Period of January 1, 2026, through December 31, 2026, 56249

Federal Communications Commission
RULES
Cable Television Rates, 56062–56063
Incarcerated People's Communication Services:
Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services, 56013–56062
PROPOSED RULES
Advanced Methods To Target and Eliminate Robocalls, 56101–56115
In the Matter of Upper C-Band (3.98?4.2 GHz), 56076–56101
Incarcerated People's Communication Services:
Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services, 56115–56123
Space Modernization for the 21st Century, 56338–56435
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56146
Licenses; Exemptions, Applications, Amendments, etc.:
Filing Schedule for Class A, LPTV, and TV Translator Major Change Applications and for New LPTV and TV Translator Station Applications, 56145

Federal Energy Regulatory Commission
NOTICES
Application and Establishing Intervention Deadline:
Rio Grande LNG, LLC, Rio Grande LNG Train 4, LLC, Rio Grande LNG Train 5, LLC, 56142–56144
Combined Filings, 56139–56142
Environmental Assessments; Availability, etc.:
Eagle Creek Schoolfield, LLC; City of Danville, VA, 56140–56141
Permits; Applications, Issuances, etc.:
Neptune Pumped Storage 2, LLC, 56139
Records Governing Off-the-Record Communications, 56144
Transfer of Exemption:
Columbia Mills Hydroelectric, LP; Columbia Mills Hydroelectric, LLC, 56141

Federal Highway Administration
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56253–56254
Environmental Impact Statements; Availability, etc.:
Milwaukee County, WI, 56249–56253

Federal Motor Carrier Safety Administration
NOTICES
Exemption Application:
Qualification of Drivers; Epilepsy and Seizure Disorders, 56254–56264

Federal Railroad Administration
NOTICES
Funding Opportunity:
Projects Located Off the Northeast Corridor for the Fiscal Years 2024–2025 Federal-State Partnership for Intercity Passenger Rail Program, 56264

Federal Reserve System
NOTICES
Change in Bank Control:
Acquisitions of Shares of a Bank or Bank Holding Company, 56146

Federal Trade Commission
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56147–56149
Meetings; Sunshine Act, 56146–56147

Food and Drug Administration
NOTICES
Guidance:
Product-Specific Guidances, 56161–56163

Foreign Assets Control Office
NOTICES
Sanctions Action, 56271–56283

Foreign-Trade Zones Board
NOTICES
Application for Subzone:
Applied Materials, Inc., Foreign-Trade Zone 183, Austin and Pflugerville, TX, 56130

Forest Service
NOTICES
Newspapers Used for Publication of Legal Notices:
Rocky Mountain Region: Colorado, Kansas, Nebraska, and Parts of South Dakota and Wyoming, 56126–56127

Health and Human Services Department
See Centers for Disease Control and Prevention
See Centers for Medicare & Medicaid Services
See Children and Families Administration
See Food and Drug Administration
See National Institutes of Health

Homeland Security Department
See Coast Guard

Industry and Security Bureau
RULES
The Commerce Control List; CFR Correction, 56001

Interior Department
See National Park Service

International Trade Commission
NOTICES
Complaint, 56182–56183
Complaint:
Certain Bicycle Trainers and Components Thereof, 56181–56182
Investigations; Determinations, Modifications, and Rulings, etc.:
Silicon Metal From Russia, 56181

Justice Department
See Antitrust Division
NOTICES
Proposed Consent Decree:
Toxic Substances Control Act, 56183

National Aeronautics and Space Administration
NOTICES
Privacy Act; Systems of Records, 56183–56185

National Highway Traffic Safety Administration
PROPOSED RULES
Safer Affordable Fuel-Efficient Vehicles Rule III for Model Years 2022 to 2031 Passenger Cars and Light Trucks, 56438–56656
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
5-Star Safety Ratings Label Quantitative Concept Testing, 56264–56266

National Institutes of Health
NOTICES
Hearings, Meetings, Proceedings, etc.:
Center for Scientific Review, 56163–56179
National Institute of Diabetes and Digestive and Kidney Diseases, 56165
National Institute of Environmental Health Sciences, 56170–56171

National Oceanic and Atmospheric Administration
RULES
Fisheries of the Exclusive Economic Zone off Alaska:
Demersal Shelf Rockfish in the Western, Central, and West Yakutat Regulatory Areas of the Gulf of Alaska, 56064
Pacific Ocean Perch in the Bering Sea Subarea of the Bering Sea and Aleutian Islands Management Area, 56065
Reallocation of Pacific Cod in the Bering Sea and Aleutian Islands Management Area, 56064–56065
Reapportionment of Halibut Prohibited Species Catch Limits in the Bering Sea and Aleutian Islands Management Area, 56063–56064
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Groundfish Trawl Catcher Processor Economic Data Report, 56130–56131
Fisheries of the Exclusive Economic Zone Off Alaska:
Bering Sea and Aleutian Islands Management Area; Cost Recovery Fee Notice for the Western Alaska Community Development Quota and Trawl Limited Access Privilege Programs, 56134–56136
Hearings, Meetings, Proceedings, etc.:
Mid-Atlantic Fishery Management Council, 56136
Pacific Fishery Management Council, 56133
Permits; Applications, Issuances, etc.:
Foreign Fishing, 56133–56134
Magnuson-Stevens Fishery Conservation and Management Act Provisions; Atlantic Coastal Fisheries Cooperative Management Act Provisions; General Provisions for Domestic Fisheries, 56131–56133

National Park Service
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals:
Nomination of Properties for Listing in the National Register of Historic Places, 56179–56180
Using Web and Mobile-Based Apps During NPS Citizen Science Events, 56180–56181

National Science Foundation
NOTICES
Privacy Act; Systems of Records, 56185–56192

Nuclear Regulatory Commission
NOTICES
Meetings; Sunshine Act, 56192

Pipeline and Hazardous Materials Safety Administration
NOTICES
Permits; Applications, Issuances, etc.:
Hazardous Materials, 56266–56270

Postal Regulatory Commission
NOTICES
New Postal Products, 56192–56193

Railroad Retirement Board
NOTICES
Privacy Act; Systems of Records, 56193–56210

Securities and Exchange Commission
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56210–56211, 56216
Joint Industry Plan:
National Market System Plan Governing the Consolidated Audit Trail, 56224–56231
Self-Regulatory Organizations; Proposed Rule Changes:
BOX Exchange LLC, 56214–56216, 56231–56234, 56241–56244
Cboe BZX Exchange, Inc., 56220
MIAX Sapphire, LLC, 56235–56241
Nasdaq BX, Inc., 56216–56220
Nasdaq MRX, LLC, 56211–56214
Nasdaq PHLX LLC, 56244–56246
New York Stock Exchange LLC, 56211
NYSE American LLC, 56222–56224
The Nasdaq Stock Market LLC, 56220–56222

Small Business Administration
RULES
Small Business Investment Company Accrual Regulatory Amendments, 55997–55999
NOTICES
Agency Information Collection Activities; Proposals, Submissions, and Approvals, 56246–56247
Performance Review Board Members, 56246

State Department
NOTICES
Culturally Significant Objects Imported for Exhibition:
New Humans: Memories of the Future, 56247

Trade Representative, Office of United States
NOTICES
Operation of the United States-Mexico-Canada Agreement With Respect to Trade in Automotive Goods, 56247–56248

Transportation Department
See Federal Aviation Administration
See Federal Highway Administration
See Federal Motor Carrier Safety Administration
See Federal Railroad Administration
See National Highway Traffic Safety Administration
See Pipeline and Hazardous Materials Safety Administration
RULES
Airline Refunds and Other Consumer Protections, 55999–56000
NOTICES
Request for Information:
Revitalizing Washington Dulles International Airport, 56270–56271

Treasury Department
See Foreign Assets Control Office

Separate Parts In This Issue

Part II
Justice Department, Antitrust Division, 56286–56335

Part III
Federal Communications Commission, 56338–56435

Part IV
Transportation Department, National Highway Traffic Safety Administration, 56438–56656

Reader Aids

Consult the Reader Aids section at the end of this issue for phone numbers, online resources, finding aids, and notice of recently enacted public laws.

To subscribe to the Federal Register Table of Contents electronic mailing list, go to https://public.govdelivery.com/accounts/USGPOOFR/subscriber/new, enter your e-mail address, then follow the instructions to join, leave, or manage your subscription.

CFR PARTS AFFECTED IN THIS ISSUE

A cumulative list of the parts affected this month can be found in the Reader Aids section at the end of this issue.

12 CFR

Proposed Rules:

621 56066

13 CFR

107 55997

14 CFR

260 55999
399 55999

Proposed Rules:

39 (2 documents) 56070, 56072

15 CFR

774 56001

33 CFR

100 56001

Proposed Rules:

1 56076

40 CFR

52 56001
63 56010

47 CFR

64 56013
76 56062

Proposed Rules:

1 56076
2 56076
25 (2 documents) 56076, 56338
27 56076
64 (2 documents) 56101, 56115

49 CFR

Proposed Rules:

523 56438
531 56438
533 56438
536 56438
537 56438

50 CFR

679 (4 documents) 56063, 56064, 56065

Rules and Regulations

Federal Register
Vol. 90, No. 232
Friday, December 5, 2025

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents.

SMALL BUSINESS ADMINISTRATION

13 CFR Part 107

RIN 3245–AI28

Small Business Investment Company (SBIC) Accrual Regulatory Amendments

AGENCY: U.S. Small Business Administration.

ACTION: Direct final rule.

SUMMARY: The U.S. Small Business Administration (''SBA'' or ''Agency'') is publishing this direct final rule (DFR) to modify regulations to provide for a clarification in the Annual Charges assessed for Leverage between SBIC licenses and Accrual SBIC licenses.

DATES: Effective on January 20, 2026, without further action, unless significant adverse comment is received no later than January 5, 2026. If significant adverse comment is received, SBA will publish a timely withdrawal of the rule in the **Federal Register**.

ADDRESSES: You may submit comments, identified by RIN: 3245–AI28, by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments for Docket Number SBA–2025–0168 or RIN 3245–AI28.
- *Mail or Hand Delivery/Courier:* Joshua Carter, Associate Administrator for the Office of Investment and Innovation, U.S. Small Business Administration, 409 Third Street SW, Washington, DC 20416.

SBA will post all comments on *https://www.regulations.gov.* If you wish to submit confidential business information (''CBI''), as defined in the User Notice at *https://www.regulations.gov,* please submit the information to Paul Van Eyl, Director of Financial Policy, Office of Investment and Innovation, Small Business Administration, 409 Third Street SW, Washington, DC 20416, or send an email to *oii.policy@sba.gov* with ''RIN 3245–AI28 Direct Final Rule'' in the subject heading. Highlight the information that you consider to be CBI and explain why you believe SBA should hold this information as confidential. SBA will review the information and make the final determination on whether it will publish the information.

In accordance with 5 U.S.C. 553(b)(4), a summary of this rule may be found *https://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT:

Policy: Joshua Carter, Associate Administrator of the Office of Investment and Innovation, U.S. Small Business Administration, *oii.policy@sba.gov,* 202–205–7159. This phone number may also be reached by individuals who are deaf or hard of hearing, or who have speech disabilities, through the Federal Communications Commission's TTY-Based Telecommunications Relay Service teletype service at 711.

*Regulatory Comments/**Federal Register** Docket:* Paul Van Eyl, Director of Financial Policy, Office of Investment and Innovation, U.S. Small Business Administration, *oii.policy@sba.gov,* 202–257–5955. This phone number can also be reached by individuals who are deaf or hard of hearing, or who have speech disabilities, through the Federal Communications Commission's TTY-Based Telecommunications Relay Service teletype service at 711.

SUPPLEMENTARY INFORMATION:

I. Background Information

A. Small Business Investment Company Program

SBA's small business investment company (''SBIC'') program is designed to enhance small business access to capital by stimulating and supplementing ''the flow of private equity capital and long-term loan funds which small-business concerns need for the sound financing of their business operations and for their growth, expansion, and modernization, and which are not available in adequate supply.'' Small Business Investment Act of 1958, as amended, 15 U.S.C. 661, *et seq.* (the ''Act''). SBICs are privately owned and managed investment funds, licensed and regulated by SBA, that use capital raised from private investors to make equity and debt investments in qualifying small businesses. SBICs pursue investments in a broad range of industries, geographic areas, and stages of investment. SBA licenses SBICs to issue SBA-guaranteed debentures (''Debentures''), typically with a ten year term, the repayment of which is guaranteed by SBA using the full faith and credit of the United States.

On July 18, 2023, SBA issued a final rule (88 FR 46012) implementing a new and distinct type of Debenture (''Accrual Debenture'') designed to align with the cash flows of long-term, equity-oriented funds (''Accrual SBICs''). The issuance of Accrual Debentures is currently limited only to those SBICs approved as an Accrual SBIC and/or a Reinvestor SBIC. To be eligible for an Accrual SBIC license, an SBIC applicant must, among other things, demonstrate an investment strategy that is equity oriented. There are currently three types of Debentures available for investment funds that have received an SBIC license: a ''Standard'' Debenture, a ''Discount'' Debenture and an ''Accrual'' Debenture, each of which have different and distinct terms and conditions.

As required by the Act and pursuant to 13 CFR 107.1130(d), in addition to a three percent (3%) Leverage fee (split between a Leverage commitment and a Leverage draw) SBICs are also required to pay an additional charge (''Annual Charge'') that is payable on the same terms and conditions as interest applicable to such Debentures.

SBA is clarifying that SBICs issuing a standard Debenture or Discount Debenture and SBICs issuing an Accrual Debenture may be subject to separate Annual Charges within the permitted Annual Charge ceiling and floor as published in the existing regulations and subject to publication in the Federal Credit Supplement for each fiscal year. The Annual Charge for SBA Leverage (as defined in the Act) has been broken out by the type of instrument utilized (*e.g.,* Debentures, Participating Securities, etc.). Under this rulemaking, Annual Charges for different types of Debentures issued may differ as terms and conditions are different and distinct. The calculations of the Annual Charge are made to keep the SBIC program budget neutral and are included in the annually published Federal Credit Supplement which provides detailed information on federal loan programs, subsidy rates, and budgetary implications for federal credit activities.

SBA publishes the Annual Charges on its website for each federal fiscal year of leverage commitments obligated to SBICs based on the type of Debenture issued. The Annual Charge is calculated on an annual basis to keep the SBIC program budget neutral and are subject to a ceiling not to exceed 1.38 percent per annum and a floor set pursuant to section 303(b) of the Act and 13 CFR 107.1130(d)(1).

SBA is modifying 13 CFR 107.1130(d) to further clarify that SBICs issuing Accrual Debentures may be subject to an Annual Charge that may differ from SBICs issuing standard Debentures or Discount Debentures in order to keep the SBIC program budget neutral. SBA notes this will be consistent with the calculations performed and are included in the annual Federal Credit Supplement.

II. Justification for Publication as Direct Final Rule

In general, SBA publishes a rule for public comment before issuing a final rule in accordance with the Administrative Procedure Act. 5 U.S.C. 553. The Administrative Procedure Act provides an exception to this standard rulemaking process, however, where an agency finds good cause to adopt a rule without prior public participation. 5 U.S.C. 553(b)(B). The good cause requirement is satisfied when prior public participation is impracticable, unnecessary, or contrary to the public interest.

SBA is publishing this rule as a direct final rule because public participation is unnecessary. SBA has determined this rulemaking as non-controversial as it provides clarification on the Annual Charge applicable to different Debenture types which have differing terms and conditions.

This rule will be effective on the date shown in the **DATES** section unless SBA receives significant adverse comment on or before the deadline for comments. Significant adverse comments are comments that provide strong justifications for why the rule should not be adopted or for changing the rule. SBA does not expect to receive any significant adverse comments because the accrual debenture program focuses on long-duration, equity- oriented investment strategies which differ than investment strategies implemented with standard licensed SBICs. SBA discussed the potential of distinct charges between accrual debenture and standard debenture instruments with existing licensed Accrual SBICs, which did not provide negative feedback. If SBA receives any significant adverse comments, it will publish a document in the **Federal Register** withdrawing this rule before the effective date. If SBA receives no significant adverse comments, the rule will be effective 45 days after publication without further notice.

As such, this rule is being implemented as a direct final rule.

III. Section by Section Analysis

A. Section 107.1130—Leverage Fees and Annual Charges

This regulation identifies the fees and other charges associated with SBA-guaranteed Leverage. Paragraph (d) of 13 CFR 107.1130 identifies the Annual Charge (as defined in 13 CFR 107.50) applicable to SBICs with outstanding Debentures. SBA is modifying paragraph (d) of 13 CFR 107.1130 to clarify that SBA may calculate Annual Charges based on the type of Debentures issued (*e.g.,* Accrual Debentures and other Debentures). The Annual Charge rates by type of Debenture are designed to be fiscally neutral in the aggregate, offsetting reductions and increases across licensee categories without increasing total program cost and keep the SBIC program budget neutral in line with the overall rate and components of the subsidy rate as calculated and reported annually in the Federal Credit Supplement.

IV. Compliance With Executive Orders 12866, 12988, and 13132, the Paperwork Reduction Act (44 U.S.C., Ch. 35), the Congressional Review Act (5 U.S.C. 801–808) and the Regulatory Flexibility Act (5 U.S.C. 601–612)

A. Executive Order 12866

The Office of Management and Budget (''OMB'') has determined that this rule is not a ''significant regulatory action'' under Executive Order 12866. The modification to section 13 CFR 107.1130 is not a material change to existing regulations and is only being clarified in this rulemaking to expressly state Annual Charge calculations are assessed individually between Accrual Debentures and other Debentures as has been SBA's historical practice. Further, less than 4% of currently licensed SBICs are Accrual Debenture SBICs, accordingly, the direct final rule would not have a significant effect on the overall number of active licensed SBICs and would not have an annual effect on the U.S. economy of more than $100 million nor have an adverse effect on the U.S. economy in any material way. The direct final rule also will not have a material effect on employment levels, competition, productivity, innovation, public health, safety, the environment, or state, local, or tribal governments or communities. Lastly, as this direct final rule is a clarification of existing obligations in accordance with historical practices, it does not create new obligations, rescind existing rights, or establish novel policy directions.

B. Executive Order 14192

This direct final rule is not an Executive Order 14192 regulatory action because it is not significant under Executive Order 12866.

C. Executive Order 12988

This action meets applicable standards set forth in Sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden. The action does not have a retroactive or preemptive effect.

D. Executive Order 13132

This direct final rule does not have federalism implications as defined in Executive Order 13132. It would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in the Executive Order. As such it does not warrant the preparation of a Federalism Assessment. Additionally, the rule will not require new compliance activities or reporting by state, local, or tribal governments.

E. Paperwork Reduction Act, 44 U.S.C., Ch. 35

SBA has determined that this direct final rule does not affect any existing collection of information and does not propose any new collection of information.

F. Congressional Review Act, 5 U.S.C. 801–808

Subtitle E of the Small Business Regulatory Enforcement Fairness Act of 1996, also known as the Congressional Review Act, 5 U.S.C. 801 *et seq.,* provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. SBA will submit a report containing this rulemaking and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States. This rulemaking has been reviewed and determined not to meet the criteria set forth in 5 U.S.C. 804(2).

G. Regulatory Flexibility Act, 5 U.S.C. 601–612

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601, requires administrative agencies to consider the effect of their actions on small entities, small nonprofit enterprises, and small local governments. Pursuant to the RFA, when an agency issues a rulemaking, the agency must prepare a regulatory flexibility analysis which describes the impact of the rule on small entities. However, the RFA requires such analysis only where notice and comment rulemaking is required. As discussed above, SBA has found good cause that notice and public comment are impracticable, unnecessary, or contrary to the public interest. Accordingly, SBA is not required to conduct a regulatory flexibility analysis and is publishing this rule as a direct final rule without advance notice and public comment. The narrow applicability and clarifying nature of the amendments ensure that no substantial number of small entities will experience a material impact from this rule.

List of Subjects in 13 CFR Part 107

Investment companies, Loan programs-business, Reporting and recordkeeping requirements, Small businesses.

Accordingly, for the reasons stated in the preamble, SBA amends 13 CFR part 107 as follows:

PART 107—SMALL BUSINESS INVESTMENT COMPANIES

■ 1. The authority citation for part 107 continues to read as follows:

Authority: 15 U.S.C. 662, 681–687, 687b–h, 687k–m.

■ 2. Amend § 107.1130 by revising paragraph (d)(1) to read as follows:

§ 107.1130 Leverage fees and Annual Charges.

* * * * *

(d) * * *

(1) *Debentures.* You must pay to SBA an Annual Charge, not to exceed 1.38 percent per annum, on the outstanding principal amount of your Debentures (including both Accrual Debentures and standard Debentures), payable under the same terms and conditions as the interest on the applicable Debentures. SBA may establish and publish an Annual Charge for Accrual Debentures at a different rate than the Annual Charge established for other Debentures. Unless otherwise determined by SBA, for Leverage issued pursuant to Leverage commitments relating to any Debentures (including both Accrual Debentures and standard Debentures), the Annual Charge, established and published, shall not be less than 0.25 percent per annum, subject to the following provisions:

(i) For Leverage issued pursuant to Leverage commitments approved on or after October 1, 2026, the Annual Charge, established and published, shall not be less than 0.30 percent per annum.

(ii) For Leverage issued pursuant to Leverage commitments approved on or after October 1, 2027, the Annual Charge, established and published annually, shall not be less than 0.35 percent per annum.

(iii) For Leverage issued pursuant to Leverage commitments approved on or after October 1, 2028, the Annual Charge, established and published annually, shall not be less than 0.40 percent per annum.

* * * * *

Kelly Loeffler,

Administrator.

[FR Doc. 2025–22055 Filed 12–4–25; 8:45 am]

BILLING CODE 8026–09–P

DEPARTMENT OF TRANSPORTATION

Office of the Secretary

14 CFR Parts 260 and 399

[Docket No. DOT–OST–2022–0089, DOT–OST–2025–2285]

RIN 2105–AF04, 2105–AF36

Airline Refunds and Other Consumer Protections

AGENCY: Office of the Secretary of Transportation (OST), U.S. Department of Transportation.

ACTION: Notification of enforcement discretion.

SUMMARY: Under the U.S. Department of Transportation's (Department or DOT) refund regulations in 14 CFR parts 260 and 399, a flight that is given a different flight number than was assigned when the consumer purchased the ticket is considered a new flight and the original flight is considered a cancelled flight for which the consumer is eligible for a refund. This document announces that the Department is exercising its discretion to not enforce the requirements in 14 CFR 260.6, 260.9 and 14 CFR 399.80(l) regarding refunds and other consumer protections for a cancelled flight when a flight is renumbered so long as the passenger is rebooked on the flight under the new number and the flight is operated without any ''significant change or delay'' as defined in 14 CFR 260.2 and 14 CFR 399.80(l). The Department is taking this interim step of pausing enforcement of its refund requirements under these specific limited circumstances while it engages in a new rulemaking to consider whether to modify the definition of cancelled flight through rulemaking.

DATES: As of December 5, 2025, the Department is pausing until June 30, 2026 the enforcement of airline refunds requirements regarding cancelled flights under 14 CFR parts 260 and 399 for flights that are operated under a different flight number than was held out to consumers at the time of ticket purchases so long as the flights impose no significant change or delay to consumers' itineraries.

ADDRESSES: This notification of enforcement discretion may be viewed online at *www.regulations.gov* using the docket numbers listed above. Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year. An electronic copy of this document may also be downloaded from the Office of the Federal Register' website at *www.federalregister.gov* and the Government Publishing Office's website at *www.GovInfo.gov.*

FOR FURTHER INFORMATION CONTACT: Clereece Kroha or Blane Workie, Office of Aviation Consumer Protection, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590, 202–366–9342 (phone), 202–366–7152 (fax), *clereece.kroha@dot.gov,* or *blane.workie@dot.gov* (email).

SUPPLEMENTARY INFORMATION: On April 26, 2024, DOT published in the **Federal Register** a final rule on ''Airline Refunds and Other Consumer Protection'' (Refund I) that, among other things, requires airlines and ticket agents to provide prompt refunds to consumers when their flights are cancelled, significantly delayed, or significantly changed and the consumers are not offered or reject alternative transportation, travel credits, vouchers, or other compensation.[1] The rule also requires carriers to provide notifications to affected consumers that they are entitled to a refund when a flight cancellation or significant delay or change occurs.[2] The rule defines a ''cancelled flight or flight cancellation'' to mean a covered flight with a specific flight number scheduled to be operated between a specific origin-destination city pair that was published in the carrier's Computer Reservation System

[1] 89 FR 32760, 14 CFR 260.6.

[2] *Id.,* 14 CFR 260.9.

at the time of the ticket sale but not operated by the carrier.[3] In the preamble of the final rule, the Department explains that under this definition, a flight that was operated under a different flight number would be considered a new flight and the original flight would be considered a canceled flight.[4]

On May 16, 2024, the FAA Reauthorization Act of 2024 (Act) was signed into law. Section 503 of the Act, which is codified in 49 U.S.C. 42305, requires airlines to notify consumers affected by flight cancellations of their rights to a refund and to provide refunds to passengers on any cancelled flight if the passengers choose not to fly on an alternative flight or accept any compensation offered by the carrier in lieu of a refund. The statute does not define what constitutes a ''cancelled flight.'' [5]

On April 3, 2025, the Department issued a Request for Information titled Ensuring Lawful Regulation; Reducing Regulation and Controlling Regulatory Costs (Regulatory Reform RFI). Among other things, the Regulatory Reform RFI sought public input to assist the Department in identifying existing regulations that can be modified or repealed, consistent with law, to ensure that DOT achieves meaningful burden reduction while continuing to meet statutory obligations and assure the safety of the U.S. transportation system.[6] Several airlines and airline trade associations commented in the Regulatory Reform RFI docket that the Department should not consider a simple flight number change a flight cancellation. The commenters pointed out that flight number changes are made for a myriad of operational or commercial reasons and have no material impact on passengers.[7] They urged the Department to revise the definition to exclude flight number changes. The Department also received a request for enforcement discretion from two U.S. carriers following their merger. In that request, the carriers described the need to renumber tens of thousands of flights for operational integration and FAA compliance. The Department determined that consumers were not harmed by this flight renumbering, and based in part on this determination, the Department granted that request.[8]

Recently, the Department has received communications from a U.S. airline advocating for a revision to the current definition of a cancelled flight as established by the prior administration, arguing that the definition is not required by statute, does not reflect the realities of airline operations, and is overly broad. The airline contends that flight number changes are often necessary for logistical reasons and have no material impact on consumers. The airline explains that there are two primary reasons for its flight number changes—a switch between mainline and regional service and a switch between two regional operators. The airline emphasizes that a flight number change should not automatically be classified as a flight cancellation that triggers eligibility for a refund.[9]

The Department has initiated a new rulemaking titled ''Airline Refunds and Other Consumer Protections III'' (Refund III) that will, among other things, address the definition of a flight cancellation that would entitle consumers to ticket refunds.[10] In the interim, the Department has decided to exercise its discretion and not enforce the ticket refund and notification requirements in 14 CFR 260.6, 260.9 and 399.80(l) when a flight is given a different flight number than was originally assigned provided that the passenger is rebooked on the new flight and the flight is operated without any ''significant change or delay'' [11] as described in 14 CFR 260.2 and 14 CFR 399.80(l). This enforcement discretion is temporary, pending a decision on whether to move forward with a final rule to change the definition of a cancelled flight. This enforcement notice does not prejudge the outcome of the new rulemaking and is intended to address operational difficulties that airlines face with the definition of canceled flight while the rulemaking is ongoing.

The earliest date that DOT expects to decide on whether to move forward with a final rule on Refund III to change the definition of a canceled flight is June 30, 2026. DOT has announced a target date of February2026 for issuance of a notice of proposed rulemaking on Refund III. A typical comment period for an NPRM is 60 days. DOT intends to carefully consider all comments received (including late comments to the extent practicable) before issuing a final rule, if appropriate. This notice of enforcement discretion does not affect the enforcement of the ticket refund or notification requirements beyond the definition of canceled flight involving renumbered flights. It also does not affect any other rights of consumers provided in other DOT rulemakings [12] or how U.S. carriers report on-time performance data including cancelled and discontinued flights to the Department pursuant to 14 CFR part 234.

Issued in Washington, DC, under authority delegated in 49 CFR 1.27(n).

Gregory Zerzan,

General Counsel.

[FR Doc. 2025–22140 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–9X–P

[3] *Id.,* 14 CFR 260.2.

[4] 89 FR 32770.

[5] On August 12, 2024, DOT published a final rule titled ''Refunds and Other Consumer Protections (2024 FAA Reauthorization)'' (Refund II) amending Refund I to be consistent with FAA Reauthorization Act.

[6] 90 FR 14593.

[7] See Comment from Airlines for America, *https://www.regulations.gov/comment/DOT-OST-2025-0026-0845;* Comment from International Air Transport Association, *https://www.regulations.gov/comment/DOT-OST-2025-0026-0796.*

[8] Letter from DOT to Alaska Airlines and Hawaiian Airlines dated March 24, 2025. See Docket No. DOT–OST–2025–2285.

[9] Letter from American Airlines to DOT dated November 17, 2025. See Docket No. DOT–OST–2025–2285.

[10] Spring 2025 Unified Agenda of Regulatory and Deregulatory Actions, Department of Transportation, Airline Refunds and Other Consumer Protections III (RIN 2105–AF36) at *https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202504&RIN=2105-AF36.*

[11] A significant delay or change would occur when as a result of the new flight (1) The consumer is scheduled to depart from the origination airport three hours or more for domestic itineraries and six hours or more for international itineraries earlier than the original scheduled departure time; (2) The consumer is scheduled to arrive at the destination airport three or more hours for domestic itineraries or six or more hours for international itineraries after the original scheduled arrival time; (3) The consumer is scheduled to depart from a different origination airport or arrive at a different destination airport; (4) The consumer is scheduled to travel on an itinerary with more connection points than that of the original itinerary; (5) The consumer is downgraded to a lower class of service; (6) The consumer who is an individual with a disability is scheduled to travel through one or more connecting airports different from the original itinerary; or (7) The consumer who is an individual with a disability is scheduled to travel on substitute aircraft on which one or more accessibility features needed by the customer are unavailable.

[12] For instance, the Department requires airlines to offer free rebooking on the next available flight of the same carrier or partner carrier when the airline becomes aware that a passenger's personal wheelchair or scooter does not fit on the passenger's scheduled flight. See 14 CFR 382.125(f)(2). This means that if there is a change of flight number accompanied by a change to a smaller aircraft that is no longer able to accommodate a passenger's wheelchair or scooter, the airline must offer the individual free rebooking on the next available flight.

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Part 774

The Commerce Control List

CFR Correction

This rule is being published by the Office of the Federal Register to correct an editorial or technical error that appeared in the most recent annual revision of the Code of Federal Regulations.

In Title 15 of the Code of Federal Regulations, Parts 745 to 799, revised as of January 1, 2025, in supplement 1 to part 774, after 1B999, reinstate the following text to read as follows:

Supplement No. 1 to Part 774—The Commerce Control List

* * * * *

C. ''Materials''

Technical Note: Metals and alloys: Unless provision to the contrary is made, the words ''metals'' and ''alloys'' in 1C001 to 1C011 cover crude and semi-fabricated forms, as follows:

Crude forms: Anodes, balls, bars (including notched bars and wire bars), billets, blocks, blooms, brickets, cakes, cathodes, crystals, cubes, dice, grains, granules, ingots, lumps, pellets, pigs, powder, rondelles, shot, slabs, slugs, sponge, sticks;

Semi-fabricated forms (whether or not coated, plated, drilled or punched):

a. Wrought or worked materials fabricated by rolling, drawing, extruding, forging, impact extruding, pressing, graining, atomizing, and grinding, *i.e.:* angles, channels, circles, discs, dust, flakes, foils and leaf, forging, plate, powder, pressings and stampings, ribbons, rings, rods (including bare welding rods, wire rods, and rolled wire), sections, shapes, sheets, strip, pipe and tubes (including tube rounds, squares, and hollows), drawn or extruded wire;

b. Cast material produced by casting in sand, die, metal, plaster or other types of molds, including high pressure castings, sintered forms, and forms made by powder metallurgy.

The object of the control should not be defeated by the export of non-listed forms alleged to be finished products but representing in reality crude forms or semi-fabricated forms.

* * * * *

[FR Doc. 2025–22137 Filed 12–4–25; 8:45 am]

BILLING CODE 0099–10–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 100

[USCG–2025–1038]

Special Local Regulations; Marine Events Within the Captain of the Port Charleston

AGENCY: Coast Guard, DHS.

ACTION: Notification of enforcement of regulation.

SUMMARY: The Coast Guard will enforce the special local regulation for the Charleston Parade of Boats on December 13, 2025, to provide for the safety and security of certain navigable waterways of Charleston Harbor during this event. Our regulation for marine events within the Captain of the Port Charleston Zone identifies the regulated area for this event in Charleston Harbor, SC. During the enforcement periods, no person or vessel may enter, transit through, anchor in, or remain within the designated area unless authorized by the Captain of the Port Charleston (COTP) or a designated representative.

DATES: The regulations in 33 CFR 100.704 will be enforced for the location identified in Item 10 of Table 1 to § 100.704 from 5 p.m. until 9 p.m. on December 13, 2025.

FOR FURTHER INFORMATION CONTACT: If you have questions about this notification of enforcement, call or email Marine Science Technician First Class Thomas Welker, Sector Charleston Waterways Management Division, U.S. Coast Guard; telephone (843) 740–3180 ext. 3339, email *charlestonwaterways@uscg.mil.*

SUPPLEMENTARY INFORMATION: The Coast Guard will enforce the special local regulation in 33 CFR 100.704, Table 1 to § 100.704, Item 10, for the Charleston Parade of Boats from 5 p.m. until 9 p.m. on December 13, 2025. This action is being taken to provide for the safety of life on navigable waterways during this event. Our regulation for marine events within the Captain of the Port Charleston, § 100.704, specifies the location of the regulated area for the Charleston Parade of Boats which encompasses portions of the Charleston Harbor including Anchorage A, Shutes Folly, Bennis Reach, Horse Reach, Hog Island Reach, Town Creek Lower Reach, and Ashley River. During the enforcement periods, as reflected in § 100.704(c), if you are the operator of a vessel in the regulated area you must comply with directions from the Patrol Commander or any official patrol vessel.

In addition to this notice of enforcement in the **Federal Register**, the Coast Guard plans to provide notification of this enforcement period via the Local Notice to Mariners, Broadcast Notice to Mariners, and on-scene designated representatives.

Shawn A. Lansing,

Captain, U.S. Coast Guard, Captain of the Port Sector Charleston.

[FR Doc. 2025–22029 Filed 12–4–25; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R06–OAR–2025–0197; FRL–12217–02–R6]

Air Plan Approval; Texas and Oklahoma; Texas Regional Haze Plans for the First and Second Implementation Periods and Five-Year Progress Report; Oklahoma Regional Haze Plan for the First Implementation Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving the regional haze State Implementation Plan (SIP) revisions submitted by the Texas Commission on Environmental Quality (TCEQ or Texas), dated March 20, 2014, and July 20, 2021, as satisfying applicable requirements under the Clean Air Act (CAA or Act) and EPA's Regional Haze Rule (RHR). Additionally, the EPA is approving portions of the 2009 Texas Regional Haze SIP submission and portions of the 2010 Oklahoma Regional Haze SIP submission that relate to reasonable progress requirements for the first planning period from 2007 through 2018. The EPA is taking these actions pursuant to sections 110 and 169A of the Act.

DATES: This final rule is effective on January 5, 2026.

ADDRESSES: The EPA has established a docket for this action under Docket ID EPA–R06–OAR–2025–0197. All documents in the docket are listed on the *www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as

copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through *www.regulations.gov,* or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Michael Feldman, U.S. Environmental Protection Agency, Region 6, Air and Radiation Division, SO_2 and Regional Haze Section (ARSH), 1201 Elm Street, Suite 500, Dallas, Texas 75270, 214–665–9793, *Feldman.Michael@epa.gov.*

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Background
II. Rationale for This Final Action
III. Public Comments Received on the Proposed Action and Responses to Comments
IV. Impact on Areas of Indian Country
V. Final Action
VI. Statutory and Executive Order Reviews

I. Background

On March 31, 2009, Texas submitted a revision to its SIP to address regional haze for the first planning period [1] (2009 Plan). Texas made this SIP submission to satisfy the requirements of the CAA's regional haze program pursuant to CAA sections 169A and 169B and 40 CFR 51.308.

As detailed in our May 2025 Proposed Rule, the EPA is approving the portions of the Texas 2009 Plan addressing the following requirements which were previously disapproved: [2]

- Section 51.308(d)(1)(i)(A) and (d)(1)(ii), regarding Texas's consideration of the four statutory factors in establishing its reasonable progress goals for the Guadalupe Mountains and Big Bend National Parks;
- Section 51.308(d)(1)(i)(B), regarding Texas's calculation of the emission reductions needed to achieve the uniform rates of progress for the Guadalupe Mountains and Big Bend National Parks;
- Section 51.308(d)(2)(iii), regarding Texas's calculation of natural visibility conditions for the Guadalupe Mountains and Big Bend National Parks;
- Section 51.308(d)(2)(iv)(A), regarding Texas's calculation of the number of deciviews by which baseline conditions exceed natural visibility conditions for the Guadalupe Mountains and Big Bend National Parks;
- Section 51.308(d)(3)(i), regarding consultation requirements with other states where emissions from Texas are reasonably anticipated to contribute to visibility impairment in any Class I area located in another state or states;
- Section 51.308(d)(3)(ii), regarding Texas securing its share of reductions necessary to achieve the reasonable progress goals at impacted Class I areas in other states;
- Section 51.308(d)(3)(iii), regarding Texas's documentation of its technical basis for which it is relying on to determine its apportionment of emission reductions necessary for those Class I areas in other states for which it affects; and
- Section 51.308(d)(3)(v)(C), regarding Texas's emission limitations and schedules for compliance to achieve the reasonable progress goals.

Similarly, we are also approving the portion of Oklahoma's first planning period SIP addressing 40 CFR 51.308(d)(1) [3] which we previously disapproved.[4] The May 2025 Proposed Rule provided background on the requirements of the CAA and RHR, summarized Texas's 2009 Plan and Oklahoma's 2010 Plan, and explained the rationale for our proposed approvals.[5] That background and rationale will not be restated in full here.

On March 20, 2014, Texas submitted its five-year progress report as a SIP revision (2014 Plan) to satisfy the requirements of 40 CFR 51.308(g) and (h). The May 2025 Proposed Rule provided background on the requirements of the CAA and RHR, summarized Texas's 2014 Plan, and explained the rationale for our proposed approval.[6] That background and rationale will not be restated in full here.

On July 20, 2021, the TCEQ submitted a revision to its SIP (2021 Plan) to address the State's regional haze obligations for the second planning period, which runs through 2028, in accordance with CAA sections 169A and the RHR at 40 CFR 51.308(f). On October 15, 2024, the EPA proposed to approve the elements of the 2021 Plan related to requirements contained in 40 CFR 51.308(f)(1), (f)(4), (f)(5),[7] and (f)(6) and to disapprove the elements of the 2021 Plan related to requirements contained in 40 CFR 51.308(f)(2), (f)(3), and (i). During that public notice-and-comment period, the EPA received several adverse comments. The full text of comments received on the October 15, 2024, proposal are available via Docket ID Number EPA–R06–OAR–2021–0539 at *www.regulations.gov.* On May 23, 2025 (May 2025 Proposed Rule), the EPA withdrew the October 15, 2024, proposal and proposed to approve Texas's 2021 Plan in full. The May 2025 Proposed Rule provided background on the requirements of the CAA and RHR, summarized Texas's 2021 Plan, and explained the rationale for our proposed approval.[8] That background and rationale will not be restated in full here.

As discussed in our May 2025 Proposed Rule, in sections II and III of this preamble, and in the accompanying Response to Comments document (RTC Document), the EPA finds that Texas's, and where relevant Oklahoma's, regional haze SIPs meet the statutory and specific regulatory requirements of the regional haze first planning period, the five-year progress report for the first planning period, and for the regional haze second planning period.

II. Rationale for This Final Action

A. Rationale for First Planning Period and Progress Report

In this final rule, the EPA is approving portions of Texas's 2009 Plan and portions of Oklahoma's 2010 Plan. As articulated in the May 2025 Proposed Rule, and the RTC Document in support of this final rule, the EPA's evaluation takes into account the requirements of the CAA and RHR and is informed by the published Stay Opinion from the Fifth Circuit. The Stay Opinion outlined that the Petitioners had a strong likelihood of success on the merits in showing that the EPA was arbitrary and capricious and exceeded its statutory authority in partially disapproving the Texas and Oklahoma plans and replacing portions of them with a Federal Implementation Plan (FIP). Because Texas considered the four factors and otherwise met the outstanding first planning period rule requirements contained in 40 CFR 51.308(d), we are finalizing approval of Texas's 2009 Plan. As discussed in

[1] We use the term ''planning period'' and ''implementation period'' interchangeably throughout this preamble and in the associated RTC Document.

[2] 81 FR 296 (January 5, 2016). As explained in the May 2025 Proposed Rule, the Fifth Circuit granted the EPA's motion for partial voluntary vacatur on December 17, 2024, vacating the SIP disapprovals and FIP portions of the 2016 Final Rule. *Texas* v. *EPA,* Case No. 16–60118, Order (December 17, 2024).

[3] Excluding the portion addressing 40 CFR 51.308(d)(1)(vi), which we previously approved.

[4] 81 FR 296 (January 5, 2016).

[5] 90 FR 22166 (May 23, 2025). See sections II, III, and V of the proposal.

[6] 90 FR 22166 (May 23, 2025). See sections II, III, and V of the proposal.

[7] 40 CFR 51.308(f)(5) requires that the second planning period SIP revision address the requirements listed in 40 CFR 51.308(g)(1) through (5).

[8] 90 FR 22166 (May 23, 2025). See sections II, III, and VII of the proposal.

greater detail in the proposal and the RTC Document, the RHR provides states with flexibility in the sources they select for further evaluation and how states consider the four factors. As permitted by the RHR, Texas relied on the technical information and analyses from the regional planning organization (RPO) it participated in at the time, CENRAP,[9] as a starting point for its analyses. We reviewed the source selection, four factor analysis and reasonable progress determination in the SIP and find it to meet the applicable requirements. The source selection methodology identified a reasonable number of sources. Texas considered the costs and emission reductions associated with potential controls, along with the other statutory factors, weighed the estimated visibility benefits that would result from those controls and determined that no additional reductions were necessary beyond those accounted for in the CENRAP modeling. Approval of Texas's 2009 Plan is further warranted due to Best Available Retrofit Technology (BART) obligations for electric generating units (EGUs) that have been addressed since 2017 and affirmed in 2020 which ensured that the emissions reductions from Clean Air Interstate Rule (CAIR) [10] that were included in the CENRAP modeling were accounted for.[11] As we noted in the May 2025 Proposed Rule, and further elaborate on in the RTC Document, emission reductions and improvement in visibility have far exceeded the reductions and improvements contemplated in the 2009 Plan. Moreover, the Fifth Circuit weighed the improvements in monitored visibility exceeding the goals in its 2016 Stay Opinion. Finally, as explained in the May 2025 Proposed Rule, because our now-vacated disapproval of portions of Oklahoma's 2010 Plan was largely contingent on our now-vacated disapproval of portions of Texas's 2009 Plan, we are also finalizing approval of the portion of Oklahoma's 2010 Plan that addresses 40 CFR 51.308(d)(1).[12]

Additionally, the EPA is approving Texas's 2014 Plan, for the reasons set out in the May 2025 Proposed Rule and RTC Document. The EPA finds that Texas's 2014 Plan satisfies the progress report SIP requirements for the first planning period contained in 40 CFR 51.308(g), (h), and (i).

B. Rationale for Second Planning Period

In this final rule, the EPA is approving Texas's 2021 Plan and affirming that it is now the Agency's policy that, where visibility conditions for a Class I Federal area impacted by a state are below the uniform rate of progress (URP) and the state has considered the four statutory factors, the state will have presumptively demonstrated reasonable progress for the second planning period for that area. The EPA acknowledges that this final action reflects a change in policy as to how the URP should be used in the evaluation of regional haze second planning period SIPs but believes that this policy better aligns with the purpose of the statute and RHR: achieving ''reasonable'' progress towards natural visibility.

As described in the May 2025 Proposed Rule, the EPA has discretion and authority to change its policy. In *FCC* v. *Fox Television Stations, Inc.,* the U.S. Supreme Court plainly stated that an agency is free to change a prior policy and ''need not demonstrate . . . that the reasons for the new policy are better than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better.'' 566 U.S. 502, 515 (2009) (referencing Motor *Vehicle Mfrs. Ass'n of United States, Inc.* v. *State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29 (1983)). *See also Perez* v. *Mortgage Bankers Assn.,* 135 S. Ct. 1199 (2015).

In developing the regulations required by CAA section 169A(b), the EPA established the concept of the URP for each Class I area. The URP is determined by drawing a straight line from the measured 2000–2004 baseline conditions (in deciviews) for the 20% most impaired days at each Class I area to the estimated natural conditions (in deciviews) for the 20% most impaired days in 2064. From this calculation, a URP value can be calculated for each year between 2004 and 2064. The EPA developed the URP to address the diverse concerns of Eastern and Western states and account for the varying levels of visibility impairment in Class I areas around the country while ensuring an equitable approach nationwide. For each Class I area, states must calculate the URP for the end of each planning period (*e.g.,* in 2028 for the second planning period).[13] 40 CFR 51.308(f)(1)(vi)(A). States may also adjust the URP to account for impacts from anthropogenic sources outside the United States and/or impacts from certain wildland prescribed fires. 40 CFR 51.308(f)(1)(vi)(B). Then, for each Class I area, states must compare the reasonable progress goal (RPG) for the 20% most impaired days to the URP for the end of the planning period. If the RPG is above the URP, then an additional ''robust demonstration'' requirement is triggered for each state that contributes to that Class I area. 40 CFR 51.308(f)(3)(ii)(B).

In the 2017 RHR Revisions, the EPA addressed the role of the URP as it relates to a state's development of its second planning period SIP. 82 FR 3078 (January 10, 2017). Specifically, in response to comments suggesting that the URP should be considered a ''safe harbor'' that relieve States of any obligation to consider the four statutory factors, the EPA explained that the URP was not intended to be such a safe harbor. *Id.* at 3099. ''Some commenters stated a desire for corresponding rule text dealing with situations where RPGs are equal to (''on'') or better than (''below'') the URP or glidepath. Several commenters stated that the URP or glidepath should be a ''safe harbor,'' opining that states should be permitted to analyze whether projected visibility conditions for the end of the implementation period will be on or below the glidepath based on on-the-books or on-the-way control measures, and that in such cases a four-factor analysis should not be required.'' *Id.*

[9] The Central States Air Resource Agencies (CenSARA) is a regional planning organization (RPO) that was created in 1995 and currently includes as members the States of Texas, Oklahoma, Louisiana, Arkansas, Missouri, Kansas, Nebraska, and Iowa, as well as the federally recognized tribes within the boundaries of these States. CenSARA created the Central Regional Air Planning Association (CENRAP) to coordinate activities associated with the management of regional haze issues within the member States and tribes. However, CENRAP has since been abolished and CenSARA currently conducts regional haze and other air quality planning activities for the CenSARA States. Since CENRAP was the entity which conducted technical analyses during the first planning period, this notice references CENRAP when discussing Texas's 2009 Plan and Oklahoma's 2010 Plan.

[10] CAIR required certain States, including Texas, to reduce emissions of SO_2 and NO_X that significantly contribute to downwind nonattainment of the 1997 NAAQS for fine particulate matter and ozone. See 70 FR 25152 (May 12, 2005).

[11] *See* 82 FR 48324 (October 17, 2017); 85 FR 49170 (August 12, 2020).

[12] Excluding the portion addressing 40 CFR 51.308(d)(1)(vi), which we previously approved.

[13] We note that Reasonable Progress Goals (RPGs) are a regulatory construct that we developed to address the statutory mandate in CAA section 169B(e)(1), which required our regulations to include ''criteria for measuring 'reasonable progress' toward the national goal.'' Under 40 CFR 51.308(f)(3)(ii), RPGs measure the progress that is projected to be achieved by the control measures a state has determined are necessary to make reasonable progress. Consistent with the 1999 RHR, the RPGs are unenforceable, though they create a benchmark that allows for analytical comparisons to the URP and mid-implementation-period course corrections if necessary. 82 FR 3091–92 (January 10, 2017).

Other comments indicated a similar approach, such as ''a somewhat narrower entrance to a 'safe harbor,' by suggesting that if current visibility conditions are already below the end-of-planning-period point on the URP line, a four-factor analysis should not be required.'' *Id.* The EPA stated in its response that we did not agree with either of these recommendations. ''The CAA requires that each SIP revision contain long-term strategies for making reasonable progress, and that in determining reasonable progress states must consider the four statutory factors. Treating the URP as a safe harbor would be inconsistent with the statutory requirement that states assess the potential to make further reasonable progress towards natural visibility goal in every implementation period.'' *Id.*

Importantly, the EPA's recently adopted policy does not make the URP a safe harbor. The policy merely creates a presumption that the state's second planning period SIP is making reasonable progress for a Class I Federal area if the state has taken into consideration the four statutory factors of 169A(g)(1) and that area is below the URP. This is consistent with the CAA and RHR.

The Class I areas impacted by emissions from Texas sources are all below the 2028 adjusted URP with one possible exception, and Texas's SIP submittal demonstrated that the state took into consideration the four reasonable progress factors listed in CAA 169A(g)(1)[14] with respect to an adequate number of emissions sources. Based on Texas's modeling, projected 2028 visibility conditions on the most impaired days at Salt Creek Wilderness Area (Salt Creek) are above the adjusted URP. However, as detailed in our May 2025 Proposed Rule and in section V.B of the RTC Document, EPA conducted an additional analysis for Salt Creek.[15] As part of that analysis, we showed that the most recent IMPROVE monitoring network data available at the time of our proposal indicated that visibility conditions are improving at a faster rate than the modeling projected and extrapolating monitoring data suggests that Salt Creek will likely be below the adjusted glidepath in 2028. To support this conclusion, we explained how conservative assumptions and approaches utilized in Texas's modeling resulted in both a smaller adjustment to its URP as well as less modeled visibility improvement projected in 2028. Had Texas used similar modeling assumptions and approaches to those used by the Western Regional Air Partnership (WRAP) and the EPA, the modeled result would have likely shown greater projected visibility improvement during the course of the planning period and a higher adjustment to the URP glidepath. Based on this information, visibility conditions in 2028 at Salt Creek are anticipated to be below the adjusted glidepath.[16] Finally, while the EPA's policy establishes a presumption regarding areas that are projected to be *below* the URP, states whose emissions contribute to impairment in areas *above* the URP can still meet the applicable requirements of the CAA and the RHR. Indeed, the RHR specifically addresses this situation by requiring a ''robust demonstration'' that there are no additional emissions reduction measures at contributing sources that would be reasonable to include in the long-term strategy.'' [17] While Texas's modeling indicated that the 2028 projected visibility conditions at Salt Creek may be above the adjusted URP, at the time Texas submitted the SIP in 2021, New Mexico had not established an RPG for the Salt Creek Class I area. Thus, Texas had no way of knowing whether a robust demonstration would be required at the time it submitted its SIP. Texas highlighted as much in its 2021 Plan and during its consultation with New Mexico. To date, New Mexico has not finalized its second planning period SIP revision, and thus, the State has not finalized its long-term strategy, established a final visibility projection (the reasonable progress goal) for Salt Creek, or calculated the adjusted URP for 2028 for Salt Creek. New Mexico has gone out for public comment on its draft regional haze plan for the second planning period and is working towards a final plan to submit to EPA.[18] Additionally, as described in section V.B.1.c of the RTC Document, even if Salt Creek is assumed to be above the 2028 adjusted URP, we find, consistent with 40 CFR 51.308(f)(3)(ii)(B), that Texas's four-factor analyses adequately satisfied the requirement to conduct a robust analysis. Therefore, because all of the Class I areas that Texas contributes to are likely to be below the 2028 URP, and because Texas meets the rule requirements for a robust analysis, we find that Texas's conclusion that no additional measures were necessary to include in its own long-term strategy was reasonable. Thus, the EPA has determined that Texas's 2021 Plan is fully approvable under the CAA, the RHR, and the Agency's recently adopted policy.

III. Public Comments Received on the Proposed Action and Responses to Comments

The EPA's May 2025 Proposed Rule provided a 30-day public comment period that was then extended to July 23, 2025.[19] The EPA received 15 sets of comments during the comment period. Two of these sets of comments (–0042 and –0049) were submitted in the form of mass comment campaigns.[20] During the public notice-and-comment period, the EPA received five sets of generally supportive comments from various state entities, specific utility companies, and coalitions and councils representing utilities. Specifically, the commenters included the Texas Commission on Environmental Quality (–0052), NRG Texas Power LLC (–0053); [21] Luminant Generation Company LLC, Coleto Creek Power LLC, and Oak Grove Management Company LLC (–0054); Power Generators Air Coalition (PGen) (–0055); and Ameren Missouri, American Electric Power, Nebraska Public Power District as Utilities for Reasonable Progress (–0043). Commenters specifically supported the EPA's new URP policy and explained how the policy is based on a proper understanding of the CAA. Commenters also offered additional rationales and reasons to support EPA's proposed approvals as well as suggestions for

[14] The four statutory factors required to be taken into consideration in determining reasonable progress are: the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements. CAA section 169(g)(1).

[15] Additional information as to Salt Creek can also be found in EPA's Salt Creek Supplemental Analysis Memorandum entitled ''EPA analysis of Salt Creek National Wildlife Refuge Modeling and Monitoring Data related to 2028 Uniform Rate of Progress in Review of Texas Second Regional Haze SIP,'' available in the docket for this action at document ID 2025–0197–0031.

[16] Additional details of our analysis of visibility conditions at Salt Creek can be found in Response V.B.1.c in our associated RTC, and in the Salt Creek Memo available in the docket for this action.

[17] 40 CFR 51.308(f)(3)(ii)(B).

[18] Information on the status of New Mexico's Second Planning Period SIP Revision can be found at *https://www.env.nm.gov/air-quality/reg-haze/.*

[19] 90 FR 26232 (June 20, 2025).

[20] Document number–0042 is a compilation of 247 comments submitted through the Sierra Club collected through a mass mailer campaign. Similarly, document number –0049 is a compilation of 1,028 comments collected by the Sierra Club in a mass mailer campaign. All of these individual comments are available in the docket for this action (EPA–R06–OAR–2025–0197).

[21] We note that NRG submitted a separate a version of its comments, which contained additional attachment marked as CBI. The attachment was a Sargent and Lundy Report on costs associated with upgrading the FGD at NRG Limestone Units 1 and 2. In accordance with 40 CFR part 2 that document is not available for public viewing in EPA's docket.

ways to revise the Regional Haze Rule (RHR).

The EPA acknowledges these supportive comments, which are included in full in the docket for this action. The EPA is finalizing its proposed approval of the remaining portions of Texas's 2009 Plan and Oklahoma's 2010 Plan, Texas's 2014 first planning period progress report, and Texas's 2021 Plan for the reasons laid out in our May 2025 Proposed Rule, this preamble, and the associated RTC Document. To the extent commenters identify suggestions or ideas for ways to amend the RHR for future planning periods, those comments are beyond the scope of this rule.

We respond to the issues raised in the remaining comment letters received on our May 2025 Proposed Rule in this preamble and the associated RTC Document, which is included in the docket for this rule.

A. Comments Related to the First Planning Period and First Planning Period Progress Report

We briefly address in this section comments raised in opposition to our May 2025 proposed approval of portions of Texas's 2009 Plan, Texas's 2014 Plan, and portions of Oklahoma's 2010 Plan. Generally, the commenters in opposition asserted that the EPA is arbitrary and capricious in approving portions of Texas's 2009 Plan, Texas's 2014 Plan, and portions of Oklahoma's 2010 Plan. In so asserting, the commenters noted the EPA's prior statements in various rulemakings [22] regarding the following issues: the Fifth Circuit's 2016 Stay Opinion; previously proposed reasons for disapproval; Texas's determination of natural visibility conditions; the Texas and Oklahoma RPGs and consultation; impacts from international emissions; and the Texas SO_2 Trading Program. The commenters argue, based on the EPA's prior statements supporting disapproval of portions of Texas's 2009 Plan and Oklahoma's 2010 Plan, that the EPA is arbitrary and capricious in now approving those portions of the plans. Additionally, the commenters assert that the EPA's reliance on the Fifth Circuit's 2016 Stay Opinion is arbitrary and capricious.

As detailed in section IV of the RTC Document associated with this rule, the EPA explained its bases for approving portions of Texas's 2009 Plan, Texas's 2014 Plan, and portions of Oklahoma's 2010 Plan in our May 2025 Proposed Rule and reiterated those bases in responding to the comments. As explained in the May 2025 Proposed Rule, the SIP disapprovals and FIPs contained in the 2016 Final Rule were vacated by the Fifth Circuit on December 17, 2024. As such, the EPA was put in a position to act anew on these portions of the Texas and Oklahoma first planning period plans. We articulate our reasoning for approving the plans in both the May 2025 Proposed Rule and the RTC Document. Finally, while we were informed by and took into account the 2016 Stay Opinion in our decision, we are finalizing approval of the relevant portions of Texas's 2009 Plan and Oklahoma's 2010 Plan, based on the requirements of the CAA and RHR, which provide the states with considerable flexibility in crafting their regional haze plans.

As discussed in our May 2025 Proposed Rule and RTC Document associated with this rule, because Texas adequately considered the four statutory factors and otherwise met the outstanding first planning period rule requirements contained in 40 CFR 51.308(d), we are approving the remaining outstanding portions of Texas's 2009 Plan. As previously discussed, the RHR provides states with flexibility in the sources they select for further evaluation and how states consider the four factors. As permitted by the RHR, Texas relied on the technical information and analyses from the RPO it participated in at the time, CENRAP, as a starting point for its analyses. We reviewed the source selection, four factor analysis and reasonable progress determination in the SIP and find it to meet the applicable requirements. The source selection methodology identified a reasonable number of sources. Texas considered the costs and emission reductions associated with potential controls, along with the other statutory factors, weighed the estimated visibility benefits that would result from those controls and determined that no additional reductions were necessary beyond those accounted for in the CENRAP modeling, which included the emission reductions which were anticipated under the CAIR, or its replacement. As discussed in detail in the May 2025 Proposed Rule and RTC Document, the Texas SO_2 Trading Program and the Cross-State Air Pollution Rule (CSAPR) NO_X Program serve as replacements for the reductions anticipated from the CAIR program such that we can approve the outstanding portions of Texas's 2009 Plan.

We are also finalizing our approval of Texas's 2014 Plan as it satisfied the applicable requirements of the RHR.

B. Comments Related to the Second Planning Period

We briefly address in this section: (1) whether the EPA's new policy is consistent with the CAA and RHR; (2) whether the EPA sufficiently justified its basis for the new policy; (3) whether the EPA's approval of Texas's 2021 Plan is based on a determination of nationwide scope and effect; (4) whether EPA's approval of Texas's 2021 Plan departs from national policy without complying with the EPA's consistency regulations at 40 CFR part 56; and (5) whether the 2021 Plan meets the applicable statutory and regulatory requirements in accordance with the new policy.

As detailed at length in section V.A of the RTC Document associated with this rule, the EPA's new policy is consistent with the CAA. Pursuant to CAA 169A(a)(4), Congress explicitly delegated to the EPA the authority to promulgate regulations regarding reasonable progress towards meeting the national goal. As some comments note, to determine the measures necessary to make reasonable progress towards the national visibility goal under 169A(a)(1), Congress mandated ''tak[ing] into consideration the cost of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirement.'' [23]

The EPA emphasizes that just because a Class I area is below the URP does not mean that a state is relieved of its obligations under the CAA and the RHR to make reasonable progress. In other words, the URP is not a ''safe harbor,'' as that phrase has sometimes been used, because the EPA still must review a state's determination whether additional control measures are necessary to make reasonable progress, determine whether the state submitted those measures for incorporation into the SIP, and evaluate whether the measures are consistent with other provisions in the CAA.

As discussed in the West Virginia final action,[24] the EPA's change in policy is consistent with *FCC* v. *Fox Television,* 556 U.S. 502 (2009). Under *FCC* v. *Fox,* an agency's change in policy is permissible if the agency acknowledges the change, believes it to

[22] Notably, the commenters quote extensively from the EPA's 2014 Proposed Rule, 2016 Final Rule, 2017 RHR Revisions, and 2023 Proposed Rules to address first planning period requirements for Texas (and Oklahoma).

[23] CAA 169A(g)(1).

[24] 90 FR 29737, 29738 (July 7, 2025).

be better, and ''show[s] that there are good reasons for the new policy.'' [25] In section VII.A of our May 2025 Proposed Rule, we stated our reasons for implementing this new policy.[26] In sum, the EPA's proposal sufficiently justifies the change in policy under *FCC* v. *Fox.*

The decision in *FCC* v. *Fox* turned primarily on whether the FCC's change in policy would lead to the FCC ''arbitrarily punishing parties without notice of the potential consequences of their action.'' [27] As we explained in the proposal, the changed policy is prospective, which addresses the primary concern in *FCC* v. *Fox.* Additionally, the new policy ''aligns with the purpose of the statute and RHR, which is achieving 'reasonable' progress, not maximal progress, toward Congress' natural visibility goal.'' [28] Furthermore, we note that the legislative history of CAA section 169A is consistent with our change in policy. The reconciliation report for the 1977 CAA amendments indicates that the term ''maximum feasible progress'' in section 169A was changed to ''reasonable progress'' in the final version of the legislation passed by both chambers.[29]

As discussed in the West Virginia final action [30] and in section V.A of the RTC Document associated with this rule, the EPA's Regional Consistency regulations at 40 CFR part 56, and in particular 40 CFR 56.5(b), are not relevant to this action. 40 CFR 56.5(b) requires that a ''responsible official in a Regional office shall seek concurrence from the appropriate EPA Headquarters office on any interpretation of the Act, or rule, regulation, or program directive when such interpretation may result in application of the act or rule, regulation, or program directive that *is inconsistent* with Agency policy.'' (emphasis added). As we expressly indicated in the proposal, the approval is *consistent* with the change in agency policy, first announced in *Air Plan Approval; West Virginia; Regional Haze State Implementation Plan for the Second Implementation Period.* Therefore, there is no obligation under the plain language of the EPA's Regional Consistency regulations for anyone in the region to seek concurrence from EPA Headquarters to take action consistent with EPA policy. The lack of relevance of these regulations to our approval of Texas's 2021 Plan accounts for the lack of materials related to compliance with the Regional Consistency process in the docket for this rule.

As discussed in the West Virginia final action [31] and section V.A of the RTC Document associated with this rule, comments that claim that the EPA ''must'' publish a finding that our approval of Texas's 2021 Plan is ''based on a determination of nationwide scope [or] effect'' are also unsupported and incorrect.[32] The Supreme Court has recognized that ''[b]ecause the 'nationwide scope or effect' exception can apply only when 'EPA so finds and publishes' that it does, EPA can decide whether the exception is even potentially relevant.'' [33] As the D.C. Circuit has also stated, the ''EPA's decision whether to make and publish a finding of nationwide scope or effect is committed to the agency's discretion and thus is unreviewable.'' [34] The Administrator has not made and published a finding that our approval of Texas's 2021 Plan is based on a determination of nationwide scope or effect. Accordingly, any petition for review of our approval of Texas's 2021 Plan must be filed in the United States Court of Appeals for the appropriate regional circuit.

Finally, as also detailed in sections V and VI of the RTC Document, the 2021 Plan meets the applicable statutory and regulatory requirements. The RHR requires states to submit a long-term strategy that addresses regional haze visibility impairment for each mandatory Class I Federal area within the state and for each mandatory Class I Federal area located outside the state that may be affected by emissions from the state,[35] and the statute refers to ''a state the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area.'' [36] However, there is no specific statutory or regulatory requirement to identify the precise set of Class I areas that are affected by emissions from Texas, and there is no requirement to establish a source contribution threshold in identifying those areas. In this case, Texas appropriately identified affected out-of-state Class I areas, as we explain in section V.B of the RTC Document.

A discussed in more detail in section V.B of the RTC Document, Texas selected a reasonable number of sources for which it evaluated potential control measures through consideration of the four statutory factors in CAA section 169A(g)(1). Texas then weighed the total aggregate annualized costs of controls [37] from all the identified controls that fell below their $5,000 cost-effectiveness threshold along with the visibility benefits that would result from the implementation of all the identified controls. As Texas explained in its response to comments on its draft 2021 Plan, the overall analysis in the SIP showed that Texas is making emissions reductions and demonstrating a downward trend in emissions of NO_X and SO_2 such that Texas is making overall reasonable progress toward the goal of natural visibility conditions.[38] Weighing the costs and the maximum amount of visibility benefit from the controls, Texas determined that additional reductions are not needed to make reasonable progress for the second planning period.[39]

As required by the statute, Texas took into consideration the four statutory factors in CAA section 169A(g)(1) and determined that no additional controls for stationary sources were necessary to make reasonable progress. Texas therefore concluded that it was not necessary to incorporate any new emissions limitations, schedules of compliance, or other measures for stationary sources into its 2021 Plan. Thus, Texas did not ignore the results of its consideration of the four statutory factors. Rather, consistent with the CAA, RHR, and EPA's new policy, Texas considered the four factors, and because the affected Class I areas are below the glidepath with the possible

[25] 556 U.S. 502, 515.

[26] 90 FR 22166, 22185–22186 (May 23, 2025).

[27] 556 U.S. at 517.

[28] 90 FR 22166, 22185 (May 23, 2025). *See also,* 90 FR 16478, 16483 (April 18, 2025); 90 FR 29737, 29738 (July 7, 2025).

[29] *See* Legislative History of the Clean Air Act Amendments of 1977 Public Law 95–95 (1977), *H.R. Rep. No. 95–564,* at 535.

[30] 90 FR 29737, 29740 (July 7, 2025).

[31] 90 FR 29737, 29740 (July 7, 2025).

[32] While commenters did not specifically raise this issue, we note that the EPA's approval of Texas's 2021 Plan is also a ''locally or regionally applicable'' action under CAA section 307(b)(1). *See Oklahoma* v. *EPA,* 145 S. Ct. 1720, 1731 (2025) (a SIP is ''a state-specific plan'' and ''the CAA recognizes this limited scope in enumerating a SIP approval as a locally or regionally applicable action''); *see also, Am. Rd. & Transp. Builders Ass'n,* 705 F.3d 453, 455 (D.C. Cir. 2013) (describing EPA action to approve a single SIP under CAA section 110 as the ''[p]rototypical'' locally or regionally applicable action).

[33] *Calumet Shreveport Refining, L.L.C.,* 605 U.S.____(slip op. at 16), citing *Sierra Club* v. *EPA,* 47 F.4th 738, 746 (D.C. Cir. 2022).

[34] *Sierra Club* v. *EPA,* 47 F.4th at 745; *see also Texas* v. *EPA,* 983 F.3d 826, 835 (5th Cir. 2020) (''when a locally applicable action is based on a determination of nationwide scope or effect, the EPA has discretion to select the venue for judicial review'').

[35] 40 CFR 51.308(f)(2).

[36] CAA section 169A(b)(2).

[37] Texas determined that the total aggregate annualized cost of controls exceeded $200 million. 2021 Plan, pg. 7–14.

[38] 2021 Plan, Response to Comments pg. 3, 21 of 38 (PDF pg. 451, 469 of 653).

[39] 2021 Plan pgs. 7–14 to 7–17; 2021 Plan, Response to Comments pg. 3, 21 of 38 (PDF pg. 451, 469 of 653).

exception of Salt Creek (discussed in section II.B of this preamble, Response V.B.1.c in the associated RTC document, and in our proposal), the state is presumed to be making reasonable progress. Thus, the state's final decisions as to the measures necessary to make reasonable progress in the second planning period are reasonable, and EPA concludes that Texas's 2021 Plan satisfied the applicable requirements of the CAA and the RHR.

The full text of comments received is included in the publicly posted docket associated with this rule at *www.regulations.gov.* The RTC Document, which is also included in the docket associated with this rule, provides detailed responses to all significant comments received. The RTC Document is organized by topic. Therefore, if additional information is desired concerning how the EPA addressed a particular comment, the reader should refer to the appropriate section in the RTC Document.

IV. Impact on Areas of Indian Country

The following information applies only to the portions of Oklahoma's SIP which are approved in this rule. No portions of the Texas SIP which we are approving in this rule apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction.

Following the U.S. Supreme Court decision in *McGirt v Oklahoma,* 140 S. Ct. 2452 (2020), the Governor of the State of Oklahoma requested approval under section 10211(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005: A Legacy for Users, Public Law 109–59, 119 Stat. 1144, 1937 (August 10, 2005) (''SAFETEA''), to administer in certain areas of Indian country (as defined at 18 U.S.C. 1151) the State's environmental regulatory programs that were previously approved by the EPA outside of Indian country. The State's request excluded certain areas of Indian country further described below. In addition, the State only sought approval to the extent that such approval is necessary for the State to administer a program in light of *Oklahoma Dept. of Environmental Quality* v. *EPA,* 740 F.3d 185 (D.C. Cir. 2014).[40]

The EPA has approved Oklahoma's SAFETEA request to administer all of the State's EPA-approved environmental regulatory programs in the requested areas of Indian country. As requested by Oklahoma, the EPA's approval under SAFETEA does not include Indian country lands, including rights-of-way running through the same, that: (1) qualify as Indian allotments, the Indian titles to which have not been extinguished, under 18 U.S.C. 1151(c); (2) are held in trust by the United States on behalf of an individual Indian or Tribe; or (3) are owned in fee by a Tribe, if the Tribe (a) acquired that fee title to such land, or an area that included such land, in accordance with a treaty with the United States to which such Tribe was a party, and (b) never allotted the land to a member or citizen of the Tribe (collectively ''excluded Indian country lands'').

The EPA's approval under SAFETEA expressly provided that to the extent the EPA's prior approvals of Oklahoma's environmental programs excluded Indian country, any such exclusions are superseded for the geographic areas of Indian country covered by the EPA's approval of Oklahoma's SAFETEA request.[41] The approval also provided that future revisions or amendments to Oklahoma's approved environmental regulatory programs would extend to the covered areas of Indian country (without any further need for additional requests under SAFETEA).

As explained in earlier in this preamble and in our May 2025 Proposed Rule, the EPA is approving the portion of Oklahoma's 2010 Plan addressing 40 CFR 51.308(d)(1)[42] which we previously disapproved, and which will apply statewide in Oklahoma. Consistent with the D.C. Circuit's decision in *ODEQ* v. *EPA* and with the EPA's SAFETEA approval, the portion of Oklahoma's 2010 Plan that we are approving will apply to areas of Indian country as follows: (1) pursuant to the SAFETEA the portion of Oklahoma's Plan that we are approving will apply to all Indian country in the State of Oklahoma other than the excluded Indian country lands as described above; and (2) pursuant to the D.C. Circuit's decision in *ODEQ* v. *EPA,* the portion of Oklahoma's 2010 Plan that we are approving will also apply to any Indian allotments or dependent Indian communities that are located outside of any Indian reservation over which there has been no demonstration of tribal authority.

V. Final Action

For the reasons set forth in the May 2025 Proposed Rule, the RTC Document, and in this final rule, the EPA is approving Texas's regional haze State Implementation Plan (SIP) revisions submitted on July 20, 2021, as satisfying the applicable regional haze requirements for the second planning period contained in 40 CFR 51.308(f) and (i). For the reasons set forth in the May 2025 Proposed Rule, the RTC Document, and in this final rule, the EPA is approving Texas's regional haze State Implementation Plan (SIP) revision submitted March 20, 2014, as satisfying the applicable regional haze requirements for the first planning period progress report contained in 40 CFR 51.308(g), (h), and (i). Additionally, the EPA is approving portions of the 2009 Texas Regional Haze SIP submission and portions of the 2010 Oklahoma Regional Haze SIP submission that relate to reasonable progress requirements for the first planning period from 2007 through 2018 as satisfying applicable requirements contained in 40 CFR 51.308(d).

VI. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Clean Air Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this final rule merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this final rule:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Is not subject to Executive Order 14192 (90 FR 9065, February 6, 2025) because SIP actions are exempt from review under Executive Order 12866:
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

[40] In *ODEQ* v. *EPA,* the D.C. Circuit held that under the CAA, states have the authority to implement a SIP in non-reservation areas of Indian country in the state, unless there has been a demonstration of tribal jurisdiction. Under the D.C. Circuit's decision, the CAA does not provide authority to states to implement SIPs in Indian reservations.

[41] The EPA's prior approvals relating to Oklahoma's SIP frequently noted that the SIP was not approved to apply in areas of Indian country (except as explained in the D.C. Circuit's decision in *ODEQ* v. *EPA*) located in the State. *See, e.g.,* 85 FR 20178, 20180 (April 10, 2020). Such prior expressed limitations are superseded by the EPA's approval of Oklahoma's SAFETEA request.

[42] Excluding the portion addressing 40 CFR 51.308(d)(1)(vi), which we previously approved.

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a state program;
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act.

In addition, the portions of this final rule that apply to the Texas SIP are not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). The portion of Oklahoma's 2010 Plan addressing 40 CFR 51.308(d)(1)[43] that we are approving as part of this final rule will apply to certain areas of Indian country throughout Oklahoma as discussed in the preamble, and therefore, has tribal implications as specified in E.O. 13175 (65 FR 67249, November 9, 2000). However, our approval will neither impose substantial direct compliance costs on federally recognized tribal governments, nor preempt tribal law. Our approval of portions of Oklahoma's 2010 Plan will not impose substantial direct compliance costs on federally recognized tribal governments because no actions will be required of tribal governments. Our approval of portions of Oklahoma's 2010 will also not preempt tribal law as no Oklahoma tribe implements a regulatory program under the CAA, and thus does not have applicable or related tribal laws. Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes (December 7, 2023), the EPA offered consultation to tribal governments that may be affected by our approval of portions of Oklahoma's 2010 Plan in a letter dated May 27, 2025. The EPA held a meeting with tribal governments on June 5, 2025, where we provided information about our May 2025 Proposed Rule. No tribes accepted EPA's offer to engage in consultation.

This final rule is subject to the Congressional Review Act, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This final rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this rule must be filed in the United States Court of Appeals for the appropriate circuit by February 3, 2026. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This rule may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: November 18, 2025.

Walter Mason,

Regional Administrator, Region 6.

For the reasons stated in the preamble, the EPA amends 40 CFR part 52 as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart LL—Oklahoma

■ 2. In § 52.1920(e), amend the table entitled ''EPA-Approved Nonregulatory Provisions and Quasi-Regulatory Measures in the Oklahoma SIP'' by:

■ a. Removing the entry for ''Regional Haze SIP: (a) Determination of baseline and natural visibility conditions (b) Coordinating regional haze and reasonably attributable visibility impairment (c) Monitoring strategy and other implementation requirements (d) Coordination with States and Federal Land Managers (e) BART determinations except for the following SO_2 BART determinations: Units 4 and 5 of the Oklahoma Gas and Electric (OG&E) Muskogee plant; and Units 1 and 2 of the OG&E Sooner plant''; and

■ b. Adding an entry for ''Oklahoma Regional Haze SIP for the First Planning Period'' immediately after the entry for ''Interstate transport for the 1997 ozone and $PM_{2.5}$ NAAQS (Noninterference with measures required to prevent significant deterioration of air quality or to protect visibility in any other State)''.

The addition reads as follows:

§ 52.1920 Identification of plan.

* * * * *

(e) * * *

[43] Excluding the portion addressing 40 CFR 51.308(d)(1)(vi), which we previously approved.

EPA-APPROVED NONREGULATORY PROVISIONS AND QUASI-REGULATORY MEASURES IN THE OKLAHOMA SIP

Name of SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Explanation
*	*	*	*	* * *
Oklahoma Regional Haze SIP for the First Planning Period.	Statewide	2/17/2010	3/7/2014, 79 FR 12953; 12/5/2025, 90 FR [INSERT **FEDERAL REGISTER** PAGE WHERE THE DOCUMENT BEGINS].	Core requirements of 40 CFR 51.308. Initial approval 12/28/2011, 76 FR 81728. Approval for § 51.308(d)(1)(vi) 1/5/2016, 81 FR 349. Approval for § 51.308(d)(1)(i), (ii), (iii), (iv), (v) 12/5/2025, 90 FR [INSERT **FEDERAL REGISTER** PAGE WHERE THE DOCUMENT BEGINS].
*	*	*	*	* * *

* * * * *

§ 52.1928 [Amended]

■ 3. Section 52.1928 is amended by removing paragraph (a)(5).

Subpart SS—Texas

■ 4. In § 52.2270, the second table in paragraph (e), entitled ''EPA Approved Nonregulatory Provisions and Quasi-Regulatory Measures in the Texas SIP'' is amended by:

■ a. Revising the entry for ''Texas Regional Haze SIP''; and

■ b. Adding two entries, ''Texas Regional Haze 5-Year Progress Report for the First Planning Period'' and ''Texas Regional Haze SIP for the Second Planning Period'', at the end of the table.

The revision and additions read as follows:

§ 52.2270 Identification of plan.

* * * * *

(e) * * *

EPA-APPROVED NONREGULATORY PROVISIONS AND QUASI-REGULATORY MEASURES IN THE TEXAS SIP

Name of SIP provision	Applicable geographic or nonattainment area	State submittal/ effective date	EPA approval date	Comments
*	*	*	* *	* *
Texas Regional Haze SIP.	Statewide	3/19/2009	1/15/2016, 81 FR 350; 12/5/2025, 90 FR [INSERT **FEDERAL REGISTER** PAGE WHERE THE DOCUMENT BEGINS].	Texas Regional Haze Plan for the First Planning Period. Approval for elements of 40 CFR 51.308(d)(1), (2), (3)(i), (3)(ii), (3)(iii), (3)(iv), (3)(v), (d)(4).
*	*	*	* *	* *
Texas Regional Haze 5-Year Progress Report for the First Planning Period.	Statewide	3/24/2014, submittal date.	12/5/2025, 90 FR [INSERT **FEDERAL REGISTER** PAGE WHERE THE DOCUMENT BEGINS].	
Texas Regional Haze SIP for the Second Planning Period.	Statewide	7/20/2021, submittal date.	12/5/2025, 90 FR [INSERT **FEDERAL REGISTER** PAGE WHERE THE DOCUMENT BEGINS].	

* * * * *

§ 52.2304 [Amended]

■ 5. Section 52.2304 is amended by removing and reserving paragraph (e).

[FR Doc. 2025–22002 Filed 12–4–25; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2002–0085, EPA–HQ–OAR–2003–0051; FRL–8471.1–04–OAR]

RIN 2060–AW65

National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Rescission of Extension of Compliance Deadlines for Coke Oven Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; rescission of interim final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is rescinding the interim final rule (IFR) titled ''National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks, and Coke Oven Batteries; Residual Risk and Technology Review, and Periodic Technology Review,'' published July 8, 2025. This rescission of the IFR effectively reinstitutes the compliance deadlines set forth in the 2024 final rule revising the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the coke ovens source category, published July 5, 2024.

DATES: This rule is effective on December 5, 2025.

ADDRESSES: The EPA has established a docket for this action under Docket ID Nos. EPA–HQ–OAR–2002–0085 for the Pushing, Quenching, and Battery Stacks (PQBS) source category and EPA–HQ–OAR–2003–0051 for the Coke Oven Batteries (COB) source category. All documents in the docket are listed on the *https://www.regulations.gov/* website. Although listed, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *https://www.regulations.gov/,* or in hard copy at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave. NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time, Monday through Friday. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the EPA Docket Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: For information about this final rule, contact the U.S. EPA, Attn: Jonathan Witt, Mail Drop: D243–04, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–5645; email address: *witt.jon@epa.gov.*

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this document the use of ''we,'' ''us,'' or ''our'' is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AG acid gases
B/W bypass/waste heat
CAA Clean Air Act
CBI Confidential Business Information
CFR Code of Federal Regulations
COB coke oven batteries
CRA Congressional Review Act
D/F dioxins and furans
EIA Economic Impact Analysis
EPA Environmental Protection Agency
FR Federal Register
HAP hazardous air pollutant(s)
HCl hydrochloric acid
HCN hydrogen cyanide
HF hydrogen fluoride
HNR heat and nonrecovery (*i.e.,* no chemical recovery), or nonrecovery with no heat recovery
HRSG heat recovery steam generator
IFR interim final rule
MACT maximum achievable control technology
NESHAP national emission standards for hazardous air pollutants
NTTAA National Technology Transfer and Advancement Act
OMB Office of Management and Budget
PAH polycyclic aromatic hydrocarbons
PM particulate matter
PRA Paperwork Reduction Act
PQBS pushing, quenching, and battery stacks
RFA Regulatory Flexibility Act
UMRA Unfunded Mandates Reform Act
VOHAP volatile organic HAP

Table of Contents

I. General Information
A. Does this action apply to me?
B. Where can I get a copy of this document and other related information?
II. Background
A. What is the statutory authority for this action?
B. What rule is being rescinded?
III. Why is the EPA rescinding the IFR?
IV. Statutory and Executive Order Reviews
A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
B. Executive Order 14192: Unleashing Prosperity Through Deregulation
C. Paperwork Reduction Act (PRA)
D. Regulatory Flexibility Act (RFA)
E. Unfunded Mandates Reform Act of 1995 (UMRA)
F. Executive Order 13132: Federalism
G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
J. National Technology Transfer and Advancement Act (NTTAA)
K. Congressional Review Act (CRA)

I. General Information

A. Does this action apply to me?

As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (57 FR 31576; July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (EPA–450/3–91–030, July 1992), the Coke Oven Batteries (COB) source category includes emissions from the batteries themselves. The Pushing, Quenching, and Battery Stacks (PQBS) source category includes emissions from pushing and quenching operations, and from battery stacks at a coke oven facility. A coke oven facility is defined as a facility engaged in the manufacturing of metallurgical coke by the destructive distillation of coal.[1] The 2022 North American Industry Classification System (NAICS) code for the COB source category (40 CFR part 63, subpart L) is 324199 for ''All Other Petroleum and Coal Products Manufacturing,'' and for the PQBS source category (40 CFR part 63, subpart CCCCC) is 331110 for ''Iron and Steel Mills and Ferroalloy Manufacturing.'' The information provided in this section is not intended to be exhaustive but rather provides a guide for readers regarding the entities that this action is likely to affect. The compliance deadlines resulting from this action are directly applicable to the affected sources. Federal, state, local, and Tribal government entities will not be affected by this interim final action. Based on the information we have, 11 operating coke manufacturing facilities are subject to the NESHAP. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

[1] *See* 90 FR 29999, 29997 (July 8, 2025).

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this action will be available on the internet at *https://www.epa.gov/stationary-sources-air-pollution/coke-ovens-batteries-national-emissions-standards-hazardous-air.*

II. Background

A. What is the statutory authority for this action?

The Clean Air Act (CAA), and CAA section 112 in particular (42 U.S.C. 7412), provides the statutory authority to issue this action.

B. What rule is being rescinded?

On July 8, 2025,[2] the EPA issued an IFR that extended the compliance deadlines for certain standards that the EPA promulgated in the 2024 rule revisions to the Coke Ovens NESHAP.[3] Specifically:

- For the PQBS source category, the EPA extended compliance deadlines from January 6, 2026, to July 7, 2027, for certain maximum achievable control technology (MACT) standards, including:
  - New emission standards based on MACT for pushing operations: acid gases (AG), hydrogen cyanide (HCN), mercury (Hg), and polycyclic aromatic hydrocarbons (PAH) (which is also a surrogate for dioxins and furans (D/F), formaldehyde, and volatile organic HAP (VOHAP));[4]
  - New emission standards based on MACT for battery stacks: AG, HCN, Hg, and particulate matter (PM) (as a surrogate for non-Hg HAP metals);
  - New emission standards based on MACT for HNR heat recovery steam generator (HRSG) main stacks: AG, Hg, PAH (which is also a surrogate for formaldehyde), and PM (as a surrogate for non-Hg HAP metals);
  - New emission standards based on MACT for HNR bypass/waste heat (B/W) stacks: AG, formaldehyde (which is also a surrogate for VOHAP), Hg, PAH, and PM (as a surrogate for non-Hg HAP metals); and
  - A new MACT standard, in the form of a good combustion practices work practice standard, for PAH, D/F, and VOHAP emitted from battery stacks.
- For the COB source category, the EPA extended compliance deadlines from July 7, 2025, to July 5, 2027, for fenceline monitoring requirements; revised leak standards for doors, lids, and offtakes; and revised pressure monitoring requirements for oven doors at heat and nonrecovery (HNR) facilities.

As a result of rescinding the IFR, the original deadlines in the 2024 rule revisions to the Coke Ovens NESHAP will apply to this source category. As explained below, the EPA does not believe that rescinding the IFR will trigger immediate compliance difficulties with relevant deadlines and remains committed to engaging with relevant stakeholders to promote compliance efforts and provide technical assistance. Moreover, the EPA notes that interested parties will have an opportunity to comment on proposed changes to the Coke Ovens NESHAP in the forthcoming rulemaking, announced on March 12, 2025, to reconsider the applicable standards.

III. Why is the EPA rescinding the IFR?

On July 8, 2025, the Agency issued an IFR that extended the compliance dates for fenceline monitoring, PQBS MACT standards, leak limits for doors, lids, and offtakes, and HNR oven door requirements to July 5, 2027.[5] The IFR stated that the comment period would remain open until August 7, 2025. On August 6, 2025, the EPA extended the comment period to September 25, 2025 (Doc. ID EPA–HQ–OAR–2003–0051–2006). On August 15, 2025, the EPA announced that the Agency would hold a public hearing on the IFR on September 4, 2025. In response to the comment period and at the public hearing, the EPA received a number of comments and oral submissions from interested stakeholders, including participants in the coke ovens industry and environmental groups.

At the time the EPA promulgated the IFR, the Agency had been made aware of serious concerns that, without the installation of additional controls that may be unavailable or infeasible, industry would be unable to comply with both the MACT standards for the PQBS source category and the leak limits for doors, lids, and offtakes in the COB source category, thus necessitating additional time beyond the compliance deadlines.[6] Rather than risking serious disruption to coke processing, which would in turn disrupt production of iron and steel critical for our nation's infrastructure and national security interests, the EPA extended the compliance deadlines for these standards without prior notice and comment and invited public input on the necessity and details of the compliance date extensions.

Among other things, the EPA solicited information from regulated parties on occurrences that would have constituted noncompliance with the standards as written in the 2024 Rule absent the compliance deadline extensions in IFR.

In response to the solicitation, the EPA received data on only a small number of exceedances of the standards for doors and lids (but not offtakes) that occurred prior to promulgation of the IFR (Doc. ID EPA–HQ–OAR–2003–0051–2013). Upon review of this and other information received in public comments and at the public hearing, the EPA does not believe that the currently available information supports a conclusion that regulated parties would face significant immediate compliance challenges meeting the PQBS MACT standards or the COB leak limits for doors, lids, and offtakes if the compliance deadlines were not changed, such that only a change in compliance date provided within the IFR would alleviate regulated parties' concerns. Thus, the EPA is rescinding the IFR compliance deadline extensions for these standards, as well as the extension for the associated fenceline monitoring requirements promulgated in the 2024 rule to promote compliance with the standards.

IV. Statutory and Executive Order Reviews

Additional information about these statutes and Executive orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and therefore was not submitted to the Office of Management and Budget (OMB) for review. The EPA prepared an Economic Impact Analysis (EIA) estimating the compliance cost savings associated with extending these compliance deadlines. The EIA estimated the IFR would result in a present value (PV) of $8.1 million of compliance cost savings ($4.2 million equivalent annualized value, or EAV) using a 3 percent social discount rate and a PV of $7.9 million of compliance cost savings ($4.4 million EAV) using a 7 percent social discount rate. The estimated compliance cost savings resulted from two years during which operation and maintenance costs associated with the fenceline monitoring requirements and

[2] *Id.* at 29997.

[3] 89 FR 55684 (July 5, 2024).

[4] Acid gases include hydrochloric acid (HCl) and hydrogen fluoride (HF).

[5] 90 FR 29997.

[6] *Id.* at 29997, 30001–02.

compliance testing, recordkeeping, and reporting costs associated with the new or revised emission standards were no longer required. The EAV were annualized over two years to reflect the length of time during which the EPA expected the compliance deadline extension to impact compliance costs at coke oven facilities relative to an analytical baseline requiring compliance at the original deadlines. This action rescinds the IFR, in effect reinstituting the compliance deadlines from the 2024 final rule. As a result, the EPA no longer expects the compliance cost savings estimated in the EIA to occur.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

This action is not an Executive Order 14192 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. The Office of Management and Budget (OMB) has previously approved the information collection activities that apply to the coke oven facilities affected by this action and has assigned OMB control numbers 2060–0253 (COB NESHAP) and 2060–0521 (PQBS NESHAP). This action does not change the information collection requirements.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities.

E. Unfunded Mandates Reform Act of 1995 (UMRA)

This action does not contain an unfunded mandate of $100 million (adjusted annually for inflation) or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any State, local or Tribal governments. Although this action creates an enforceable duty on the private sector, the cost does not exceed $100 million or more.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. This rule will implement revisions to the compliance dates for certain provisions. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This action does not involve technical standards; therefore, the NTTAA does not apply.

K. Congressional Review Act (CRA)

This action is subject to the CRA, 5 U.S.C. 801–808, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This is not a major action as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Lee Zeldin,

Administrator.

For the reasons stated in the preamble, the Environmental Protection Agency amends part 63 of title 40, chapter I, of the Code of Federal Regulations as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart L—National Emission Standards for Coke Oven Batteries

■ 2. Amend § 63.302 by revising paragraph (a)(4) introductory text and paragraph (d) introductory text to read as follows:

§ 63.302 Standards for by-product coke oven batteries.

(a) * * *

(4) On and after July 7, 2025:

* * * * *

(d) Emission limitations and requirements applied to each coke oven battery utilizing a new recovery technology shall be less than the following emission limitations or shall result in an overall annual emissions rate for coke oven emissions for the battery that is lower than that obtained by the following emission limitations on and after July 7, 2025:

* * * * *

■ 3. Amend § 63.303 by revising paragraphs (a)(1)(iii) and (b)(1)(iii) to read as follows:

§ 63.303 Standards for nonrecovery coke oven batteries.

(a) * * *

(1) * * *

(iii) The date for compliance with paragraphs (a)(1)(i) and (ii) of this section is on and after July 7, 2025.

* * * * *

(b) * * *

(1) * * *

(iii) The date for compliance with paragraphs (b)(1)(i) and (ii) of this section is on and after July 7, 2025, or upon initial startup, whichever is later.

* * * * *

■ 4. Amend § 63.304 by revising paragraph (b)(8) introductory text to read as follows:

§ 63.304 Standards for compliance date extension.

* * * * *

(b) * * *

(8) On and after July 7, 2025:

* * * * *

■ 5. Amend § 63.311 by revising paragraph (h) to read as follows:

§ 63.311 Reporting and recordkeeping requirements.

* * * * *

(h) *Electronic reporting of compliance certification reports.* Beginning on July 7, 2025, or once the report template for this subpart has been available on the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) website for one year, whichever date is later, submit all subsequent reports to the EPA via the CEDRI according to § 63.9(k) except that confidential business information (CBI) should be submitted according to paragraph (k) of this section.

* * * * *

■ 6. Amend § 63.314 by revising the introductory text to read as follows:

§ 63.314 Fenceline monitoring provisions.

For each by-product coke oven battery facility as defined in § 63.301, beginning no later than July 7, 2025, the owner or operator of a coke manufacturing facility shall conduct sampling along the facility property boundary and analyze the samples in accordance with paragraphs (a) through (g) of this section.

* * * * *

Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

■ 7. Amend § 63.7283 by revising paragraphs (d)(1) and (2) to read as follows:

§ 63.7283 When do I have to comply with this subpart?

* * * * *

(d) * * *

(1) If you have an existing affected source or a new or reconstructed affected source for which construction or reconstruction commenced on or before August 16, 2023, you must be in compliance no later than January 5, 2026.

(2) If you have a new or reconstructed affected source for which construction or reconstruction commenced after August 16, 2023, you must be in compliance no later than January 5, 2026, or upon startup, whichever is later.

* * * * *

■ 8. Amend § 63.7300 by revising paragraph (c)(4) introductory text to read as follows:

§ 63.7300 What are my operation and maintenance requirements?

* * * * *

(c) * * *

(4) Beginning January 5, 2026, you must identify and implement a set of site-specific good combustion practices for each battery. These good combustion practices should correspond to your standard operating procedures for maintaining the proper and efficient combustion within battery waste heat flues. Good combustion practices include, but are not limited to, the elements listed in paragraphs (c)(4)(i) through (v) of this section.

* * * * *

■ 9. Amend § 63.7341 by revising paragraph (f) to read as follows:

§ 63.7341 What reports must I submit and when?

* * * * *

(f) *Electronic reporting of compliance reports.* Beginning on July 7, 2026, or once the report template for this subpart has been available on the CEDRI website for one year, whichever date is later, submit all subsequent reports to the EPA via the CEDRI according to § 63.9(k) except that confidential business information (CBI) should be submitted according to paragraph (h) of this section.

* * * * *

[FR Doc. 2025–22034 Filed 12–4–25; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 64

[WC Docket Nos. 12–375, 23–62; FCC 25–75; FR ID 319372]

Incarcerated People's Communication Services; Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) modifies the Commission's previous incarcerated people's communications services (IPCS) rate caps in response to record evidence of the significant unintended consequences of those rate caps. It establishes new interim audio and video IPCS rate caps by basing the calculation of the Commission's rate caps only on billed minutes, incorporating all safety and security measure expenses that IPCS providers reported incurring, and creating an additional rate cap tier for extremely small jails. It also creates a separate interim rate additive to ensure recovery of correctional facilities' costs of administering IPCS. Additionally, it sets a new compliance date for providers' compliance with the new rules and clarifies that the rate cap, site commission, and per-minute pricing rules from the Commission's 2021 Order will no longer apply following that date.

DATES:

Effective date: This rule is effective December 5, 2025.

Compliance date: compliance with this rule will be required on April 6, 2026.

FOR FURTHER INFORMATION CONTACT: Shabbir Hamid, Pricing Policy Division of the Wireline Competition Bureau, at (202) 418–2328 or via email at *shabbir.hamid@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order and Order on Reconsideration, document FCC 25–75, adopted on October 28, 2025 and released on November 6, 2025, in WC Docket Nos. 12–375 and 23–62. This summary is based on the public redacted version of the document, the full text of this document can be obtained from the Commission's Electronic Document Management System (EDOCS) website at *www.fcc.gov/edocs* or via the Commission's Electronic Comment Filing System (ECFS) website at *www.fcc.gov/ecfs,* or is available at the following internet address: *https://docs.fcc.gov/public/attachments/FCC-25-75A1.pdf.*

Synopsis

I. Introduction

1. The rates and other practices of the incarcerated people's communications services (IPCS) industry have been the subject of the Commission's and Congress' attempts to ensure just and reasonable rates for consumers and fair compensation for providers for over a decade. Indeed, the Commission has attempted on multiple occasions over the last 12 years to address these issues, spawning multiple rounds of litigation in several federal courts. With the passage of the Martha Wright-Reed Act and its implementation by the Commission in the *2024 IPCS Order,* the regulatory framework to achieve these dual goals was largely established. But in taking those steps, the new regulatory framework has led to significant unintended consequences that have been brought to light by stakeholders, as well as other challenges that are currently before the First Circuit. The ongoing implementation challenges and the resulting risks to safety and security they cause greatly exceed what the Commission considered or anticipated when it adopted the *2024 IPCS Order,* leading the Commission to today's action.

2. The goal of today's action is to establish a regulatory framework that is

faithful to the Martha Wright-Reed Act and is also consistent with the record that has developed over the last two years. The changes we make in the IPCS regulatory framework today, in particular changes to the methodology for calculating IPCS rate caps, supersede the corresponding aspects of the *2024 IPCS Order* and result in revised, interim audio and video IPCS rate caps that respond to these unintended consequences. We modify certain aspects of the rate cap calculations and rate structure to more accurately reflect the costs providers and correctional authorities incur in the provision of IPCS. The revised audio and video rate caps we establish are interim, while we seek additional comment in the Further Notice of Proposed Rulemaking (Further Notice) on, among other issues, rate structure and rate cap setting methodologies, the continued evolution of the IPCS market, and potential unintended consequences of these proposals. The goal of our actions today is to create a durable, predictable, and lawful framework that will properly balance our implementation of the dual statutory mandates—just and reasonable rates for consumers and providers and fair compensation for providers—and thereby ensure the continued availability of IPCS to incarcerated people and preserve correctional officials' ability to provide safe and secure access to IPCS. The steps we take today will provide a more stable framework to ensure continued higher levels of communication between incarcerated people and their loved ones, bringing all the benefits that has been demonstrated to provide, including improved reentry into society, reduced recidivism, increased public safety, and strengthened family ties between parents and children, between spouses, and with family members generally.

II. Background

3. The Martha Wright-Reed Act was enacted by Congress in January 2023 to ensure that ''all [IPCS] rates and charges are just and reasonable'' while continuing to ensure that ''all payphone service providers are fairly compensated.'' The Act expanded the Commission's jurisdiction to regulate IPCS to include intrastate IPCS and advanced communications services, including video IPCS. It also permitted the Commission to use industry-wide average costs to determine just and reasonable rates and directed the Commission to ''consider costs associated with any safety and security measures necessary to provide'' IPCS in determining those rates. In July 2024, the Commission adopted the *2024 IPCS Order,* implementing the Martha Wright-Reed Act and establishing a new framework for the regulation of the IPCS industry. The Commission also adopted the *2024 IPCS Notice,* seeking further comment on certain issues, including further disaggregation of the very small jail rate cap tier and the adoption of a uniform rate additive to account for costs incurred by correctional facilities providing IPCS.

4. In October 2024, petitions were filed seeking reconsideration of various aspects of the *2024 IPCS Order,* including for our purposes here, a petition by NCIC (NCIC Reconsideration Petition). The NCIC Reconsideration Petition seeks reconsideration of two issues the Commission addresses herein. First, it challenges the Commission's decision to exclude certain safety and security costs from the lower bounds of its zones of reasonableness, asserting that the exclusion led to rate caps that are ''below the cost of providing service for most IPCS providers.'' It also seeks reconsideration of the Commission's decision to include unbilled minutes of use in its cap calculations, claiming that ''led to unsustainable rate cap reductions.''

5. During the transition period to the newly adopted rate caps, the Commission was made aware of certain unintended consequences of the new IPCS rules for the industry and for correctional facilities. In the *2025 IPCS Waiver Order,* the Wireline Competition Bureau (WCB or the Bureau) found the record, developed subsequent to the adoption of the *2024 IPCS Order,* contained evidence indicating that the restructuring of the IPCS industry required to implement the Commission's new rate cap rules ''imposes implementation challenges and safety and security risks greatly exceeding those the Commission envisioned in the *2024 IPCS Order.*'' In light of these difficulties, the Bureau adopted the *2025 IPCS Waiver Order,* which extended compliance deadlines for the IPCS rate caps and other rules ''until April 1, 2027 or any alternative date the Commission sets as part of further action in this proceeding.'' On July 30, 2025, the Public Interest Parties filed an Application for Review of the *2025 IPCS Waiver Order,* asking the Commission to rescind the order and allow the relevant IPCS rules to go into effect as adopted. The Bureau sought and received comment on the Application for Review.

III. Report and Order and Order on Reconsideration

6. We adopt a joint Report and Order and Order on Reconsideration (Order) to address rate cap setting issues that arose in two distinct procedural settings in this rulemaking—some in response to the *2024 IPCS Notice* and others in response to the NCIC Reconsideration Petition. We combine the discussions of our Report and Order and Order on Reconsideration into a single holistic discussion to simplify and clarify our analysis of the various rate cap setting modifications we make, which are interrelated and interdependent, but which must be factored together to result in a single set of revised rate caps. For clarity's sake, we identify throughout this hybrid discussion the procedural source of each issue we address and therefore the aspect of the joint Order we issue today.

7. In this Order, we use a two-step process for revising the IPCS rate caps. We first address four methodological issues raised in the record and revise the approach to each in response to comments raised in the record. We then incorporate the effects of those modifications into the audio and video rate cap calculations by establishing a zone of reasonableness for each rate tier, calculating upper and lower bounds for each rate tier, and then select new rate caps from within the resulting zones, rounding to whole cent amounts. The rate caps we establish are interim, acknowledging the limitations of the data submitted and allowing the Commission to seek further comment before setting permanent rate caps.

8. We adopt the following revised, interim audio and video IPCS rate caps:

Table 1: Revised Interim Audio and Video IPCS Rate Caps

Tier (ADP)	Audio (Per Minute)			Video (Per Minute)		
	Rate Cap	Rate Additive	Effective Rate Cap	Rate Cap	Rate Additive	Effective Rate Cap
Prisons (any ADP)	**$0.09**	$0.02	$0.11	**$0.23**	$0.02	$0.25
Large Jails (1,000 +)	**$0.08**	$0.02	$0.10	**$0.17**	$0.02	$0.19
Med. Jails (350-999)	**$0.10**	$0.02	$0.12	**$0.17**	$0.02	$0.19
Small Jails (100-349)	**$0.11**	$0.02	$0.13	**$0.19**	$0.02	$0.21
Very Small Jails (50-99)	**$0.13**	$0.02	$0.15	**$0.23**	$0.02	$0.25
Extremely Small Jails (0-49)	**$0.17**	$0.02	$0.19	**$0.42**	$0.02	$0.44

A. Revisions to Rate Cap Setting Methodology and Rate Structure

9. We first revise four aspects of the rate cap setting approach the Commission used in the *2024 IPCS Order,* based on the record developed in response to the *2024 IPCS Notice* and NCIC's Petition for Reconsideration of various aspects of the *2024 IPCS Order,* as well as updated information received in the record of this proceeding. As noted above, these changes supersede the corresponding aspects of the *2024 IPCS Order.* First, in response to the NCIC Reconsideration Petition, we reconsider the use of unbilled minutes in calculating the IPCS rate caps, excluding such minutes as they result in no compensation for IPCS providers. Second, pursuant to comment sought in the *2024 IPCS Notice,* we adopt an additional size tier for extremely small jails (from 0 to 49 average daily population (ADP)) to better reflect the generally higher per-minute and per-capita costs extremely small jails face. Third, in response to the NCIC Reconsideration Petition, we revise the treatment of safety and security costs to include all such reported costs in the revised rate caps. Finally, pursuant to comment sought in the *2024 IPCS Notice,* we adopt a separate rate additive for all rate tiers of up to $0.02 per minute that may be charged on top of the newly revised per-minute rate caps. The net effect of these changes will be to properly balance the way we implement the Martha Wright-Reed Act and thereby ensure consumers, correctional facilities, and IPCS providers realize the shared goal of increased communication with all the benefits that has been shown to produce.

1. Exclusion of Unbilled Minutes in Calculating Rate Caps

10. NCIC seeks reconsideration of the Commission's inclusion of unbilled minutes of use in calculating IPCS rate caps in the *2024 IPCS Order.* NCIC argues that the inclusion of unbilled minutes of use—minutes that facilities may require and for which providers currently collect no revenue—''would lead to IPCS providers being under-compensated.'' The majority of commenters that responded to the petition support NCIC's claim. We agree and therefore grant this portion of the NCIC Reconsideration Petition.

11. In the *2024 IPCS Order,* the Commission calculated the IPCS rate caps by dividing used and useful costs incurred in the provision of IPCS by the sum of billed and unbilled minutes as the unit of sale. It reasoned that using both billed and unbilled minutes ''better reflect[ed] the cost of actual minutes.''

The Commission considered that using both billed and unbilled minutes would ''ensure all incarcerated persons are charged no more than the cost of their calls, and treat[] all minutes equally, regardless of a facility's or a provider's policy decisions on whether and how to provide free minutes.''

12. NCIC contends that the Commission erred by including unbilled minutes in its calculation of rate caps. It claims that the Commission failed to ''adequately explain how including unbilled minutes, for which IPCS providers incur costs to carry the traffic and monitor the communications but receive no revenue, is a better reflection of an IPCS providers' costs to provide service.'' We find that using total reported minutes of use to calculate interim rate caps may not produce rate caps that allow providers sufficient revenues to recover their costs, even if doing so may be useful in assessing overall industry cost characteristics. Using both billed and unbilled minutes, without accounting for the fact that providers may not presently have contracts in place enabling them to recover from facilities the costs of providing any unbilled minutes that facilities require, may lead to under-compensation, contrary to the ''fair compensation'' principle of section 276(b)(1)(A) of the Communications Act of 1934, as amended (Communications Act).

13. NCIC challenges the Commission's conclusion that using billed and unbilled minutes to derive its rate caps was ''an improvement from the *2021 ICS Order,* which divided expenses by paid minutes.'' It further claims the Commission ''failed to provide any meaningful discussion on why its prior conclusion to rely on solely [paid] minutes was in error.'' It cites the Commission's previous conclusion in the *2021 ICS Order* to use paid minutes to derive rate caps ''because those are the minutes that providers rely on to recover their costs.'' As NCIC noted, using unbilled minutes for which no compensation is received to calculate rate caps leads ''to IPCS providers' costs being diluted by non-revenue generating IPCS calls,'' which may not ensure providers are fairly compensated, as required by the Martha Wright-Reed Act.

14. While NCIC seeks to exclude unbilled minutes from the calculation of IPCS rate caps, it does not seek a return to the use of paid minutes to calculate rate caps as was done in the *2021 ICS Order.* A return to using paid minutes was not necessary in the *2024 IPCS Order* as the Commission accounted for the difference between paid and billed minutes by including bad debt expense in its rate cap calculations. In this Order, we account for this difference by including a similar allowance for bad debt expense in the costs used to calculate rate caps.

15. The Public Interest Parties assert that ''excluding unbilled minutes would lead to rate caps that are unreasonably high . . . in at least some facilities.'' But they fail to acknowledge that basing rates on unbilled minutes will undercompensate providers unless they recover those costs directly from facilities. We therefore are not persuaded that excluding unbilled minutes results in interim rate caps that are not just and reasonable. Additionally, the Commission must take into account the fact that unbilled minutes represent a non-trivial percentage of all minutes as it balances the dual goals of ensuring just and reasonable rates for consumers and fair compensation for providers. Finally, consumers are direct beneficiaries of unbilled minutes, an offsetting benefit which must be factored in assessing the reasonableness of industry rate caps overall. This revision to our rate caps, as well as the others adopted in this Order, are cost-based, supported by the record, and meet the dual requirements that our rate caps be just and reasonable and fairly compensatory. We find that excluding unbilled minutes in calculating our interim rate caps satisfies both statutory mandates.

16. In the *2024 IPCS Order,* the Commission further explained its decision to use unbilled minutes by citing the fact that the ''ratio of billed minutes to unbilled minutes varies across facilities'' and that basing rates on billed and unbilled minutes would minimize the problem of under-recovery in facilities with a higher proportion of unbilled minutes and over-recovery in facilities with a lower proportion of unbilled minutes. However, as NCIC observes, that reasoning reflects the inherent variability of rate caps based on average industry data and therefore does not constitute a flaw in the Commission's rate cap setting methodology, only an inherent attribute of average cost-based ratemaking.

17. Finally, NCIC questions the Commission's reasoning that ''if the relative proportions of billed to unbilled minutes were to shift in the future, a rate cap based on the amount of billed minutes would become outdated.'' It asserts that the Commission ''already has plans to address any outdated rate caps in connection with ongoing oversight of IPCS service.'' The Public Interest Parties assert in contrast that including unbilled minutes ''eliminat[es] the need for the type of ongoing monitoring NCIC describes,'' but do not explain how including unbilled minutes in rate calculations would obviate the need for the Commission to discharge its ongoing oversight responsibilities under the Communications Act and the Martha Wright-Reed Act. We agree with NCIC. We are currently monitoring and fully intend to continue to monitor the IPCS industry as part of our ongoing oversight obligations under the Communications Act and the Martha Wright-Reed Act.

18. We therefore use only billed minutes in calculating our interim rate caps, superseding our decision in the *2024 IPCS Order,* which we find will help ensure IPCS providers are fairly compensated while still ensuring just and reasonable rates. Removing unbilled minutes from the calculation of those rate caps will, in combination with the other modifications to IPCS rate caps adopted in this Order, ensure those rate caps comply with the statutory requirement that providers are fairly compensated. The impact of altering this aspect of the Commission's rate cap calculation, as further explained in Appendix D, is material. Unbilled minutes constitute 7.8% of the total number of minutes reported by the industry in response to the 2023 Mandatory Data Collection, although this proportion varies across different rate tiers and between audio and video services. Unbilled minutes consist of a greater proportion of video minutes than audio minutes, approximately 27.5% of reported video minutes, versus roughly 7% of audio minutes. Removing unbilled minutes from our calculations increases the per minute industry averages for audio and video IPCS and safety and security expenses by as little as 6.2% to as much as 63.7%, depending on the service and the tier in question (before lower-bound adjustments). Replacing total minutes with billed minutes increases the per-minute allowance for recovery of ancillary service expenses reflected in the rate caps by about 8.5% (before lower-bound adjustments and rounding to the nearest third decimal place). The effect of this change is reflected in the interim rate caps adopted by the Commission.

Table 2: Effect of Removing Unbilled Minutes on Audio and Video Safety and Security Expenses

	Audio			Video		
	IPCS and Safety & Security Expenses Per Total Minute	IPCS and Safety & Security Expenses Per Billed Minute	Percent Change	IPCS and Safety & Security Expenses Per Total Minute	IPCS and Safety & Security Expenses Per Billed Minute	Percent Change
Prisons	0.074	0.079	7.0%	0.293	0.455	55.1%
Large Jails	0.065	0.071	9.1%	0.190	0.312	63.7%
Medium Jails	0.077	0.082	7.5%	0.183	0.244	32.8%
Small Jails	0.088	0.093	6.2%	0.175	0.215	22.7%
Very Small Jails	0.106	0.113	7.0%	0.222	0.248	11.6%
Extremely Small Jails	0.141	0.153	8.6%	0.369	0.421	14.1%

Source: 2023 Mandatory Data Collection facility-specific Excel tabs.

Total minutes include billed and unbilled audio or video minutes. Billed minutes do not include unbilled audio or video minutes.

2. Establishing the Extremely Small Jail Tier

19. In the *2024 IPCS Notice,* the Commission sought comment on the costs of providing IPCS to very small jails, whether to disaggregate the very small jail tier, and the types of data that would help capture the variability of IPCS costs in this very small jail tier. After analyzing the record received in response to the *2024 IPCS Notice,* we now further disaggregate the very small jail tier into two separate tiers—very small jails and extremely small jails. Specifically, we revise our definition of ''very small jails'' to include jails with an ADP between and including 50 to 99 and create a new rate cap tier for ''extremely small jails'' for jails with an ADP of 0 to 49. These revisions result in the following rate cap tiers, reflecting differences in facility type and size, which we hereby adopt:

- A separate tier for all prisons regardless of average daily population;
- Jails with an average daily population of 1,000 or more (large jails);
- Jails with an average daily population between and including 350 to 999 (medium jails);
- Jails with an average daily population between and including 100 to 349 (small jails);
- Jails with an average daily population between and including 50 to 99 (very small jails); and
- Jails with an average daily population of 0 to 49 (extremely small jails).

20. The Martha Wright-Reed Act directs the Commission to ensure just and reasonable rates and consider costs associated with ''small, medium, and large facilities'' or ''other characteristics.'' In the *2024 IPCS Order,* the Commission interpreted this language as a mandate to analyze the cost characteristics of different-sized facilities. The Commission found no need to create separate rate cap tiers among prisons because they are almost uniformly large, enjoy greater economies of scale, and the data do not indicate significant differences in the costs of serving different prison facilities. Further, the Commission did not interpret the Martha Wright-Reed Act as a directive that limits the Commission to adopting only three size tiers. Given the record then before it, the Commission adopted a four-tiered rate cap structure that includes the ''very small jail'' rate cap tier that we reexamine here to better reflect the differences in the costs of serving various sizes of jails.

21. Notably, the very small jail tier included jails with an ADP between 0 and 99, which encompassed over half of all jails in the United States. Generally speaking, these and other small jails are located in rural areas—an ''other characteristic[ ]'' within the meaning of the Martha Wright-Reed Act—where the record suggests that providing IPCS involves increased costs due to ''higher telecommunications expenses and customization requirements.'' The Commission recognized that the rate cap tiers adopted in the *2024 IPCS Order,* while an improvement over its previous rate caps, may still not effectively capture cost variations within this tier, and sought comment in the *2024 IPCS Notice* on further disaggregation of the very small jail tier. Given the significant number of such jails and their distinct cost structures, and given their generally more rural nature, we find it necessary to further refine our rate cap tiers to better capture the variability among small jails generally and within the very small jail tier specifically to more accurately reflect providers' costs and ensure they are fairly compensated.

22. As a general matter, we agree with commenters that as ADP decreases, per-minute or per capita costs for the provision of IPCS increase for the provider. Several factors cause per-minute IPCS costs to rise as ADP shrinks. For one, the fixed costs of providing IPCS at smaller or more rural facilities are distributed over fewer incarcerated people and therefore fewer minutes of use, which results in providers tending to have higher costs per minute at smaller facilities as opposed to larger facilities. Importantly, extremely small jails and very small jails are more typically located in rural areas, where the per minute cost of service is higher because of the reported difficulty of serving those areas. In addition to increased costs for jail management and account set-up, greater reliance on prepaid accounts, and fewer calling minutes, IPCS providers that serve smaller jail facilities typically in rural locations often must also provision longer haul, higher cost broadband connections to deliver service. Accordingly, building upon the Commission's prior actions and based on the record and analysis of IPCS data, we subdivide the very small jail tier established in the *2024 IPCS Order* and instead create two separate tiers: a more focused very small jail tier for jails with ADPs between 50 and 99, and a new extremely small jail tier for jails with ADPs between 0 and 49.

23. The real world implications of adopting rate caps that do not sufficiently take into account the higher costs of serving the smallest and most rural facilities is evident in the record subsequent to the adoption of the *2024 IPCS Order.* One provider reported being ''forced to cease the provision of IPCS services to four small jails in Arizona and New Mexico that would no longer be financially viable under the 2024 Order.'' After attempting to find a replacement provider, ''the facilities had no other choice but to revert to 1980s-style supervised public pay telephones for use by the incarcerated population.'' Securus and Pay Tel further emphasize that rate caps that do not take into account the costs of serving very small facilities ''will undoubtedly impact small jails in rural areas to the greatest extent, as those facilities typically have the lowest calling levels and the highest costs.''

24. We find that further disaggregating the very small jail tier into two separate tiers better accounts for the operational challenges of providing IPCS to very small and extremely small jails, more accurately captures the heightened costs associated with providing IPCS to jails in rural areas, and therefore more reliably ensures that IPCS rates are just, reasonable, and fairly compensatory. Further, the majority of incarcerated people that would have been covered by the former very small jail tier rate cap will pay relatively lower rates than they otherwise would have if the very small jail tier were not subdivided, given that the majority of incarcerated people within the two new tiers will be in the revised very small jail tier. Incarcerated people housed in jails included in the new extremely small jail tier, while paying marginally higher rates than they otherwise would have if the very small jail tier were not subdivided, will be assured of the long-term availability of IPCS at those institutions given that those rates will more accurately compensate providers for their costs.

25. We subdivide the former very small jail tier at 50 ADP to create two tiers, and find that using this additional threshold will improve or better ensure the provision of IPCS within these tiers, while balancing the differences in ADP, average length of time incarcerated people are detained, and consumers' interests. This action subdivides the rate tier that encompasses the largest number of facilities. The most recent Bureau of Justice Statistics show that of the 2,779 jails in operation, over half have an ADP below 100 (567 with an ADP of between 50 to 99 and 956 with an ADP lower than 50). While there are a higher number of jails in the lower half of the 0–100 ADP range, those jails house significantly fewer people. Of the total ADP of 59,600 in jails below 100 ADP during the 12-month period from July 1, 2021 to June 30, 2022, jails with ADPs from 50 to 99 account for roughly 40,500 (68%), while jails with ADPs under 50 account for only 19,100 (32%).

26. We agree with commenters that assert that, because of this uneven population distribution within the former very small jail tier, the rate cap for this tier ''saddles many with rates that are far too high as a result of the costs associated with providing service in the smallest jails.'' Taking into account the differences in ADP at the very small jail tier and the extremely small jail tier, we find that dividing the existing very small jail tier at 50 ADP will ensure that, at any given point in time, the majority of consumers in this group will pay lower IPCS rates, reflecting the relatively lower per-minute cost of service in jails from 50 to 99 ADP, while allowing providers at extremely small jails to charge rates that will enable them to recover their higher per-minute cost of service and therefore ensure they will be able to continue providing service over the long term. Differences in average length of stay between these two sets of facilities further amplify the importance of disaggregating the former very small jail tier to set appropriate rates for both new tiers. According to Worth Rises, on average, ''people in jails with an ADP of 50 to 99 are detained for 21.6 days, whereas people in jails with an ADP of 0 to 49 are detained for 13.4 days.'' Shorter detentions would tend to increase the frequency of one-time administrative costs, all else being the same. We therefore divide the former very small jail tier into two separate tiers based on ADP.

27. We decline to further disaggregate the extremely small jail tier by setting an additional threshold below 50 ADP. NCIC suggests that there are a limited number of IPCS providers willing to serve very small jails because they lack a consistent ADP that would enable adequate revenue projections. After a certain point, however, we find further disaggregating the smallest rate cap tiers beyond those we adopt today would likely offer diminishing benefits. We recognize that IPCS providers—both large and small—serving jails with, for example, an ADP below 20 would likely face disproportionate compliance burdens if an additional, even smaller tier were created. Therefore, after carefully reviewing the data and record, we conclude 50 ADP represents a reasonable break point between the very small and extremely small jail tiers.

3. Inclusion of Safety and Security Costs

28. In the *2024 IPCS Order,* to determine which provider-reported expenses to include when calculating industry-average IPCS costs, the Commission applied a used and useful framework and evaluated various categories of safety and security expenses. After evaluating seven categories ''based on the nature of the preponderance of tasks or functions within each category,'' the Commission found that two categories of safety and security expenses were used and useful in the provision of IPCS. The Commission therefore included the reported costs for the two categories—CALEA compliance measures and communications security services—in the cost of service, but ultimately concluded that ''the remaining five categories should not be treated as used and useful'' for purposes of determining the lower bounds of the zones of reasonableness. NCIC disputes this conclusion, arguing that the Commission's ''inconsistent application of the 'used and useful' standard led to material errors'' when the Commission rejected the costs in those five categories.

29. We now grant in part NCIC's Petition, by reconsidering the Commission's previous decision to exclude various safety and security costs from its IPCS rate cap calculations and instead treat all reported safety and security costs as used and useful costs for determining the costs to be included in the lower bounds of the zones of reasonableness. In its Petition, NCIC alleges that the Commission's application of the used and useful analysis ''did not fully account for IPCS providers' safety and security costs.'' NCIC argues that ''the lack of comprehensive data'' prevented ''a reasoned analysis of the IPCS costs allocated across the seven categories of safety and security measures.'' On reconsideration, we agree. While the available record evidence concerning used and useful safety and security costs provided a basis for the Commission to exclude certain categories of safety and security costs, given the record which has developed since the Commission adopted the *2024 IPCS Order,* we find that this led to rate caps that did not sufficiently recover providers' used and useful safety and security costs. Accordingly, given our concerns about jeopardizing access to IPCS if we underestimate used and useful safety and security costs, we take a more conservative approach on the existing record and treat all reported such costs as used and useful, unless and until an improved record going forward shows otherwise, thereby superseding our treatment of safety and security costs in the *2024 IPCS Order.* Therefore, for the purposes of our interim rate caps we now incorporate all safety and security cost categories in the Commission's IPCS rate cap calculations and specifically add all such categories of costs into our calculation of the lower bounds. The zone's upper bounds already included and incorporated all reported safety and security costs, and we need make no corresponding change to the upper bounds as a result. In doing so, we not only reconsider the Commission's earlier exclusion of five of the seven reported cost categories, but also incorporate and reaffirm the Commission's earlier reasons for including the other two reported cost categories.

30. In the 2023 Mandatory Data Collection, the Commission expanded the scope of collected data, gathering more granular information concerning safety and security services offered by providers, particularly those safety and security services which were used and useful in the provision of IPCS, and required providers to report on these data in detail for the first time. The Commission structured reporting of safety and security expenses by requiring providers to allocate these expenses across seven different cost categories. Industry-wide, providers reported the following expenses by category:

Table 3: Reported Safety & Security Expenses By Category

	Total	Percent
CALEA Compliance Measures	5,839	0.001%
Law Enforcement Support Services	24,593,237	4.3%
Communication Security Services	195,760,913	34.4%
Communication Recording Services	144,917,189	25.4%
Communication Monitoring Services	99,898,694	17.5%
Voice Biometrics Services	44,599,879	7.8%
Other Safety and Security Measures	60,113,471	10.5%
All Categories	569,889,222	100%

Source: 2023 Mandatory Data Collection Safety & Security Measures Excel tabs.

As the chart demonstrates, providers reported a total of $569.9 million in safety and security costs across all categories, with Category 3 (''Communications Security Services'') showing the highest reported costs of any category. These costs represent 34.4% of all reported costs.

31. While the Commission's categories were designed to group costs according to the uses or functions for which they were incurred, the Bureaus further disaggregated the category-based approach by directing providers to report cost data for each category between regulated IPCS (like audio IPCS, video IPCS, and ancillary services) and nonregulated services using a catch-all column for reporting. Despite these changes and attempts at clarification, providers still had difficulty in reporting. Commenters have since disputed the categories as a viable means of identifying used and useful costs, arguing that ''IPCS providers do not categorize safety and security measures costs the same way the [Commission] grouped them.'' For example, the record demonstrates that responding providers interpreted communications monitoring services (category 5) to include functions that might be considered as typical of law enforcement, such as ''aid[ing] investigations related to detention facilities,'' but that providers also reported services more typically considered IPCS-related in category 5, for example costs for ''keeping incarcerated people from calling blocked numbers and from engaging in three-way calling.'' Similarly, as the National Sheriffs' Association argues, call recording (category 4) and call monitoring (category 5) both may include functions they consider used and useful in the provision of IPCS, insofar as threats are made or crimes are committed during the use of IPCS. On reconsideration, we find these arguments imply a benefit to IPCS consumers and that overlapping uses between the categories of safety and security measures include costs that the Commission did not evaluate previously, which we find appropriate to contemplate for all categories. Without more and better information, the Commission undermined its category-based analysis by requiring providers to lump reported costs into inexact categories, which, in some instances, excluded certain reported costs from the categories the Commission deemed used and useful.

32. At a more granular level, some of the individual services within each category also suffered from ambiguity in function and use, as they could be classified as a law enforcement function, as a service which supported the provision of IPCS, or potentially both. Cost data for safety and security measures can be allocated among different security categories or functions in many ways, for example, by allocating costs for research and development processes to one specific category even if those costs apply more broadly to additional categories. Further, reported safety and security costs—such as platform development—could support both regulated IPCS and nonregulated services like text messaging. For example, certain IPCS providers develop their own proprietary software platforms for use by customers and law enforcement; such platforms naturally serve multiple functions, supporting not only the use of IPCS, but also education, entertainment, or other nonregulated uses, in addition to providing some safety and security features. Without a prescribed method of cost allocation or attribution, the categorical distinctions lose reliability, and can be treated differently by different respondents. In sum, we find other costs, such as platform development costs, and other functional overlaps heighten the degree to which regulated and nonregulated service costs are intermingled, and further obfuscate the Commission's ability to exclude reported safety and security cost categories without better data.

33. Next, given the limitations of the available data in the *2024 IPCS Order,* the Commission could not verify whether the costs of each provider's reported safety and security measures were allocated consistently to the seven cost categories. Despite the detailed instructions and description of the safety and security cost categories the Commission issued in the Mandatory Data Collection, providers did not report their safety and security data in a uniform fashion; in fact, the absence of costs reported in certain categories by certain carriers underscores this point. For example, {[REDACTED]} recorded costs for all seven categories of safety and security measures costs. (Material that is set off by double brackets {[ ]} is subject to a request for confidential treatment and is redacted from the public version of this document.) Similarly, {[REDACTED]} providers reported costs in only two out of seven categories, while the remaining {[REDACTED]} reported costs across six different categories. Different sized providers made very different safety and security cost allocations. The two largest providers allocated approximately {[REDACTED]} percent of their expenses (besides other ancillary services and other products and services expenses) to safety and security, in contrast to all other providers which collectively allocated only about 3.3 percent of these expenses to safety and security. These percentages are derived from company-wide data. The expenses reflected in the base used to calculate these percentages are expenses reported as audio IPCS, video IPCS, safety and security measures, automated payment services, live agent services, paper bill/statement services, single-call and related services, and third-party financial transaction services. Further, the Commission was aware that providers had difficulty allocating safety and security costs among categories as instructed or otherwise attributed safety and security measures to many categories without supporting that allocation. We find these types of reporting issues to be particularly impactful on allocation decisions, particularly when some providers elected not to allocate, despite instructions to do so. Similarly, the National Sheriffs' Association argues that many providers do not maintain ''more granular cost'' data that would allow accurate categorization. Reporting disparities like these cannot be attributed exclusively to the inexactitude of the Commission's reporting categories; nonetheless, we agree that, upon reconsideration, these flaws suggest on balance that the structure of the data collection needs further refinement.

34. Despite the Commission's analysis, the safety and security data on which the Commission relied in the *2024 IPCS Order* were imperfect; our reevaluation of that data in light of the record we have since developed leaves us without assurance that the Commission's approach was the best way to implement the relevant directives of the Martha Wright-Reed Act. We now find that the method of data collection, and providers' allocations in response to the collection, together impaired the Commission's ability to assess the effect of excluding certain safety and security costs. The data collection results fell short of capturing the manner in which individual safety and security measures were used in the provision of IPCS, particularly at smaller institutions. We also agree that more specific, discrete, and granular cost data and operational information would assist the Commission in more reliably analyzing the costs and uses of reported safety and security measures.

35. The record demonstrates that the unintended consequences of these

shortcomings have had a significant impact on providers, correctional facilities, and ultimately consumers. Correctional facilities have raised basic safety and security concerns following the adoption of the *2024 IPCS Order* suggesting that the adopted rates resulted in reduced access to certain safety and security measures. For example, certain IPCS providers state that ''many correctional facilities have made the difficult—but [2024 IPCS] Order-required—decision to forgo these services because they lack the funds to pay for them,'' ultimately impacting the availability of IPCS generally. One provider reported that it renegotiated contracts with a number of facilities that ''lack sufficient financial resources to pay for the suite of safety and security tools they previously relied upon to provide IPCS safely to their populations and, accordingly, have elected to move forward with a substantially reduced set of those tools, thus endangering facility and public safety.'' The effects of the exclusion of certain safety and security costs from IPCS rate calculations also appears to have impacted access to IPCS generally. Another IPCS provider reported that some facilities ''have decided to stop offering IPCS altogether because they cannot guarantee the continued safety and security of their facilities.''

36. While the Commission attempted to reconcile the intermingled nature of these costs in the *2024 IPCS Order,* particularly when setting the relevant rate caps inside the zones of reasonableness, the results of the 2023 Mandatory Data Collection did not enable the Commission to be precise enough to avoid the unintended consequences described above. As we have noted, the categories excluded by the *2024 IPCS Order* included services or functions that are used and useful. As a result of excluding the costs of such services from the rate caps, and as the record since the adoption of the *2024 IPCS Order* shows, the fiscal resources required to provide requisite safety and security services were put at risk, implicating the availability of IPCS generally. We therefore take the interim step of reincorporating the five excluded cost categories of safety and security measures into the lower bounds and calculating new interim rate caps for audio IPCS and video IPCS accordingly, while continuing to include the two previously included categories. The seven categories are as follows: Communications Assistance for Law Enforcement Act (CALEA) compliance measures; law enforcement support services; communication security services; communication recording services; call monitoring services; voice biometrics services; and other safety and security measures. This approach applies the used and useful framework to an imperfect record and therefore best ensures that all used and useful costs from safety and security measures necessary to the provision of IPCS will be accounted for in the governing interim rate caps pending the adoption of permanent rate caps, alleviating the risk that consumers could lose access to IPCS at some facilities altogether while the Commission works to collect more precise data and operational information. While it may at times be challenging to discern actual IPCS market conditions given imperfect data and marketplace complexities, the evidence of a threat to the availability of service is sufficient to justify our actions today. We note that Pay Tel asserts that ''[b]ut for the 2025 waiver order suspending several portions of the 2024 order, and the FCC's ongoing consideration of revisions to the 2024 order, Pay Tel would likely have been forced to forego service in other high-cost jails.'' Ultimately, we do not have the option to wait until market failure becomes more widespread to intervene. The inclusion of these costs for the purposes of our interim rate caps produces a reasonable outcome given the fact that they are based on providers' reported costs. We note that the upcoming data collection to establish permanent rates for IPCS will provide the Commission and interested parties another opportunity to revisit and reconsider these topics in the future.

4. Interim Facility Cost Rate Additive

37. On an interim basis and consistent with the record, we adopt a uniform rate additive of up to $0.02 per minute separate from and in addition to our rate caps to account for the costs correctional facilities incur in allowing access to IPCS. This additive is applicable equally to each rate tier we adopt today, and may be charged on top of the new, interim per-minute audio and video IPCS rate caps adopted in this Order. Our adoption of this uniform additive is an interim measure designed to provide greater certainty to IPCS providers and correctional facilities in determining compensation for correctional facilities for the costs they incur in allowing access to IPCS while the Commission seeks comment on how to structure a permanent rate additive in today's Further Notice.

38. As an initial matter, we modify the IPCS rate structure to create separate provider-related and facility-related cost recovery components, as the Commission previously did in the *2021 ICS Order.* This rate structure more clearly delineates between provider-incurred IPCS costs and IPCS costs incurred by correctional facilities. Importantly, both rate elements are limited to the recovery of used and useful expenses incurred in the provision of IPCS. Accordingly, we modify the rate calculations used in the *2024 IPCS Order,* which included, based on the record before the Commission at that time, all of the used and useful costs incurred in the provision of IPCS regardless of whether such costs are incurred by IPCS providers or correctional facilities. In this Order, we supersede that decision and remove from our rate cap calculations the costs incurred by correctional facilities in making IPCS available and allow recovery of those costs through a separate rate additive for facility-related cost recovery. Establishing separate provider-related and facility-related rate components helps ensure our rate structure accounts for both providers' and correctional facilities' used and useful costs.

39. In the *2024 IPCS Order,* the Commission established a framework that aimed to account for, and to allow providers to reimburse correctional facilities for the used and useful costs they incur in allowing access to IPCS. To do so, the Commission incorporated its best estimate of the costs correctional facilities incur into the zones of reasonableness. Due to the lack of reliable correctional facility cost data in the record, the Commission relied on the National Sheriffs' Association's 2015 cost survey to incorporate $0.02 into the upper bounds of the zones of reasonableness for all facilities. The Commission explained that the ''$0.02 figure derives from the Commission's prior analysis of the amount of used and useful correctional facility costs the National Sheriffs' Association Cost survey reasonably supported'' in the *2021 ICS Order.* In the *2021 ICS Order,* the Commission stated that it relied on ''two separate independent bases'' in adopting the $0.02 per minute facility rate additive. The *2021 ICS Order* first based the rate additive on the Commission's analysis of the portion of site commissions that were legitimately related to inmate calling services. That analysis included site commission data submitted by prisons and jails and compared the per-minute site commission costs between all facilities that paid site commissions to all those that did not. Second, the Commission also based its decision on survey data submitted by the National Sheriffs'

Association. We likewise rely on both sources of data here in adopting an interim rate additive and therefore reject the assertion by the UCC, et al. that the ''2-cent facility fee does not apply to prisons'' and that the data on which the $0.02 per minute rate additive is based is ''not related to costs in prisons.'' The Commission included no estimate for correctional facility costs in the lower bounds of the zones of reasonableness as the record contained ''no data that would allow [it] to estimate those costs with any degree of precision.'' Because the Commission did not incorporate a measure of correctional facility costs in the lower bounds, it explained that those bounds may understate the used and useful costs of providing IPCS. The Commission aimed to account for this fact by adopting rate caps that exceeded the lower bounds of the zones of reasonableness at each tier.

40. To provide correctional facilities with the opportunity to recover their used and useful costs, the Commission permitted IPCS providers to reimburse correctional facilities for such costs under the rate caps. The Commission explained that the rate caps ''reflect . . . all of the used and useful costs incurred in the provision of IPCS regardless of whether such costs are incurred by IPCS providers or correctional facilities'' and thus ''recognize[d], consistent with the record, that correctional facilities may incur some used and useful costs in allowing access to IPCS.'' Since the Commission also eliminated site commissions, which likely were the primary means by which correctional facilities recovered their used and useful costs, they would have no means to recover those costs absent a reimbursement mechanism.

41. In response to comments that the Commission's reimbursement mechanism may be difficult for IPCS providers to implement and the suggestion of some commenters that the Commission should instead use an explicit additive to IPCS rate caps to account for correctional facility costs, the Commission sought comment in the *2024 IPCS Notice* on whether the Commission should adopt a uniform additive to its IPCS rate caps to account for correctional facility costs. The Commission sought comment on the appropriate amount of a uniform rate additive, noting that one commenter had suggested that $0.02 per-minute could be established as a maximum facility cost recovery amount. Considering the ''perennial problem'' of receiving reliable correctional facility cost data in these proceedings, the Commission also sought comment on which data the Commission should rely on in determining any additive and how the Commission can ensure that it receives reliable data.

42. The record now before us supports the adoption, on an interim basis, of a uniform rate additive in lieu of the reimbursement framework adopted in the *2024 IPCS Order.* Commenters explain that the reimbursement mechanism, which leaves correctional facilities and IPCS providers to negotiate reimbursement between them ''will create confusion and conflict for facilities and IPCS providers, and will be less transparent for end users.'' Some commenters argue that the reimbursement framework effectively resurrects the harms of site commission payments insofar as IPCS providers will compete to offer the highest reimbursement amounts instead of competing on price or quality of service metrics, just as they did in connection with site commission payments. In addition, ''the absence of a specific additive to rates as a cost-recovery mechanism, and the separate prohibition on providers using regulated revenue to fund safety and security services, is by necessity requiring correctional facilities to divert already-limited resources away from core elements of their public-safety mission.''

43. In contrast, a ''rate additive would provide much greater certainty and remove providers from the role of gatekeeper for correctional facility cost reimbursement.'' Pay Tel explains that a fixed correctional facility cost rate additive would ''prevent the harms associated with the flawed reimbursement provision and better align market forces for all participants in the IPCS industry'' because it would permit ''full facility cost recovery'' while also incentivizing correctional facilities to increase the availability of IPCS and create downward pressure on rates ''to stimulate more calling.'' Commenters also point out that a rate additive structure is a ''tested approach'' that is ''far simpler to implement and enforce, and can better ensure that facilities can recover their reasonably incurred costs.'' Indeed, ''a uniform additive has been in place'' for prisons and large jails since the *2021 ICS Order* became effective. The $0.02 per-minute rate additive ''has proven to be an efficient, consistent, predictable, and transparent solution for ensuring correctional facilities can recover their costs associated with providing access to IPCS.''

44. Although there is broad support for a rate additive, some commenters oppose this approach. Worth Rises argues because ''the Commission's rates already account for all investments necessary to sustain IPCS, a uniform rate additive is duplicative at best and a way around the ban on commissions at the worst.'' Given the prohibition on paying site commissions, however, a rate additive does not result in duplicative recovery. Nor does a uniform rate additive allow circumvention of that prohibition because the rate additive is limited to used and useful IPCS costs incurred by facilities. The Public Interest Parties likewise oppose a rate additive, noting that it ''would include an additional amount on top of the rate caps,'' which already incorporate an estimate of used and useful correctional facility costs. But, unlike in the *2024 IPCS Order,* our ratemaking methodology is based exclusively on provider costs and thus excludes facility costs from our interim rate cap calculations. Commenters also note that even if there were a basis to adopt an additive, the record is devoid of reliable correctional facility cost data on which to base an additive.

45. Securus and Pay Tel acknowledge that the record lacks definitive correctional facility cost data and that such data is difficult to obtain, complicating the process of determining the appropriate additive amount. Securus notes that ''the data used to derive the previous $0.02 rate additive . . . is based on old data'' but that IPCS providers ''do not have information on the costs correctional facilities incur.'' For its part, Pay Tel argues that ''implementing an interim fixed additive of $0.02 per minute consistent with the 2021 ICS Order is achievable'' even if it would need adjustment at a later date ''based on further evidence.'' In today's Further Notice, we seek comment on how to obtain correctional facility cost data that could be used to implement a permanent rate additive. Additionally, prior to the adoption of the *2024 IPCS Order,* the Prison Policy Initiative proposed that if the Commission were to adopt a rate additive, it should set a ''maximum facility cost recovery fee of 2 cents per minute of use'' while prohibiting site commission payments.

46. Considering the significant record support, we adopt an interim uniform rate additive of up to $0.02 per minute. We agree with commenters that an additive will provide greater certainty for IPCS providers and correctional facilities. In particular, as Securus notes, a rate additive ''would better enable facilities to estimate their IPCS-related costs that would be compensable by providers'' as opposed to the current reimbursement mechanism which requires correctional facilities to negotiate contracts with providers

providing for reimbursement of their used and useful costs and to persuade the provider that the costs for which they seek reimbursement are used and useful. Additionally, as some commenters note, providers and correctional facilities are already familiar with the rate additive mechanism adopted in the *2021 ICS Order,* which will facilitate implementation by IPCS providers and correctional facilities alike. While some commenters support non-uniform rate additives that would reflect the varying costs faced by different facilities, the record at this point is insufficient for us to adopt such additives. We seek further comment on such rate additives in the Further Notice.

47. We therefore cap the interim additive at $0.02 per minute for audio and video IPCS across all rate tiers for all correctional facilities. The $0.02 additive derives from the additive adopted in the *2021 ICS Order* and the estimate of used and useful correctional facility costs in the upper bounds of the zones of reasonableness in the *2024 IPCS Order,* both of which were based in part on the National Sheriffs' Association's 2015 cost survey. The lack of reliable correctional facility cost data in the record constrains our ability to justify adopting a different additive today, including one based on facility size, as the National Sheriffs' Association suggests. We find that the $0.02 per minute interim rate additive to be a reasonable proxy for correctional facilities' used and useful costs pending the receipt of additional information and data in response to today's Further Notice. Although we concur with the National Sheriffs' Association suggestion that rate additives more closely tailored to facilities' costs would be preferable, the record before us does not allow it and we therefore seek additional comment in the Further Notice. Nevertheless, the National Sheriffs' Association cost survey remains the best data available about the costs correctional facilities incur in allowing access to IPCS that has been reported by correctional facility representatives, despite outstanding questions about the reliability of these data. We also continue to rely in part on the analysis of prison and jail site commission data that the Commission conducted when it originally adopted the $0.02 per minute rate additive in the *2021 ICS Order.* We therefore rely on these data to implement an interim rate additive of up to $0.02 per minute at all correctional facilities while the Commission considers the record that develops in response to today's Further Notice. The survey provided by Pay Tel's outside consultant, which quantified safety and security costs at 30 correctional facilities, is potentially helpful to inform future consideration of a permanent additive. However, the survey is not sufficient for the purposes of the industry-wide interim step we take today.

48. The interim additive we adopt today is to be charged on top of the per-minute audio and video rate caps as set forth in this Order. It is thus ''in addition to, and not an offset or extraction from'' the IPCS rate caps as they have been recalculated in this Order. The interim rate caps adopted in this Order are higher than the rate caps adopted in the *2024 IPCS Order* due to the inclusion of an additional $346 million of safety and security costs now included in the lower bounds of the zones of reasonableness. To be clear, however, the revised rate caps we adopt today reflect our removal from the upper bounds of the zones of reasonableness the $0.02 estimate of used and useful correctional facility costs that the Commission had added in the *2024 IPCS Order.* Additionally, removing the $0.02 from the upper bounds of the zones of reasonableness will mitigate the possibility that the interim uniform additive we adopt today ''could double-count any purported used and useful facility costs that have already been factored into the Commission's IPCS rate caps.''

49. The interim $0.02 per-minute rate additive ''does not constitute a site commission'' as that term is defined in the Commission's rules. In the *2024 IPCS Order,* the Commission distinguished between ''IPCS provider payments to correctional facilities for costs used and useful in the provision of IPCS'' from site commissions. With respect to the former, the Commission concluded that its rate caps would ''allow for IPCS provider reimbursements to correctional facilities for costs used and useful in the provision of regulated IPCS.'' The Commission took a different approach with respect to site commissions, concluding that these payments are not used and useful in the provision of IPCS and therefore must be excluded from the calculation of the Commission's rate caps. We maintain this distinction today.

50. Some commenters argue that if ''IPCS providers are allowed to freely compensate correctional facilities for costs without oversight, they will effectively reintroduce site commissions by a different name.'' We disagree. The interim rate additive we adopt is capped at $0.02 per minute. In contrast, the current reimbursement mechanism is ''uncapped'' in that its only constraint is the IPCS rate caps. The $0.02 per-minute rate additive we adopt here will provide a more ''consistent, predictable, and transparent solution for ensuring correctional facilities can recover their costs associated with providing access to IPCS.''

51. We also disagree with commenters arguing against a rate additive based on the lack of data in the record regarding used and useful correctional facility costs. While the Commission has noted the lack of updated correctional facility cost data in the record, it has, ''out of an abundance of caution,'' incorporated a measure of correctional facility costs into its rate structure based on the National Sheriffs' Association's 2015 cost survey in both the *2021 ICS Order* and the *2024 IPCS Order.* In both cases the Commission determined that capping facility reimbursement at $0.02 per minute represents a ''reasonable estimate'' of used and useful correctional facility costs and provides a reasonable outer bound for providers' negotiations with facilities over the used and useful costs they incur in making IPCS available. For purposes of the interim facility rate additive we adopt today, we continue to rely on these data while we seek further information regarding correctional facility costs in today's Further Notice. While the Commission originally applied the $0.02 per-minute additive only to prisons and jails with average daily populations of 1,000 or more in the *2021 ICS Order,* those facilities' used and useful IPCS costs may be less per minute than the used and useful IPCS costs incurred by jails with lower average daily populations, a question we seek further comment on in the attached Further Notice. Given this capped and interim nature of the rate additive we adopt while we consider alternatives, we find it is unlikely that the additive will result in unreasonably high IPCS rates during the period the rate additive remains in effect.

B. Adopting Revised Interim Audio and Video IPCS Rate Caps

52. After carefully considering the record developed since the Commission adopted the *2024 IPCS Order* and the *2024 IPCS Notice,* and incorporating the foregoing modifications to our rate cap setting methodology and rate structure, we adopt the following interim, per-minute, audio and video IPCS rate caps:

Table 4: Interim Audio and Video IPCS Rate Caps

Tier (ADP)	Audio (Per Minute)			Video (Per Minute)		
	Rate Cap	Rate Additive	Effective Audio Rate Cap	Rate Cap	Rate Additive	Effective Video Rate Cap
Prisons (any ADP)	$0.09	$0.02	$0.11	$0.23	$0.02	$0.25
Large Jails (1,000 +)	$0.08	$0.02	$0.10	$0.17	$0.02	$0.19
Med. Jails (350-999)	$0.10	$0.02	$0.12	$0.17	$0.02	$0.19
Small Jails (100-349)	$0.11	$0.02	$0.13	$0.19	$0.02	$0.21
Very Small Jails (50-99)	$0.13	$0.02	$0.15	$0.23	$0.02	$0.25
Extremely Small Jails (0-49)	$0.17	$0.02	$0.19	$0.42	$0.02	$0.44

53. Our revised rate structure consists of two primary rate components: provider-related rate caps designed to allow providers to recover their used and useful costs in providing IPCS, and facility-related rate additives, designed for the recovery of the used and useful costs facilities incur in making IPCS available. In calculating revised interim rate caps and rate additives for each tier, we incorporate the four principal changes described in the foregoing section based on the record developed in response to the *2024 IPCS Notice* and NCIC's Petition for Reconsideration. Those changes include: (1) the removal of unbilled minutes from the rate cap calculations in response to the NCIC Reconsideration Petition; (2) the adoption of an additional size tier for extremely small jails (from 0 to 49 ADP) pursuant to the *2024 IPCS FNPRM;* (3) revisions to the treatment of safety and security costs to include all such reported costs in the rate caps in response to the NCIC Reconsideration Petition; and (4) the adoption of a separate rate additive component consistent with the rate additive adopted in the *2021 ICS Order* of up to $0.02 per minute for all rate tiers to address facilities' costs in making IPCS available, pursuant to the *2024 IPCS Notice.* Together, these modifications to our rate caps and rate structure result in new, interim audio and video IPCS rate caps that, while higher than the rate caps adopted in the *2024 IPCS Order,* appropriately balance the need to ensure that IPCS rates and charges are just and reasonable and that IPCS providers are fairly compensated in accordance with section 276. These interim rate caps and rate additives supersede the rate caps from the *2024*

IPCS Order and will remain in place pending resolution of the issues set forth in today's Further Notice.

54. Each of these modifications functions within the ratesetting methodology that the Commission used in both the *2021 ICS Order* and the *2024 IPCS Order.* That framework remains unchanged. We use average industry costs to develop rate caps pursuant to section 3(b)(1) of the Martha Wright-Reed Act as the Commission did in the *2024 IPCS Order.* We continue to rely on the 2023 Mandatory Data Collection and record evidence to calculate rate caps as the Commission did in the *2024 IPCS Order* since it remains the best data available to the Commission on which to base IPCS rate caps. In calculating the revised rate caps, we use the zone of reasonableness approach that was previously used in both the *2021 ICS Order* and the *2024 IPCS Order* as the best means for minimizing the impact of any imperfections in the dataset on our final rate caps. As the Commission noted in the *2024 IPCS Order,* the zone of reasonableness approach is ''well-suited to reconcile competing concerns,'' in particular, the ''competing interests of providers and consumers.'' It also gives us ''flexibility to effectively address imperfections in the data and ultimately select rate caps that satisfy'' the dual mandates of the Martha Wright-Reed Act—just and reasonable rates for consumers and fair compensation for providers. As the Commission did in the *2024 IPCS Order,* we include an allowance for the additional costs IPCS providers incur in making TRS and other, related disability access communications technologies available to disabled incarcerated people in both our upper and lower bounds calculations. Finally, we continue to include IPCS providers' reported costs of providing ancillary services in both our upper and lower bounds calculations to ensure providers are fairly compensated. Together, these modifications will ensure a stable regulatory framework that continues to foster increased communication for incarcerated people while the Commission adopts permanent rate caps and rate additives based on additional data and stakeholder input.

1. Preliminary Rate Cap Setting Observations

55. Our revisions to IPCS rates are based on the 2023 Mandatory Data Collection, which remains the best data available to us, notwithstanding the limitations previously acknowledged. From the results of that data collection, the Commission developed and refined a database that enabled it to analyze industry cost and operational characteristics and ultimately to select IPCS rate caps. The database represents approximately 99% of all industry minutes of use and approximately 97% of all industry revenues. We revisit the IPCS rate caps and rate cap setting methodology given the fact that the record developed since the adoption of the *2024 IPCS Order* makes clear the unforeseen consequences of some aspects of the methodology used. The modifications we make in our rate cap setting methodology and rate structure ensure that the revised rate caps we set today will result in just and reasonable rates for consumers and fair compensation to providers.

56. We set audio and video IPCS rate caps on an interim basis. As the aforementioned discussion on safety and security costs illustrates, more accurate data is needed with regard to how safety and security measures are used in the provision of IPCS, including data on the costs of individual safety and security measures and data on how and where such measures are used, before the Commission can set permanent audio rate caps. Additionally, as the Commission previously noted in the *2024 IPCS Order,* the data collected regarding the video IPCS market demonstrates the nascent character of that market, which will continue to mature over time as video IPCS deployment and usage becomes more widespread. Therefore, we adopt interim rate caps, which will give us flexibility to adjust our rate caps to reflect the evolution of the marketplace, and time for us to refine our rate analysis based on a future data collection before adopting permanent IPCS rates.

57. We clarify that our revisions to the rate cap setting methodologies and rate structure continue to be based on the used and useful framework for analyzing industry costs the Commission used in the *2024 IPCS Order.* For example, based on the limited data available for our analysis and in light of the recognized inconsistencies with the categorical approach the Commission took in the *2024 IPCS Order,* we cannot conclude that the categories of safety and security costs formerly excluded from the lower bounds are not in fact used and useful in the provision of IPCS, and we thus treat these categories, pending our further data collection, as used and useful as a whole. As previously discussed, we are unable to reconcile the disparities in reporting among providers and the inconsistencies of providers' allocation of safety and security measure costs among reporting categories, which effectively precluded further analysis of the data. Upon reconsideration, we find it unworkable to apply the used and useful analysis at a categorical level given the available data. By the same token, neither can we apply the used and useful analysis to the reported costs of individual safety and security measures, as the reported data is insufficiently granular and inconsistently allocated between the categories by providers. Without the ability to reliably attribute cost data to the categories employed by the data collection, and in order to avoid the unintended consequences—for providers and consumers alike—of incorrectly classifying costs and thereby excluding from the lower bounds the cost of safety and security measures that are necessary to the provision of IPCS and to consumers' continuing access to IPCS, we find it appropriate, on an interim basis, to include reported safety and security costs as a whole in the revised interim rate caps. We therefore revisit the Commission's conclusion that ''[a]llowing the costs of measures that are not used and useful in the provision of IPCS to be recovered through IPCS rates would be inconsistent with that mandate [to ensure just and reasonable rates].'' Where, as here, the decision to exclude certain of those expenses would frustrate the industry's ability to provide the service at all, the inclusion of those same expenses in order to enable service is inherently just and reasonable, unless and until additional data allows the Commission the ability to review and analyze such expenses on a more granular basis to determine whether such expenses are used and useful in the provision of IPCS. At present, we find the developed record insufficient to determine the requisite ''nexus'' of reported safety and security expenses, particularly under a categorical analysis. Therefore, in the interim and out of an abundance of caution to preserve the general availability of IPCS, we treat all reported safety and security costs as used and useful in the provision of IPCS. Given the state of the record, we likewise consider this approach the best way to ensure that the Commission has satisfied its duty under the Martha Wright-Reed Act to ''consider costs associated with any safety and security measures necessary to provide'' IPCS. While some parties might seek to portray this approach as a departure from the ordinary application of the used and useful framework, we find that this approach benefits ratepayers by ensuring that they continue to receive service, and thus is directionally aligned

with the ordinary operation of the framework.

2. Establishing Zones of Reasonableness

58. We employ a zone of reasonableness approach to rate cap setting that follows a three-step analysis consistent with the process used by the Commission in the *2021 ICS Order* and the *2024 IPCS Order,* and base our analysis on the data submitted by providers in response to the 2023 Mandatory Data Collection. We first establish upper bounds for each rate tier, which set a ceiling on the upper range of reasonable rates. We then establish lower bounds for each rate tier, by beginning with the upper bound figures and then making certain reasonable and conservative data adjustments which reduce the reported costs to set a reasonable rate floor. Finally, we rely on record evidence and on extensive agency expertise to determine a rate cap for each tier from within those upper and lower bounds for both audio and video IPCS.

59. *Determining the Upper Bounds.* Our approach to establishing the upper bounds of the zones of reasonableness remains largely identical to the approach taken by the Commission in the *2024 IPCS Order.* In short, we take a series of familiar steps to reach the upper bounds, each identical to the approach adopted in the *2024 IPCS Order.* For continuity, we continue to use the dataset developed for the *2024 IPCS Order,* which incorporates the vast majority of reported data but which excludes certain data submissions that were either incomplete or unusable. We again accept providers' costs and weighted average cost of capital as reported. Importantly, we continue to incorporate all of providers' safety and security costs into the upper bounds without any adjustment. As we note above, our estimate of the upper bounds likewise includes the provider-reported costs of ancillary service charges, as well as an estimate of providers' TRS-related costs. We repeat these steps in setting upper bounds for rates today based on the same analysis and reasoning used in setting upper bounds in the *2024 IPCS Order,* and we readopt them for our use here.

60. Our approach to establishing the upper bounds of the zones of reasonableness diverges from that in the *2024 IPCS Order* in one key respect: we no longer incorporate into the upper bounds any estimate of the separate IPCS-related costs which correctional facilities may incur in allowing access to IPCS. As we previously explained, the record that has developed since the adoption of the *2024 IPCS Order* demonstrates a need to account for such costs in the form of a separate rate additive. Because we adopt and implement that rate additive in today's Order, those costs are now recovered outside of the rate caps, which in turn removes any need to account for them when developing our estimate of industry average IPCS costs. We therefore exclude such costs from the upper bounds we establish today.

61. In light of the foregoing, and after adding the new size tier for ''extremely small jails,'' we calculate the upper bounds for interim audio and video IPCS rate caps for each tier as follows:

- *Prisons:* $0.094 per minute for audio communications and $0.470 per minute for video communications;
- *Large Jails:* $0.086 per minute for audio communications and $0.327 per minute for video communications;
- *Medium Jails:* $0.097 per minute for audio communications and $0.259 per minute for video communications;
- *Small Jails:* $0.108 per minute for audio communications and $0.230 per minute for video communications;
- *Very Small Jails:* $0.128 per minute for audio communications and $0.263 per minute for video communications; and
- *Extremely Small Jails:* $0.168 per minute for audio communications and $0.436 per minute for video communications.

62. *Determining the Lower Bounds.* The second step of our rate cap setting process is to establish lower bounds of our zones of reasonableness. To reach the lower bounds, we incorporate the results of the upper bound analysis and make reasonable adjustments beyond those applied to reach our upper bounds. Our approach to these adjustments largely follows that taken by the Commission in the *2024 IPCS Order,* with the exception that we incorporate all reported safety and security costs in the industry costs we use to calculate the lower bounds.

63. As explained above, and upon reconsideration, we now incorporate the five previously excluded categories of safety and security costs in the lower bounds, which includes costs for: Category 2 (Law Enforcement Support Services); Category 4 (Communication Recording Services); Category 5 (Communication Monitoring Services); Category 6 (Voice Biometric Services); and Category 7 (Other Safety & Security Services). Including these costs increases industry-wide total costs in the lower bounds by approximately $346 million. Because we find that the data collected by the categorical approach the Commission took in 2024 did not offer sufficient precision to allow the Commission to exclude entire categories without risking providers' and facilities' ability to provide and/or fund IPCS and the necessary safety and security services, we take the conservative approach to include all such reported costs in our lower bounds.

64. Apart from the inclusion of safety and security costs in the lower bounds, the remaining steps and adjustments we take today replicate those taken in 2024. To be clear, the components of the lower bounds continue to incorporate reported ancillary service charge costs and an estimate of providers' TRS-related costs, both of which were also included in the upper bounds. As we describe in Appendix D, the adjustment we make to the reported weighted average cost of capital lowers the net sum of ancillary service expenses, although the total per minute allowance for recovery of these expenses is otherwise developed identically. This is the same approach the Commission took in 2024, to which no commenter objected. And, because we excluded an estimate of facility costs from the upper bound, we need no longer adjust the lower bound to remove them. In other words, because we adopt an external rate additive to ensure recovery of facilities' costs of making IPCS available, we no longer include any separate estimate of facility costs in our rate cap setting analysis.

65. We make two adjustments to the industry cost data. First, we adjust the weighted average cost of capital reported by certain providers to match the industry default of 9.75%. As explained in greater length in Appendix D, the net effect of this adjustment is to reduce reported costs by about $72.5 million industry-wide.

66. Second, we adjust Securus's reported video costs to bring Securus's costs in line with its competitors in the IPCS market and set Securus's video IPCS cost per minute equal to the weighted average for all other providers offering video IPCS. We complete the adjustment by reducing Securus's cost per-minute data reported for each facility by the appropriate relative percentage. Without adjustment, the per-minute video IPCS costs reported by Securus in the 2023 Mandatory Data Collection are between {[REDACTED]} times the average of the rest of the industry. Given its size, Securus should be able to ''achieve economies of scale'' by ''spread[ing] its fixed costs over a relatively large portfolio of contracts relative to other providers.'' Notably, these economies of scale are present in Securus's reported cost data for audio IPCS but not for video IPCS. While

Securus argues that the Commission should set interim rates that reflect their costs as reported in the data collection and not future expectations of costs, we find it inappropriate to set rates based on cost data that is heavily ''skewed by one provider's outsized investment in upfront costs for a nascent service offering.'' Therefore, we find it reasonable to adjust Securus's video IPCS costs to align with IPCS industry costs for the purposes of calculating interim video rate caps.

67. Separate from its video IPCS cost data, Securus's reported video safety and security cost data are also significantly higher than the rest of the industry. Given the inclusion of all safety and security costs in the lower bounds we establish here, including those for video IPCS, we extend our adjustment of Securus's video IPCS costs to include its video safety and security costs. Failure to do so would perpetuate the distortions caused by Securus's extremely high video costs, which would ''significantly skew the industry average'' on which we base our interim video IPCS rate caps. Further, not extending our adjustment to Securus's video safety and security costs would also be inconsistent with our adjustment to other costs, including our adjustment to weighted average cost of capital costs, which applies to both IPCS and safety and security costs.

68. Following the aforementioned steps, including adding all reported safety and security costs upon reconsideration, and adding the new ''extremely small jail'' tier, we calculate the lower bounds for interim audio and video IPCS rate caps as follows:

- *Prisons:* $0.086 per minute for audio communications and $0.214 per minute for video communications;
- *Large Jails:* $0.079 per minute for audio communications and $0.156 per minute for video communications;
- *Medium Jails:* $0.091 per minute for audio communications and $0.161 per minute for video communications;
- *Small Jails:* $0.103 per minute for audio communications and $0.174 per minute for video communications;
- *Very Small Jails:* $0.124 per minute for audio communications and $0.216 per minute for video communications; and
- *Extremely Small Jails:* $0.163 per minute for audio communications and $0.390 per minute for video communications.

3. Determining Interim Rate Caps for Audio IPCS and Video IPCS

69. Based on the available information and on the changes outlined above regarding billed and unbilled minutes, the adoption of a new ''extremely small jail'' tier, and the incorporation into the lower bounds of all safety and security costs as reported, we find that the following rate caps based on the zone of reasonableness for each tier of facilities will provide just and reasonable rates while ensuring fair compensation. We establish these rate caps based on our examination of the developing record, the available data, and the Commission's experience regulating the IPCS marketplace. These rate caps are interim in nature given the need to conduct an additional industry data collection that will capture, particularly for the evolving video IPCS market, more mature market characteristics that will provide a sufficient basis for the establishment of permanent IPCS rate caps. These interim rate caps and rate additives will serve to ensure that the demonstrated benefits of increased communication in the carceral setting—reduced recidivism, increased public safety and strengthened family ties—will not be jeopardized by unintended implementation challenges.

70. *Setting Interim Audio Rate Caps.* We begin by setting our audio rate caps at the lower bounds of the zones of reasonableness, and rounding to the nearest whole cent for each tier. At the outset, we note that the upper and lower bounds for audio rates differ by relatively small margins; at no tier do they differ by more than $0.01. The audio caps we set at each tier are as follows:

Table 5: Interim Audio IPCS Rate Caps and Rate Additive

Tier	Audio Lower Bound	Audio Rate Cap*	Audio Upper Bound	Audio Cost Additive	Effective Audio Rate Cap*
Prisons (any ADP)	$0.086	**$0.09**	$0.094	$0.02	$0.11
Large Jails (1,000 +)	$0.079	**$0.08**	$0.086	$0.02	$0.10
Med. Jails (350-999)	$0.091	**$0.10**	$0.097	$0.02	$0.12
Small Jails (100-349)	$0.103	**$0.11**	$0.108	$0.02	$0.13
Very Small Jails (50-99)	$0.124	**$0.13**	$0.128	$0.02	$0.15
Extremely Small Jails (0-49)	$0.163	**$0.17**	$0.168	$0.02	$0.19

Source: Appendix D. * Audio rate caps include adjustment for inflation.

71. The lower bounds are the appropriate starting points when setting the audio IPCS rate caps, for many of the reasons that drove the Commission's rate cap setting decisions in the *2024 IPCS Order.* First, the collected data reflect ''total industry reported costs which exceeded total industry revenues by $219 million;'' a mismatch which continues to strongly suggest that reported costs are overstated. The difference between total industry revenues and costs does not, by itself, undermine the reasonableness of the interim rate caps we set here given that we are unable to ascertain and quantify the factors driving this difference in the dataset. We will seek additional clarity on this question in the forthcoming mandatory data collection that will be the basis for the Commission's adoption of permanent rate caps. While we nonetheless find these cost data provide a valid basis on which to set rates, they suggest that setting rate caps based initially on our lower bounds will ensure just and reasonable rates and fair compensation for providers. Second, our analysis of the cost data still suggests that several providers have reported ''substantial amounts of goodwill,'' which resulted in large allocations of reported costs to IPCS activities. As the Commission did in 2024, we again decline to introduce an adjustment to reported costs on this basis. Continued inclusion of these goodwill amounts argues in favor of calculating our rate caps based initially on the lower bounds we have set. As the Commission noted in 2024, these goodwill allocations ''tend to inflate reported costs'' and therefore support our reliance on the lower bounds as the initial step of our rate setting process.

72. Choosing to set interim audio rate caps based on the lower bounds also is justified by the fact that the largest adjustment we make—the inclusion of all reported safety and security costs in our calculation of the lower bounds—may include some costs that are only marginally related to the provision of IPCS. Although we describe above why the categorical exclusion of safety and security costs failed to adequately provide fair compensation for facilities and providers, it is just as important to note that the wholesale inclusion of all reported safety and security costs may be overbroad. Consequently, taking all such costs as reported should also tend to result in a conservative estimate of IPCS costs, further supporting the use of the lower bounds as a basis for setting interim rate caps.

73. Record evidence received since the *2024 IPCS Order* was adopted also

supports our interim audio rate caps. As the record illustrates, providers have contracted to provide audio IPCS at lower rates in some circumstances. For example, both New York and California contracted to provide audio IPCS to their respective state prison systems at a lower rate. While the rates charged in these instances support our use of the lower bounds in setting our rate caps, they are rates paid by facilities directly to providers and are therefore not directly comparable to the interim consumer rate caps we adopt here. Although we cannot evaluate these prices in the abstract without a complete understanding of the contractual relationships between the parties, they nonetheless provide additional evidence in favor of adopting audio rate caps at the lower bounds.

74. After deciding to set audio IPCS rate caps based on the lower bounds, we use the standard rounding rule, in order to set caps at the whole cent. We find that setting rate caps at the whole cent will reduce confusion and complexity, and result in rate caps which can be more easily understood and used by consumers. While rounding a lower bound downward (or upward) can result in a rate cap that technically falls below a lower bound (or above an upper bound), our use of standard rounding principles is a statistically defensible process that yields interim rate caps that remain consonant with our zone of reasonableness approach. (Our use of a factor to estimate the effects of inflation on the 2022 cost data is intended to reflect a separate dynamic in our ratesetting process and does not impact the validity of our standard rounding rule.) Additionally, rounding to the nearest whole cent avoids conveying a false sense of precision, given the limitations of the data, and facilitates the administration of and provision of IPCS. Further, by the very nature of the rounding process, the differences between the audio rate caps we now adopt and the lower bounds which we have calculated are *de minimis* and therefore will not result either in unjust rates or unfair compensation for providers. The audio rate caps we adopt today are above the caps adopted in the *2024 IPCS Order,* reflecting a more comprehensive accounting of IPCS costs, thereby ensuring that, even for marginal cases, providers should be more than able to recover their costs. To the extent that a provider with exceptionally high costs can demonstrate that its costs exceed the interim audio and video rate caps we adopt today, it may use the Commission's waiver process.

75. Finally, the rate caps we set today are interim in nature given remaining outstanding questions we have with the dataset we use (goodwill costs, excess of costs over revenues industry-wide, inconsistent allocation practices, etc.) and given the continued evolution of the IPCS market. Likewise, interim caps are particularly appropriate until we can better isolate and analyze the costs of safety and security measures. Rather than the permanent caps adopted in the *2024 IPCS Order,* today's audio rate caps are designed to be temporary in nature thus helping reduce concerns about their levels which the Commission has already committed to revisit in the relatively near future on the basis of additional data.

76. *Setting Interim Video IPCS Rate Caps.* We find that the lower bounds are also the appropriate starting points when setting interim video IPCS rate caps, for many of the same reasons we have used the lower bounds as the starting point for setting interim rate caps for audio IPCS. We find that setting the interim video rate caps based on the lower bounds of the video zones of reasonableness gives appropriate weight to a range of factors, as described below. The video rate caps we set at each tier are as follows:

Table 6: Interim Video IPCS Rate Caps and Rate Additive

Tier	Video Lower Bound	Interim Video Rate Cap*	Video Upper Bound	Interim Facility Cost Additive	Effective Interim Video Rate Cap*
Prisons	$0.214	**$0.23**	$0.470	$0.02	$0.25
Large Jails	$0.156	**$0.17**	$0.327	$0.02	$0.19
Medium Jails	$0.161	**$0.17**	$0.259	$0.02	$0.19
Small Jails	$0.174	**$0.19**	$0.230	$0.02	$0.21
Very Small Jails	$0.216	**$0.23**	$0.263	$0.02	$0.25
Extremely Small Jails	$0.390	**$0.42**	$0.436	$0.02	$0.44

Source: Appendix D. * Video rate caps include adjustment for inflation.

77. We identify certain factors that support setting video IPCS rate caps based on the lower bounds, including several that dovetail with those referenced above in the discussion of our audio IPCS rate caps, as well as with those the Commission relied on in 2024. In particular, we reiterate that including all safety and security costs is generally conservative, and that providers have a natural incentive to overreport their IPCS cost data. Additionally, given the nascent nature of the video IPCS market, substantial initial investments in fixed assets are typical and are evident in our record, which gives us further confidence that relying on our lower bounds to set video IPCS rate caps will result in rate caps that are just and reasonable and fairly compensatory. Finally, given the inclusion of all safety and security costs in the lower bounds and the removal of facility costs from our rate cap analysis, the video rate caps we adopt today are above the corresponding rate caps adopted in the *2024 IPCS Order,* ensuring that providers should be able to recover their costs. We acknowledge that the adjustment we apply to Securus's video expenses reduces the lower bounds for video IPCS. For the aforementioned reasons, however, we find that relying on that adjustment does not undermine our reliance on our lower bounds as the basis for setting rate caps.

78. We continue to adopt video rate caps on an interim basis, as the Commission did in the *2024 IPCS Order.* The same considerations which led us to adopt interim audio IPCS rate caps today support the adoption of interim video IPCS rate caps. Further, the interim nature of the video rate caps will allow the Commission to monitor the evolving nature of the video IPCS industry. As an emerging segment of the IPCS industry, we expect that the per minute costs reflected in the 2023 Mandatory Data Collection would normally fall over time as the industry matures. As with the interim audio rate caps we set today, our interim video caps will be revisited going forward on the basis of additional data and input from stakeholders generally.

79. *Inflation factor.* Securus contends that the interim IPCS rate caps we adopt in this Order should be adjusted for inflation as these rate caps are based on provider cost data from calendar year 2022. It proposes an inflation adjustment factor of 11.6% using the Telecommunications Producer Price Index (Telecom PPI). We agree that the interim rate caps should be adjusted to account for inflation since 2022 but do not choose to rely on Securus's method of calculating the adjustment. Securus relies on the Telecom PPI but IPCS providers' investments and expenses reflect a mix of assets and business activities that is not purely a telecommunications service. For example, the provision of IPCS safety and security measures, which accounts for roughly one-third of all industry costs, aligns as much with the information technology and systems software sectors as it does with telecommunications. Similarly, the costs reported by providers like Securus also include significant hardware investments, particularly in tablets used for video IPCS and other non-IPCS services. Using a broader index like the Gross Domestic Product Price Index (GDP–PI) to estimate an inflation adjustment factor would arguably be more applicable to the relatively diverse mix of costs IPCS providers typically incur. The Commission has a long history of relying on broad measures of inflation including, for example, use of the GDP–PI to adjust the Price Cap Index used as part of the *ex ante* rate-setting methodology that limits certain interstate access rates that incumbent local exchange carriers subject to the

Commission's price cap and incentive regulation rules may charge. Moreover, Securus does not explain or justify the starting point for its calculation. Nor could we confirm the initial figure Securus cites (104.25) in its calculation in the Telecom PPI series published by the Bureau of Labor Statistics (BLS).

80. We therefore find it more appropriate to use the GDP–PI figure for the 4th quarter 2022, 120.175, as the starting point (*i.e.,* time zero or baseline figure) and the GDP–PI figure for the 2nd quarter 2025, the most recent figure published by the Bureau of Economic Analysis (BEA), 128.266, as the ending point to calculate an inflation adjustment factor. Our use of these two factors produces an inflation adjustment factor of 6.73%. We apply this factor to the lower bounds before rounding from three to two decimal places, and then we round the products of these calculations to two decimal places to produce the final rate caps. We also note that when the Commission incorporates an estimate of inflation in a ratesetting process, it also typically includes an offsetting estimate of productivity, which we do not attempt here given the relative lack of productivity data specific to the IPCS industry.

C. Other Matters

1. Data Collection

81. We reaffirm the Commission's prior delegation of authority to WCB and OEA to conduct an additional data collection to enable the Commission to set permanent rate caps for both audio and video IPCS. That delegation included a direction to WCB and OEA to determine the timing and scope of the data collection, ''provided that such collection shall be conducted as soon as practicable.'' Parties have underscored the importance of conducting a data collection without further delay. Given the time that has elapsed since the most recent mandatory data collection, the evolution of the market in the interim, and the importance of establishing permanent IPCS rate caps without undue delay, we now direct WCB and OEA to conduct a data collection following the conclusion of the Further Notice comment period with the goal of establishing permanent rate caps before the end of the first quarter of 2027. We reiterate our delegation of authority to WCB and OEA to make any appropriate modifications to the structure of the collection and the template and instructions for the collection necessary to provide the Commission an objective basis to establish permanent IPCS rate caps.

2. Cost Benefit Analysis

82. We perform an analysis of the relative costs and benefits of establishing new, interim audio and video IPCS rate caps. We expect that the benefits of adopting new, interim audio rate caps that are lower than the rate caps currently in effect, and establishing new interim video rate caps, will far exceed the implementation costs over a five-year time horizon. The net welfare gain to IPCS consumers alone is sufficient to ensure that the benefits of our actions exceed the costs. The other salutary effects of higher IPCS call volume—greater family stability, improved mental health, and lower recidivism and crime—will further expand these benefits.

83. *Upward Revision of IPCS Demand Price Elasticity.* Commission staff previously estimated a price elasticity of demand for inmate calling services of −0.3 based on empirical evidence of the responsiveness of inmate calling volumes to price declines. The record at the time included five estimates of demand elasticity which ranged from −0.38 to −0.29. The Commission selected a demand elasticity estimate effectively at the lower end of this range as a conservative estimate. A more recent empirical study estimates a higher IPCS price elasticity of demand of between −0.55 and −0.69, a range with a midpoint of −0.62. The authors computed the demand elasticity as the implied rate of a 15-minute call fell from $2.30 to $0.72 in New York and from $4.95 to $0.66 in New Jersey. We find that the increase identified by this study more accurately reflects the surge in call volume from unleashing the pent-up demand of inmates who had previously either called less than desired or not at all. Indeed, Miller et al. found that the average number of calls per inmate/per month increased from 8.82 to 15.86 in New York and from 8.32 to 27.00 in New Jersey, a near-doubling and tripling, respectively, of incarcerated people call volume. Miller et al. also developed a model using pooled New York and New Jersey data that showed rate elasticities of demand are higher at higher rates. Massachusetts sheriffs also witnessed a significant surge in demand when the price of inmate calling was lowered. The literature corroborates the higher elasticity: typical basic telephone demand price elasticities in developed countries range between −0.1 to −0.5 for local calls, −0.2 to −0.5 for long distance calls, and −0.2 to −1.5 for international calls. The price elasticity estimated by Miller, et al. is only slightly higher in absolute terms. This difference might be attributable to the higher incidence of youth or poverty among inmates. Studies have shown price elasticities are highest among the youngest and poorest customers. Another possible explanation is that Miller, et al. are estimating a blended elasticity for all calls, which would be higher because of the inclusion of the relatively more elastic international call volume (*i.e.,* their price elasticity is tantamount to a weighted average). We therefore revise our previous demand elasticity estimate and rely on a price elasticity of demand of −0.6 to estimate consumer welfare effects.

84. *Gain in IPCS Consumer Welfare.* Using our revised IPCS price elasticity of demand, we estimate a net increase in IPCS caller welfare of nearly $14 million annually, for a net present value of $64 million over a five-year period. $64 million is the present value of a five-year stream of $14 million payments discounted at an OMB recommended rate of 3%. Worth Rises also estimates higher elasticity for IPCS, although it does so by comparing the rates adopted here to those adopted in the *2024 IPCS Order* instead of those currently in force.

85. *Other Salutary Effects of Increased IPCS Call Volume.* The anticipated expansion in IPCS call volume due to the new, interim rate caps that are lower than the rate caps currently in effect should generate salutary effects similar in nature to those discussed in prior Commission orders, namely facilitating inmate re-entry, reducing recidivism and crime, diminishing costly foster-child care placements, and improving the mental health outcomes of inmates and their families.

86. *Costs of Implementing New IPCS Rates.* We previously estimated that implementing new IPCS rates would cost IPCS providers a one-time expense of $14 million in order to revise audio and video contracts to reflect the new rate caps. To account for unanticipated challenges faced by IPCS providers to implement the changes, including substantial admin costs, we revise our estimate upward by 50%, for a total of $21 million. For the sake of direct comparison with estimated annual benefits, this one-time cost averages to $2.8 million per year over five years. The revised IPCS rates stipulated in this Order will not alter estimated contract revision costs.

3. Effective Date and Compliance Date

87. We find good cause to make our rules effective on publication in the **Federal Register**. The Administrative Procedure Act ordinarily requires notice of a rule ''not less than 30 days before

its effective date,'' subject to exceptions, including ''as . . . provided by the agency for good cause.'' Here, there is good cause to make the rules we adopt effective immediately upon publication. The Martha Wright-Reed Act required the Commission to promulgate implementing rules not more than 24 months after the Act's enactment, or by January 5, 2025. The Commission adopted implementing rules in the *2024 IPCS Order,* but as previously discussed, those rules had unintended consequences that prompted us to revisit them soon after (and before widespread compliance). Because we are making fundamental changes to those rules—including superseding the rate caps themselves—we conclude that there is still a reason for urgency. Therefore, consistent with Congress's direction to move quickly and avoid unnecessary delay, we make this Order effective on publication of notice in the **Federal Register**.

88. At the same time—and to avoid any risk of prejudice from our determination to make the new rules effective immediately upon publication of notice in the **Federal Register**—we do not require compliance with the new interim audio and video IPCS rate caps and rate additive adopted in this Order until 120 days after the date of **Federal Register** notice. This will allow providers, correctional institutions, and state and local governments sufficient time to conduct any negotiations and administrative steps that may be necessary to implement the new rate caps and rate additive. The Commission's release of proposed orders three weeks in advance of their consideration at the Commission's monthly open meetings and the additional time inherent in the **Federal Register** publication process provide additional reasons why we believe this deferred effective date gives providers and facilities reasonable time to implement the revised interim rate caps and rate additive. We find that deferring the compliance date until after the effective date, as the Commission previously did in the *2024 IPCS Order,* will best balance the interests in fulfilling Congress's intent to ensure implementation of the Martha Wright-Reed Act without undue delay, while at the same time allowing parties sufficient time to implement these changes.

89. The compliance date, 120 days after publication in the **Federal Register**, represents the ''alternative date the Commission sets as part of further action in the IPCS proceeding,'' as anticipated in the *2025 IPCS Waiver Order* and therefore supersedes the April 1, 2027 compliance deadline previously established in that order. While not directly responding to the Application for Review filed by the Public Interest Parties, by superseding the April 1, 2027 compliance date of the *2025 IPCS Waiver Order,* the Commission effectively provides the substance of the relief sought in that filing. The compliance date of this Order therefore becomes the date on which compliance will be required for the three rules temporarily suspended in the *2025 IPCS Waiver Order*—the IPCS interim rate caps (as modified herein), the prohibition on the payment of site commissions, and the per-minute rate requirement for IPCS offerings. The compliance date of this Order, which supersedes the extended deadline for compliance with the Commission's per minute rate rules set by the *2025 IPCS Waiver Order,* works in conjunction with deadlines previously set for compliance by two other recent Bureau orders. The effective date of this Order will provide Securus the additional time it requested to implement the per-minute rate requirement for its video IPCS in the *ex parte* it filed in this proceeding on June 27, 2025. The compliance date for this Order supersedes and effectively extends the waiver relief previously granted Securus by the Bureau. We do not modify waiver relief previously granted TKC Telecom, which extended its compliance with the per-minute pricing rule for its video IPCS until April 1, 2026. This compliance date will approximate the latest of the staggered compliance dates established by the *2024 IPCS Order* and the deferred compliance dates set by WCB in granting waivers of the per-minute pricing rule for video IPCS. Securus seeks additional time to implement the per-minute pricing rule, which we do not grant. While the Commission does not grant additional time for providers to meet the per-minute pricing rule, it reminds providers that they may seek a waiver of the Commission's rules on an as-needed basis.

IV. Procedural Matters

90. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA), requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that ''the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.'' Accordingly, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the possible impact of the rule changes contained in this Report and Order and this Order on Reconsideration on small entities. The FRFA is set forth in section V below.

91. *Paperwork Reduction Act.* This document does not contain proposed information collections subject to the Paperwork Reduction Act of 1995 (PRA), 44 U.S.C. 3501–3521. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, 44 U.S.C. 3506(c)(4).

92. *Congressional Review Act.* The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget concurs, that this Report & Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking is non-major under the Congressional Review Act, 5 U.S.C. 804(2). The Commission will send a copy of this Report & Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking to Congress and the Government Accountability Office pursuant to 5 U.S.C. 801(a)(1)(A).

93. *Providing Accountability Through Transparency Act.* Consistent with the Providing Accountability Through Transparency Act, Public Law 118–9, a summary of the *2025 IPCS NPRM* will be available on *https://www.fcc.gov/proposed-rulemakings.*

94. *OPEN Government Data Act.* The OPEN Government Data Act requires agencies to make ''public data assets'' available under an open license and as ''open Government data assets,'' *i.e.,* in machine-readable, open format, unencumbered by use restrictions other than intellectual property rights, and based on an open standard that is maintained by a standards organization. This requirement is to be implemented ''in accordance with guidance by the Director'' of OMB. The term ''public data asset'' means ''a data asset, or part thereof, maintained by the Federal Government that has been, or may be, released to the public, including any data asset, or part thereof, subject to disclosure under the Freedom of Information Act (FOIA).'' A ''data asset'' is ''a collection of data elements or data sets that may be grouped together,'' and ''data'' is ''recorded information, regardless of form or the media on which the data is recorded.'' We delegate authority to the Wireline Competition Bureau, in consultation with the agency's Chief Data and Analytics Officer and after seeking public comment to the extent it deems appropriate, to determine whether any

data assets maintained or created by the Commission pursuant to the rules adopted in the *2025 IPCS Order* are ''public data assets'' and if so, to determine when and to what extent such information should be published as ''open Government data assets.'' In doing so, WCB shall take into account the extent to which such data assets should not be made publicly available because they are not subject to disclosure under the Freedom of Information Act. *See, e.g.,* 5 U.S.C. 552(b)(4), (6)–(7) (exemptions concerning confidential commercial information, personal privacy, and information compiled for law enforcement purposes, respectively). We also seek comment in the *2025 IPCS Notice* on whether any of the information proposed to be collected in the Notice would constitute ''data assets'' for purposes of the OPEN Government Data Act and, if so, whether such information should be published as ''open Government data assets.''

95. *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer and Governmental Affairs Bureau at 202–418–0530.

96. *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be publicly available online via ECFS.

97. *Further Information.* For further information, contact Shabbir Hamid, at (202) 418–2328 or *Shabbir.Hamid@fcc.gov* or *IPCS@fcc.gov.*

V. Final Regulatory Flexibility Analysis

98. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Federal Communications Commission (Commission) incorporated Initial Regulatory Flexibility Analyses (IRFAs) in the *Incarcerated People's Communications Services; Implementation of the Martha Wright-Reed Act*; *Rates for Interstate Inmate Calling Services, Further Notice of Proposed Rulemaking* (*2024 IPCS Notice*), released in July 2024), in the Notice of Proposed Rulemaking (Notice) in WC Docket Nos. 23–62 and 12–375 (released in March 2023), in the Sixth Further Notice of Proposed Rulemaking in WC Docket No. 12–375 (released in September 2022), and in the Fifth Further Notice of Proposed Rulemaking in WC Docket No. 12–375 (released in May 2021). The Report and Order and Order on Reconsideration continue ongoing efforts to reform providers' rates, charges, and practices in connection with incarcerated people's communication services. The Report and Order and Order on Reconsideration also address issues raised in the Petition for Reconsideration of Network Communications International Corp. The Commission sought written public comment on the proposals in those notices, including comment on the IFRA. No comments were filed addressing the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA and it (or a summary thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Rules

99. The Report and Order and Order on Reconsideration modify the incarcerated people's communications services (IPCS) regulatory framework, changing the methodology for calculating IPCS rate caps and adopting revised, interim audio and video IPCS rate caps that address unintended consequences of the Commission's *2024 IPCS Order.* These actions ensure rates and charges for incarcerated people's audio and video communications services are just and reasonable and IPCS providers are fairly compensated.

100. The Report and Order and Order on Reconsideration alters the ratesetting methodology used in the *2024 IPCS Order* by: (1) excluding the use of unbilled minutes of use in calculating per-minute rate caps; (2) establishing a new rate cap tier for extremely small jails; (3) including previously excluded safety and security costs from rate cap calculations; and (4) removing an estimate of correctional facilities' costs from the rate caps and creating a separate rate additive to account for those costs. In the Report and Order and Order on Reconsideration, the Commission adopts interim rate caps for all intrastate and interstate audio IPCS and video IPCS and revises the existing dates for providers' compliance with the Commission's rules. The goal of the Report and Order and Order on Reconsideration is to properly balance the Commission's implementation of the dual statutory mandates—just and reasonable rates for consumers and fair compensation for providers—and thereby ensure the continued availability of IPCS to incarcerated people and preserve correctional officials' ability to provide safe and secure access to IPCS.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

101. No comments were filed addressing the impact of the proposed rules on small entities.

C. Response to Comments by the Chief Counsel for the Small Business Administration Office of Advocacy

102. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for the Small Business Administration Office of Advocacy (SBA), and also provide a detailed statement of any change made to the proposed rules as a result of those comments. The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

103. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the rules they adopt. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act (SBA). A ''small business concern'' is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. The SBA establishes small business size standards that agencies are required to use when promulgating regulations relating to small businesses; agencies may establish alternative size standards for use in such programs, but must consult and obtain approval from SBA before doing so.

104. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe three broad groups of small entities that could be directly affected by our actions. In general, a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses. Next, ''small organizations'' are not-for-profit enterprises that are independently owned and operated and are not dominant in their field. While we do not have data regarding the number of non-profits that meet that criteria, over 99 percent of nonprofits have fewer than 500 employees. Finally, ''small governmental jurisdictions'' are defined as cities, counties, towns, townships, villages, school districts, or special districts with populations of less

than fifty thousand. Based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 out of 90,835 local government jurisdictions have a population of less than 50,000.

105. The rules adopted in the Report and Order and Order on Reconsideration will apply to small entities in the industries identified in the chart below by their six-digit North American Industry Classification System (NAICS) codes and corresponding SBA size standard. Based on currently available U.S. Census data regarding the estimated number of small firms in each identified industry, we conclude that the new rules will impact several small entities. Where available, we also provide additional information regarding the number of potentially affected entities in the identified industries below.

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Table 1: 2022 U.S. Census Bureau Data by NAICS Code

Regulated Industry (Footnotes specify potentially affected entities within a regulated industry where applicable)	**NAICS Code**	**SBA Size Standard**	**Total Firms**	**Total Small Firms**	**% Small Firms**
All Other Telecommunications	517810	$40 million	1,673	1,007	60.19%
Wired Telecommunications Carriers	517111	1,500 employees	3,403	3,027	88.95%
Wireless Telecommunications Carriers (except Satellite)	517112	1,500 employees	1,184	1,081	91.30%
Telecommunications Resellers	517121	1,500 employees	955	847	88.69%

Table 2: Telecommunications Service Provider Data

2024 Universal Service Monitoring Report Telecommunications Service Provider Data (Data as of December 2023)	SBA Size Standard (1500 Employees)		
Affected Entity	**Total # FCC Form 499A Filers**	**Small Firms**	**% Small Entities**
Competitive Local Exchange Carriers (CLECs)	3,729	3,576	95.90
Incumbent Local Exchange Carriers (Incumbent LECs)	1,175	917	78.04
Interexchange Carriers (IXCs)	113	95	84.07
Local Exchange Carriers (LECs)	4,904	4,493	91.62
Local Resellers	222	217	97.75
Other Toll Carriers	74	71	95.95
Payphone Service Providers	28	24	85.71
Toll Resellers	411	398	96.84
Telecommunications Resellers	633	615	97.16
Wired Telecommunications Carriers	4,682	4,276	91.33
Wireless Telecommunications Carriers (except Satellite)	585	498	85.13

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E. Description of Economic Impact and Projected Reporting, Recordkeeping and Other Compliance Requirements for Small Entities

106. The RFA directs agencies to describe the economic impact of the adopted rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record.

107. IPCS providers that qualify as small entities should be positively impacted by the modifications made in the calculation of IPCS rate caps. Those changes include the incorporation of five additional safety and security costs in the rate caps, helping to ensure that IPCS providers, and particularly smaller IPCS providers, recover their costs and therefore receive fair compensation. The Commission also determined that only billed minutes will be used to calculate

interim rate caps, which will help ensure that small and other providers will be fairly compensated. The creation of a new rate cap tier for extremely small jails (0–49 average daily population or ADP) is specifically designed to ensure that the predominantly smaller providers that serve the smallest jails, which the Commission's data collection show tend to have higher per-minute costs, will be able to recover their costs of service.

108. Additionally, the creation of a $0.02 per-minute interim rate additive to account for costs that facilities incur in making IPCS available will ensure the adopted IPCS rates allow smaller correctional institutions to be better able to recover those costs. Setting the effective date of the joint Report and Order and Order on Reconsideration at the date of its publication in the **Federal Register** but adding a separate compliance date at 120 days post-publication of the item in the **Federal Register**, instead of the April 1, 2027 date established in the *2025 Waiver Order,* will give small and other providers a reasonable time frame to adapt to the new rates and ensure compliance burdens for small entities are reasonable. Additional resources or personnel should not be required to effectuate these changes because IPCS providers should already be familiar with how to adjust their systems to effectuate new rate caps and should be able to make the necessary operational changes.

F. Discussion of Steps Taken To Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

109. The RFA requires an agency to provide, ''a description of the steps the agency has taken to minimize the significant economic impact on small entities . . . including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.''

110. In the Report and Order and Order on Reconsideration, the Commission took several steps to minimize the economic impact of its IPCS regulations on small entities. First, the item modifies existing rate caps by including additional safety and security costs in the rate cap calculations which will minimize the chance that providers, particularly smaller providers with generally higher per-minute costs, will not be able to recover their costs. The Commission also adopts a new rate cap tier that provides additional differentiation between five different sizes of jails—large, medium, small, very small, and extremely small—based on ADP. The use of five different size tiers for jails is supported in the record and accounts for differences in costs incurred by providers serving these different facility sizes. Adding this extremely small jail tier minimizes the risk that providers, and smaller providers that typically serve smaller facilities, will not be able to recover their cost of service. However, we decline to adopt a proposed alternative to set an additional tier below extremely small because it would likely create a disproportionate compliance burden for jails with a lower ADP. Finally, instead of the approach adopted in the *2024 IPCS Order,* the Commission adopts a $0.02 per-minute rate additive to account for correctional facilities' IPCS costs, which will aid with cost recovery and minimize economic uncertainties faced by smaller correctional facilities when they make service available to their incarcerated populations.

Rate Cap Methodology

111. This appendix sets forth the Commission's revised methodology for setting just and reasonable and fairly compensatory rate caps for incarcerated people's communications services (IPCS). The appendix reflects our reassessment of the data and other information IPCS providers submitted to the 2023 Mandatory Data Collection in light of the expanded record developed in response to the *2024 IPCS Notice* and the NCIC Petition for Reconsideration of aspects of the *2024 IPCS Order.* Our reassessment relies on the same dataset that the Commission staff developed for the *2024 IPCS Order* (as described in Appendix D of that order) and, subject to the exceptions discussed below, adheres to the rate cap methodology set forth in Appendices E, F, H, and I of that order.

112. *Unit of Sale.* Our revised rate cap methodology relies on billed minutes of audio or video IPCS as the unit of sale to determine industry average costs per minute. Billed minutes refer to the number of audio and/or video IPCS minutes supplied during a year for which payment is demanded. Table 1 summarizes the billed and total audio and video IPCS minutes for each reporting provider, along with the percentage of total minutes that are billed and share of industry billed and total minutes for each provider.

113. The percentage of total IPCS minutes that are billed significantly differs between audio and video IPCS. Table 1 shows that 93.1% of all audio IPCS minutes are billed. Providers with the lowest percentages of billed audio minutes include {[REDACTED]}, {[REDACTED]}, {[REDACTED]}, and {[REDACTED]}. Three providers ({[REDACTED]}) report {[REDACTED]} of their audio minutes as billed. In contrast, only 72.5% of all video IPCS minutes are billed, with significant variation among providers ranging from {[REDACTED]}. {[REDACTED]} reports the lowest percent of billed video minutes at {[REDACTED]}, followed in increasing order by {[REDACTED]}, {[REDACTED]}, and {[REDACTED]}. Only two providers ({[REDACTED]}) report {[REDACTED]} of billed video minutes.

114. The industry share of billed versus total minutes across providers also varies between audio and video IPCS. Securus and ViaPath supply almost {[REDACTED]} of the industry's billed and total audio minutes, with Securus supplying more than a third and ViaPath supplying nearly half of industry audio minutes. ICSolutions has the third largest share of audio minutes at {[REDACTED]}, while the remaining nine providers account for less than {[REDACTED]} of the industry. As for video IPCS, ViaPath similarly supplies a large share of the billed and total minutes ({[REDACTED]}), but Securus, the second largest provider of video IPCS, supplies a much smaller share of respective industry billed and total video minutes ({[REDACTED]}) compared to audio IPCS minutes ({[REDACTED]}). HomeWAV, ICSolutions, and Pay Tel account for {[REDACTED]} of billed video minutes and {[REDACTED]} of total video minutes, respectively. The remaining five providers account for {[REDACTED]} of industry billed and total video minutes, respectively.

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Table 1: Billed and Total Audio and Video IPCS Minutes, By Provider

	Provider	Billed Minutes	Share of Industry Billed Minutes	Total Billed and Unbilled Minutes	Share of Industry Total Minutes	Share Billed Minutes of Total Minutes
Audio	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	HomeWAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Smart	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	TKC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}

	Industry	10,494,473,118		11,266,271,215		93.1%
Video	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	HomeWAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Smart	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	TKC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	407,122,234		561,373,604		72.5%

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

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115. *Separation into Tiers.* In setting rate caps in the *2024 IPCS Order,* the Commission adopted tiers for prisons and different sized jails (large, medium,

small, and very small) based on average daily population (ADP) data reported by providers. Our revised rate cap methodology adds a new rate cap tier for extremely small jails (0–49 ADP). The largest three jail tiers remain the same as those adopted in the *2024 IPCS Order:* large jails (ADP ≥ 1,000); medium jails (350 ≤ ADP < 1,000); and small jails (100 ≤ ADP < 350). We divide the very small jail category, originally including all jails with an ADP of less than 100, into two jail tiers: very small jails (50 ≤ ADP < 100) and extremely small jails (ADP < 50). Jails with an ADP below 100 include a disproportionally large number of facilities with disparate demand and cost characteristics. Table 2 sets out summary statistics for audio and video IPCS for each rate tier as well as the industry as a whole. There are 534 very small jails and 881 extremely small jails, or 1,415 facilities, out of the 4,149 total facilities that provide access to audio IPCS. As for video IPCS, there are 325 very small and 259 extremely small jails, or 684 facilities out of 2,234 total facilities that provide access to video IPCS. The very small and extremely small jail tiers not only comprise a significant proportion of these facilities, but also of total industry video IPCS expenses. These tiers, however, account for a small share of total ADP (2.1% and 1.1% for audio and 2.2% and 0.7% for video, respectively) and billed minutes (1.7% and 0.9% for audio and 6% and 1.7% for video, respectively). Rate tiers for larger facilities account for all other ADP and billed minutes. For example, prisons account for a majority of ADP and billed minutes and nearly half of total audio IPCS expenses. For video IPCS, ADP and billed minutes are more dispersed among the largest four facility tiers, with prisons still retaining the majority of total ADP. Despite the small share of billed minutes and ADP of the extremely small jail tier, jails in that tier account for an outsized share of total IPCS expenses for both audio and video IPCS (8% for audio and 10.1% for video). This observation supports the disaggregation of the previous very small jail tier into the two new tiers we use in our revised rate cap methodology.

116. Additionally, Table 2 shows that the average costs of providing audio and video IPCS differed between very small and extremely small jails, further supporting our disaggregation of the former very small tier (ADP < 100) into two separate tiers. For example, the average per minute cost of providing audio IPCS in very small jails was $0.083 as compared to $0.115 for extremely small jails. For video IPCS, the average per minute cost of providing service in very small jails was $0.192 as compared to $0.282 for extremely small jails. The cost differences between these two sets of facilities support disaggregation of the former very small jail tier into two tiers to ensure our rate caps are just and reasonable and fairly compensate the providers serving these two sets of facilities.

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Table 2: Summary Statistics for Audio and Video IPCS, By Facility Type

	Facility Type	Facility Count	ADP	Share of ADP	Billed Minutes	Share of Billed Minutes	Total IPCS Expenses	Share of Total IPCS Expenses
Audio	Prisons	1,330	1,140,488	62.7%	6,309,115,632	60.1%	$153,526,350	46.4%
	Large Jails	120	218,291	12.0%	1,569,714,440	15.0%	$39,300,968	11.9%
	Medium Jails	414	235,731	13.0%	1,502,276,185	14.3%	$58,970,501	17.8%
	Small Jails	872	165,422	9.1%	833,730,354	7.9%	$52,339,244	15.8%
	Very Small Jails	534	38,560	2.1%	180,183,005	1.7%	$14,959,984	4.5%
	Extremely Small Jails	881	19,294	1.1%	99,453,502	0.9%	$11,426,685	3.5%
	Industry	4,151	1,817,786		10,494,473,118		$330,523,732	
Video	Prisons	633	624,765	56.7%	85,477,740	21.0%	$20,396,004	30.9%
	Large Jails	83	143,987	13.1%	60,592,951	14.9%	$9,241,790	14.0%
	Medium Jails	325	184,869	16.8%	123,825,773	30.4%	$15,226,764	23.1%
	Small Jails	624	117,241	10.6%	105,461,579	25.9%	$14,486,897	21.9%
	Very Small Jails	327	24,046	2.2%	24,444,147	6.0%	$4,698,191	7.1%
	Extremely Small Jails	260	7,257	0.7%	7,009,229	1.7%	$1,975,636	3.0%
	Industry	2,252	1,102,165		406,811,419		$66,025,282	

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs. We exclude facilities with no valid data entries for audio/video IPCS expenses, total audio/video minutes, ADP when the facility is a jail, and/or facility type. Total audio IPCS expenses are unadjusted and do not include TRS or facility additives.

117. *Upper Bound Analysis.* We again establish zones of reasonableness, separately for audio and video IPCS and for each facility tier, and determine interim audio and video IPCS rate caps using these zones. The upper bounds of our zones of reasonableness incorporate four distinct per-minute expense components: (1) audio/video IPCS expenses; (2) audio/video safety and security expenses; (3) ancillary service expenses; and (4) a telecommunications relay services (TRS) allowance. These bounds are calculated in the same manner as in the *2024 IPCS Order,* with two exceptions. First, as previously indicated, the unit of sale is now billed audio or video IPCS minutes of use rather than total billed and unbilled minutes as in the *2024 IPCS Order.* Second, we remove the correctional facilities' expense component previously included in the upper bounds in the *2024 IPCS Order* and do not consider it in the determination of our zones of reasonableness or our rate caps. Instead, we adopt a separate per-minute rate cap additive to allow for recovery of these expenses. We make this separation because, if a provider does not incur expenses by collecting monies from its customers and remitting those monies to the facility, the additive should not be included in its rate cap.

118. The per billed minute ancillary services expenses included in our rate cap calculations equal the sum of all ancillary service expenses divided by the sum of all billed audio and video minutes for providers that reported ancillary expenses. Those expenses total $0.013 per billed minute—an increase from the estimate of $0.011 per minute in the *2024 IPCS Order* that results from using billed, instead of total, minutes to calculate per billed minute expenses. The TRS per billed minute allowance ($0.002 per minute) remains unchanged from the *2024 IPCS Order.* Use of billed minutes instead of total minutes to calculate the TRS additive produces the same per minute figure when rounded to the third decimal place.

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Table 3: Upper Bound IPCS Expenses Per Billed Minutes, By Facility Type ($/Minute)

	Audio				**Video**			
	IPCS Expenses (1A)	**Safety and Security (2A)**	**(1A) + (2A)**	**Upper Bounds: (1A) + (2A) + $0.002 + $0.013***	**IPCS Expenses (1B)**	**Safety and Security (2B)**	**(1B) + (2B)**	**Upper Bounds: (1B) + (2B) + $0.002 + $0.013***
Prisons	0.024	0.054	0.079	0.094	0.242	0.213	0.455	0.470
Large Jails	0.025	0.046	0.071	0.086	0.154	0.158	0.312	0.327
Medium Jails	0.039	0.043	0.082	0.097	0.126	0.118	0.244	0.259
Small Jails	0.063	0.030	0.093	0.108	0.143	0.072	0.215	0.230
Very Small Jails	0.083	0.030	0.113	0.128	0.200	0.047	0.248	0.263
Extremely Small Jails	0.115	0.038	0.153	0.168	0.348	0.072	0.421	0.436

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs. Ancillary services additive calculated using the 2023 Mandatory Data Collection commission and revenue sharing Excel tab for ancillary services expenses totals.

* Per-minute additives for TRS ($0.002) and ancillary services ($0.013).

119. *Lower Bound Analysis.* We establish lower bounds for our zones of reasonableness by making reasoned adjustments to reported provider cost data, which we explain below. After the adjustments to certain expense categories, the lower bounds incorporate the following components of industry average expenses: (1) audio/video IPCS expenses; (2) audio/video IPCS safety and security expenses; (3) ancillary service expenses; and (4) a TRS allowance. The impact of the expense adjustments on the allowance for recovery of ancillary service expenses is again trivial, decreasing the lower bounds by $0.002 per minute (after rounding the upper- and lower-bound figures to the nearest third decimal place). Accordingly, the lower-bound allowance for recovery of ancillary services is $0.011 per billed minute.

120. *Weighted Average Cost of Capital and Tax-Deductible Interest Expense Adjustments.* In their 2023 Mandatory Data Collection submissions, Securus reported an {[REDACTED]} weighted average cost of capital (WACC), and ViaPath reported a {[REDACTED]} WACC for audio and video IPCS, safety and security measures, and ancillary services. In determining the lower bounds of our zones of reasonableness, we again adjust Securus's and ViaPath's claimed WACCs and Securus's claimed tax-deductible interest expense for the

same reasons and in the same manner as in the *2024 IPCS Order.* There are three steps to these adjustments. First, we replace Securus's and ViaPath's claimed WACC figures with the default WACC of 9.75% on their Excel templates to adjust their reported annual total expenses. Annual total expenses is the sum of annual operating expenses and annual capital expenses including a return on net capital stock to cover the cost of capital. Net capital stock is gross investment in assets, net of accumulated depreciation and amortization, accumulated deferred federal and state income taxes, and customer prepayments or deposits, plus an allowance for cash working capital. The Excel template uses formulas and investment, expense, and other inputs to calculate annual total expenses for audio IPCS, video IPCS, safety and security measures, and ancillary services at the company level and separately for audio IPCS and video IPCS at each facility. The WACC and tax-deductible interest expense are two of these inputs. The Excel template calculates return by multiplying net capital stock by the provider's claimed WACC or the default after-tax rate of return of 9.75%. Decreasing the WACC decreases the (dollar) return on net capital stock reflected in annual total expenses; at the same time, the lower return reduces taxable income, and thus the allowance for state and federal income taxes reflected in annual total expenses. Second, we replace the tax-deductible interest expense Securus reported for IPCS and IPCS-related services with a formula that multiplies Securus's return by 30%. This adjustment is consistent with the explanation provided by Securus in its Word supplement as to how it determined its tax-deductible interest expense. Use of this formula reduces the WACC adjustment's impact on Securus's annual total expenses because it reduces tax-deductible interest expense as return decreases, thereby increasing taxable income, and thus the allowance for state and federal income taxes. Third, we reduce the safety and security measure expenses these providers reported at the facility level by the same percentage by which these expenses are reduced at the company-wide level as a result of the WACC and tax-deductible interest expense adjustments.

121. The adjustments we make in this Order to Securus's and ViaPath's claimed WACCs and Securus's tax-deductible interest expense also have the effect of reducing these providers' claimed expenses for all seven categories of safety and security measures, as here we make no adjustment to remove any of these categories. Moreover, the adjustments we make here to Securus's WACC and tax-deductible interest expense are made prior to the adjustments we make below to bring Securus's video expenses in line with industry expenses (by disallowing a portion of Securus's claimed expenses for both video IPCS costs and video safety and security measure costs). In the *2024 IPCS Order,* the Commission disallowed five of the seven categories of safety and security measure expenses, but did so after making the corresponding WACC and tax-deductible interest expense adjustments to all seven categories of these providers' safety and security measure expenses. The Commission did not make an adjustment in the *2024 IPCS Order* to disallow any of Securus's claimed expenses within the two categories of safety and security measure for which it allowed recovery of expenses as a general matter. Accordingly, the adjustments we make here to Securus's and ViaPath's WACCs and Securus's tax-deductible interest expense on these providers' claimed safety and security measure expenses produce the same effect as the adjustments the Commission made in the *2024 IPCS Order,* prior to excluding five categories of safety and security measure expenses in the *2024 IPCS Order* and disallowing a portion of Securus's claimed expenses for safety and security measures in this Order.

122. Table 4 summarizes IPCS and safety and security expenses for audio and video IPCS before and after adjusting Securus's and ViaPath's WACC and Securus's tax-deductible interest expenses. Adjusting both providers' WACCs to 9.75% and Securus's tax-deductible interest expense results in total audio and video IPCS and safety and security expenses decreasing by about $60 million. The WACC and tax-deductible interest expense adjustments for Securus and the WACC adjustment for ViaPath also reduce Securus's and ViaPath's reported ancillary service expenses by approximately {[REDACTED]}, respectively. These adjustments are developed using the investment and expense data reported by these providers for ancillary services in their Company-Wide Information worksheets, as company-wide data are used to develop the allowance for recovery of ancillary services expenses. This reduction corresponds to a 6.2% decrease in total expenses for the industry. The total of the expenses reported separately by ICSolutions and ViaPath for the 22 facilities at which ICSolutions is the contractor and ViaPath is the subcontractor is reduced because of the adjustment to ViaPath's WACC, but the impact is limited. As shown in Table 4 below, of the $60 million total reduction in expenses associated with the WACC and tax-deductible interest expense adjustments, $54 million comes from a reduction in audio IPCS and safety and security expenses while the remaining $6 million comes from a reduction in video IPCS and safety and security expenses. Adding the total of the two ancillary services expense reductions referenced above, about {[REDACTED]}, to the reduction to audio and video IPCS and safety and security expenses, about $60 million, brings the total of the WACC and tax-deductible interest expense reductions to about {[REDACTED]}.

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Table 4: Audio and Video IPCS and Safety & Security Expenses Before and After Adjustments

		Before WACC & Tax-Deductible Interest Expense Adjustments		After WACC & Tax-Deductible Interest Expense Adjustments		
		IPCS Expenses Before Adjustments	Safety and Security Expenses Before Adjustments	IPCS Expenses After Adjustments	Safety and Security Expenses After Adjustments	Reduction in IPCS Expenses and Safety and Security Expenses
Audio	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath ICSolutions (via ViaPath)*	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	$330,553,437	$514,613,041	$315,592,000	$475,589,426	$53,985,052
Video	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath ICSolutions (via ViaPath)*	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	$68,072,716	$51,658,707	$65,646,337	$48,039,872	$6,045,214

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

*ViaPath is a subcontractor for 22 of ICSolutions' facilities.

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123. *Safety and Security.* We include all categories of safety and security expenses in establishing the lower bounds of our zones of reasonableness.

This is in contrast to the approach taken in the *2024 IPCS Order,* where the costs of Communications Assistance for Law Enforcement Act (CALEA) compliance measures and communication security services were the only safety and security measure costs included in the lower bounds. Tables 5 through 7 examine safety and security expenses for audio and video IPCS after adjusting for Securus's and ViaPath's WACC and Securus's tax-deductible interest expenses.

124. Table 5 summarizes the safety and security expenses attributable to audio and video IPCS by category and by provider. Audio safety and security expenses total approximately $475 million. Video safety and security expenses total approximately $48 million. For audio IPCS, Securus and ViaPath report total safety and security expenses of {[REDACTED]}, respectively, accounting for nearly {[REDACTED]} percent of the industry total. All other providers have expenses between {[REDACTED]}. For video IPCS, Securus's and ViaPath's respective safety and security expenses ({[REDACTED]} account for {[REDACTED]} of the industry total). All other providers' expenses range from as little as {[REDACTED]}.

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Table 5: Audio and Video Safety & Security Expenses, By Category and Provider

		CALEA	Law Enforcement	Comm. Security	Comm. Recording	Comm. Monitoring	Voice Biometrics	Other	Total
Audio	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Home WAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securu	{[RED	{[REDA	{[REDA	{[REDA	{[REDA	{[REDA	{[RED	{[REDAC

	s	ACTED]}	CTED]}	CTED]}	CTED]}	CTED]}	CTED]}	ACTED]}	TED]}
	Smart	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	TKC	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	ViaPath	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	Industry	5,306	20,944,006	161,938,954	117,784,624	84,954,753	40,293,972	49,667,811	475,589,426
Video	ATN	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	CPC	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	City Tele-Coin	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	Home WAV	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	ICSolutions	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	NCIC	{[RED	{[REDA	{[REDA	{[REDA	{[REDA	{[REDA	{[RED	{[REDAC

		ACTED]}	CTED]}	CTED]}	CTED]}	CTED]}	CTED]}	ACTED]}	TED]}
	Pay Tel	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	Prodig y	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	Securu s	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	Smart	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	TKC	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	ViaPat h	{[RED ACTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[REDA CTED]}	{[RED ACTED]}	{[REDAC TED]}
	Indust ry	84	1,500,42 6	17,720,6 59	15,376,8 02	7,267,74 9	1,428,46 9	4,745,6 83	48,039,872

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

125. Table 6 summarizes safety and security expenses attributable to audio and video by provider and across facility tiers. For audio, prisons account for 66.6% of industry-wide safety and security expenses and Securus and ViaPath jointly account for {[REDACTED]} of those prison expenses. Extremely small jails account for the lowest share of audio safety and security expenses, and Securus and ViaPath account for {[REDACTED]} such expenses. Video safety and security expenses are more evenly distributed across the four larger facility tiers. Securus and ViaPath account for {[REDACTED]} of the industry's video safety and security expenses among prisons ({[REDACTED]}), large jails ({[REDACTED]}), and medium jails ({[REDACTED]}), but their combined

share decreases within the smaller jail tiers ({[REDACTED]} for small, very small, and extremely small jails, respectively).

Table 6: Audio and Video Safety & Security Expenses, By Facility Type and Provider

		All Facilities	Prisons	Large Jails	Medium Jails	Small Jails	Very Small Jails	Extremely Small Jails
Audio	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	HomeWAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Smart	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	TKC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	475,589,426	316,747,4	66,659,41	59,868,42	23,677,61	5,089,796	3,546,777

			03	0	3	6		
Video	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	HomeWAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Smart	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	TKC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	48,039,872	16,974,163	8,938,916	13,535,856	7,031,714	1,083,911	475,312

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

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126. Table 7 presents per billed minute audio and video safety and security expenses by provider and across facility tiers. For audio, the

industry-wide per-minute safety and security expense across all facility tiers is $0.045. Paradoxically, per-minute audio safety and security expenses are highest among prisons ($0.05), followed by large jails ($0.042), medium jails ($0.04), and extremely small jails ($0.036). Small and very small jails have the lowest per-minute average safety and security expenses at $0.028 (each), due in part to providers' differing expense allocation practices. Industry-wide video per-minute safety and security expenses are over 2.5 times higher than audio, averaging $0.118. As with audio, prisons have the highest per-minute video safety and security expenses at $0.198, followed by large jails ($0.148), medium jails ($0.109), and extremely small jails ($0.068).

127. We would expect larger facilities to have lower per billed minute expenses due to economies of scale. However, these counterintuitive observations result, in large part, from the different ways providers allocated expenses between IPCS and safety and security measures. Only Securus and ViaPath allocated a non-trivial share of their expenses to categories of safety and security measures. Securus reports {[REDACTED]} of its total expenses as safety and security expenses. ViaPath reports {[REDACTED]} of its total expenses as safety and security expenses. The rest of the industry, on average, reports only 3.9% of total expenses as safety and security expenses. Because Securus and ViaPath supply a lower share of billed minutes in the smallest facility tiers relative to their share in prisons and large jails, per billed minute safety and security expenses in the smallest tiers are driven less by these two market leaders and more by the smaller providers. These smaller providers allocated nearly all of their expenses to audio and video IPCS, and nearly none to safety and security measures. Securus and ViaPath have per billed minute audio safety and security expenses of {[REDACTED]}, respectively, which dwarfs all other providers' expenses. The provider with the next highest per billed minute safety and security expense is CPC at {[REDACTED]}. For video safety and security, Securus and ViaPath have per billed minute expenses of {[REDACTED]}, respectively. ICSolutions is third at {[REDACTED]} per billed minute. As a consequence, industry average safety and security measure expenses across facility size tiers appear to exhibit diseconomies of scale. However, this is almost entirely the result of the different cost allocation approaches taken by Securus and ViaPath as compared to those taken by smaller providers.

BILLING CODE 6712–01–P

Table 7: Audio and Video Safety & Security Expenses Per Billed Minute, By Facility Type and Provider

		All Facilities	Prisons	Large Jails	Medium Jails	Small Jails	Very Small Jails	Extremely Small Jails
Audio	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	HomeWAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Smart	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	TKC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}

	Industry	0.045	0.050	0.042	0.040	0.028	0.028	0.036
Video	ATN	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	CPC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	City Tele-Coin	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	HomeWAV	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ICSolutions	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	NCIC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Pay Tel	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Prodigy	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Smart	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	TKC	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	0.118	0.198	0.148	0.109	0.067	0.044	0.068

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

* CPC's per-minute video expenses rely on {[REDACTED]}, which have a total of {[REDACTED]} for video.

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128. *Adjustment to Securus's Video IPCS Expenses.* We adjust Securus's extraordinarily high per-minute video IPCS expenses to bring them in line

with the rest of the industry. The Commission previously made a similar adjustment to the same expenses, with the exception that here we use billed instead of total billed and unbilled minutes. The adjustment involves several steps. First, we calculate the weighted average video IPCS expense per billed minute for all providers, excluding Securus. We then multiply this estimate by Securus's total billed video IPCS minutes to simulate the video IPCS expenses Securus would incur if they were equivalent to the average of the rest of the industry's expenses on a per-minute basis. This estimate is then divided by Securus's reported expenses and subtracted from one to calculate the percent reduction to Securus's video IPCS expenses. Excluding Securus, the industry expense per billed minute for video IPCS is {[REDACTED]}. After multiplying this estimate by Securus's total billed video minutes, dividing by Securus's original expenses and subtracting by one, we calculate {[REDACTED]} reduction in Securus's video IPCS expenses.

129. Table 8 presents the unadjusted and adjusted video IPCS expenses per billed minute for Securus and the industry (including Securus) for each facility type. Securus's unadjusted per-minute expenses range from just under {[REDACTED]}, depending on facility type. Securus's per-minute average of {[REDACTED]} across all facilities is more than {[REDACTED]} times higher than the industry average, and more than {[REDACTED]} times higher than the industry average when excluding Securus. Securus's unusually high per-minute expenses increase the industry average from {[REDACTED]}, a {[REDACTED]} increase. However, once the adjustment to Securus's video IPCS expenses is made, its per-minute expenses are significantly more comparable to those of the rest of the industry.

BILLING CODE 6712–01–P

Table 8: Non-Adjusted* and Adjusted Video IPCS Expenses Per Billed Video Minute, For Securus and Industry**

	Before Adjustment*		After Adjustment**	
	Securus Video IPCS Expenses ($ / Min)	**Industry Video IPCS Expenses ($ / Min)**	**Securus Video IPCS Expenses ($ / Min)**	**Industry Video IPCS Expenses ($ / Min)**
All Facilities	{[REDACTED]}	0.161	{[REDACTED]}	0.099
Prisons	{[REDACTED]}	0.229	{[REDACTED]}	0.093
Large Jails	{[REDACTED]}	0.147	{[REDACTED]}	0.066
Medium Jails	{[REDACTED]}	0.121	{[REDACTED]}	0.079
Small Jails	{[REDACTED]}	0.140	{[REDACTED]}	0.115
Very Small Jails	{[REDACTED]}	0.198	{[REDACTED]}	0.176
Extremely Small Jails	{[REDACTED]}	0.345	{[REDACTED]}	0.324

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

* No adjustment to Securus's video IPCS expenses but includes other adjustments made to the lower bounds.

** Includes adjustment to Securus's video IPCS expenses along with other adjustments made to the lower bounds.

130. Table 9 shows the total video IPCS expenses for Securus and the industry before and after the adjustment. The overall reduction in video IPCS expenses is roughly {[REDACTED]} million, or a reduction in

industry video IPCS expenses of {[REDACTED]}%.

Table 9: Video IPCS Expenses Before and After Adjusting for Securus's Video IPCS Expenses

	Video IPCS Expenses Before Adjustment*	**Video IPCS Expenses After Adjustment****	**Total Reduction in Video IPCS Expenses**
Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Industry	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

* No adjustment to Securus's video IPCS expenses but includes other adjustments made to the lower bounds.

** Includes adjustment to Securus's video IPCS expenses along with other adjustments made to the lower bounds.

BILLING CODE 6712–01–C

131. *Adjustment to Securus's Video IPCS Safety and Security Measure Expenses.* Table 10 demonstrates the proportionality of Securus's reported expenses, and shows Securus's audio and video IPCS billed minutes and safety and security measure expenses in dollars and per billed minutes along with the analogous figures for ViaPath, the industry, and the industry without Securus. Securus's video IPCS safety and security measure per billed minute expenses {[REDACTED]} are substantially higher than ViaPath's, its most comparable provider in terms of scale and scope, {[REDACTED]}, and the industry average is significantly skewed by including Securus {[REDACTED]} as compared to the industry average of all providers excluding Securus ({[REDACTED]} without Securus). Securus's video IPCS safety and security expenses per billed minute are over {[REDACTED]} times higher than the industry average with and without Securus, respectively, and over {[REDACTED]} times higher than those of ViaPath. Notably, Securus's share of the industry's IPCS video safety and security measure expenses also markedly exceeds Securus's share of the industry's video IPCS minutes. While Securus accounts for about {[REDACTED]} of the industry's IPCS video safety and security measure expenses, it only reports about {[REDACTED]} of the video minutes. By comparison, ViaPath's share of the industry's video IPCS billed minutes and safety and security measure expenses mirror one another, at {[REDACTED]}, respectively. Securus's video IPCS safety and security measure data are also inconsistent with its audio IPCS safety and security measure data. Securus's audio IPCS safety and security measure per billed minute expenses {[REDACTED]}, are lower than ViaPath's {[REDACTED]} and only slightly above the industry average {[REDACTED]}, with and without Securus, respectively. Moreover, Securus's shares of the industry's audio IPCS billed minutes and safety and security measure expenses, {[REDACTED]}, respectively, are similar. These data and their relative proportions demonstrate the anomalous character of Securus's video IPCS and video safety and security expense data and the need for adjustments.

BILLING CODE 6712–01–P

Table 10: Total and Industry Share of Audio and Video IPCS Billed Minutes and Safety & Security Measure Expenses and Per Billed Minute Safety & Security Measure Expenses, by Securus, ViaPath, Industry, and Industry Excluding Securus

		Billed Minutes	Share of Industry Billed Minutes	Safety and Security Expenses	Share of Industry Safety and Security Expenses	Safety and Security Expenses Per Minute
Audio	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	10,494,473,118	100%	475,589,426	100%	0.045
	Industry Excluding Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Video	Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	ViaPath	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
	Industry	407,122,234	100%	48,039,872	100%	0.118
	Industry Excluding Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs. Expense data are net of other lower-bound adjustments.

BILLING CODE 6712–01–C

132. The record does not allow us to fully determine why Securus's per billed minute video IPCS safety and security measure expenses deviate so

significantly from those of the other providers. However, Securus's video IPCS safety and security measure expenses are not indicative of a mature, ongoing operation. Taking Securus's expense data at face value, however, it is reasonable to anticipate future demand for Securus's video IPCS to increase to a level more commensurate with its future video IPCS and video IPCS safety and security expenses as the rate of investment in new infrastructure slows and customer awareness and use of video IPCS increase. This would enable Securus to spread its significant early stage and subsequent incremental investments in long-term video IPCS and video safety and security measure assets over significantly more video IPCS billed minutes, and thus reduce both its per billed minute video IPCS and video IPCS safety and security measure expenses.

133. We therefore adjust Securus's high video IPCS safety and security measure expenses per billed minute down to the industry average (without Securus). The adjustment is made in the same manner as the adjustment to Securus's video IPCS expenses. We thus use the industry average (without Securus) to reduce both Securus's video IPCS expenses and its video IPCS safety and security measure expenses. Specifically, we reduce Securus's video IPCS safety and security measure expenses equally across all facilities by the percentage that equates the sum of these expenses to the overall industry average (excluding Securus) on a per billed minute basis. Securus's video IPCS safety and security measure expenses are {[REDACTED]} per billed minute. The industry average video IPCS safety and security measure expenses per billed minute without Securus are $0.07. A reduction of {[REDACTED]} to Securus's video IPCS safety and security measure expenses across all of its facilities reduces the sum of these expenses to the level of the industry average on a per billed minute basis.

134. Table 11 shows the unadjusted and adjusted video IPCS safety and security measure expenses per billed minute for Securus and the industry (including Securus) for each facility type. Securus's unadjusted billed per minute expenses range from {[REDACTED]}, depending on facility type. After the adjustment to Securus's video IPCS safety and security measure expenses, its per billed minute expenses range from {[REDACTED]}, and as shown in the final column, these adjusted per billed minute expenses are significantly more comparable to the industry average for each facility type.

Table 11: Non-Adjusted* and Adjusted Video Safety and Security Expenses Per Billed Video Minute, For Securus and Industry**

	Before Adjustment*		After Adjustment**	
	Securus Video Safety and Security Expenses ($ / Min)	**Industry Video Safety and Security Expenses ($ / Min)**	**Securus Video Safety and Security Expenses ($ / Min)**	**Industry Video Safety and Security Expenses ($ / Min)**
All Facilities	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Prisons	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Large Jails	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Medium Jails	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Small Jails	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Very Small Jails	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Extremely Small Jails	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

* No adjustment to Securus's video safety and security expenses but includes other adjustments made to the lower bounds.

** Includes adjustment to Securus's video safety and security expenses along with other adjustments made to the lower bounds.

135. Table 12 shows Securus and industry total (including Securus) video IPCS safety and security measure expenses before and after the {[REDACTED]} downward adjustment to Securus's expenses. Adjusting Securus's video IPCS safety and security measure expenses to reflect the industry average per billed minute expense reduces Securus's video expenses by approximately {[REDACTED]} million. This reduction decreases total industry video IPCS safety and security measure expenses by {[REDACTED]}.

Table 12: Video Safety & Security Expenses Before and After Adjusting for Securus' Video

	Video Safety and Security Expenses Before Adjustment*	**Video Safety and Security Expenses After Adjustment****	**Total Reduction in Video Safety and Security Expenses**
Securus	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}
Industry	{[REDACTED]}	{[REDACTED]}	{[REDACTED]}

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs.

* No adjustment to Securus' video safety and security expenses but includes other adjustments made to the lower bounds.

** Includes adjustment to Securus' safety and security IPCS expenses along with other adjustments made to the lower bounds.

136. *Lower Bounds.* We now determine lower bounds, which in conjunction with the upper bounds addressed above, will establish the zones of reasonableness that we use to set audio and video IPCS rate caps. The four distinct per billed minute expense components of the lower bounds are: (1) audio/video IPCS expenses; (2) audio/video safety and security expenses; (3) ancillary service expenses; and (4) TRS allowance. These per billed minute components are calculated using the upper bound data net of the adjustments to Securus's and ViaPath's WACCs and to Securus's tax-deductible interest, video IPCS, and video IPCS safety and security measure expenses. As with our upper bound analysis, the correctional facilities' expenses are not included in the lower bound analysis but are addressed separately through the establishment of a rate additive for facility costs. The ancillary service expenses per billed minute additive is calculated in the same manner as in the upper bound analysis except for using ancillary expense data after the WACC and tax-deductible interest expense adjustments. This per billed minute additive totals $0.011. The TRS additive of $0.002 included in the upper bound remains unchanged. Table 13 shows the lower bounds for audio and video IPCS for each facility type and size.

Table 13: Lower Bound IPCS Expenses Per Billed Minutes, By Facility Type ($/Minute)

	Audio				Video			
	IPCS Expenses (1A)	Safety and Security (2A)	(1A) + (2A)	Lower Bounds: (1A) + (2A) + $0.002 + $0.011*	IPCS Expenses (1B)	Safety and Security (2B)	(1B) + (2B)	Lower Bounds: (1B) + (2B) + $0.002 + $0.011*
Prisons	0.023	0.050	0.073	0.086	0.093	0.108	0.201	0.214
Large Jails	0.024	0.042	0.066	0.079	0.066	0.077	0.143	0.156
Medium Jails	0.038	0.040	0.078	0.091	0.079	0.069	0.148	0.161
Small Jails	0.062	0.028	0.090	0.103	0.115	0.046	0.161	0.174
Very Small Jails	0.082	0.028	0.111	0.124	0.176	0.027	0.203	0.216
Extremely Small Jails	0.114	0.036	0.150	0.163	0.324	0.053	0.377	0.390

Source: 2023 IPCS Mandatory Data Collection facility-specific Excel tabs (other than for ancillary services expenses). The ancillary services additive is calculated using ancillary service expenses drawn from the Company-Wide Information tab of the 2023 Mandatory Data Collection.

* Per billed minute additives for TRS ($0.002) and ancillary services ($0.011).

Report to Congress

137. The Commission will send a copy of the Report and Order and Order on Reconsideration, including this Final Regulatory Flexibility Analysis, in a report to Congress pursuant to the Congressional Review Act. In addition, the Commission will send a copy of the Report and Order and Order on Reconsideration, including this Final Regulatory Flexibility Analysis, to the Chief Counsel for the SBA Office of Advocacy and will publish a copy of the Report and Order and Order on Reconsideration, and this Final Regulatory Flexibility Analysis (or a summary thereof) in the **Federal Register**.

VI. Ordering Clauses

138. Accordingly, *it is ordered,* pursuant to the authority contained in sections 1, 2, 4(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 716 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 617, and the Martha Wright-Reed Just and Reasonable Communications Act of 2022, Public Law 117–338, 136 Stat. 6156 (2022), that this joint Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking in WC Docket Nos. 23–62 and 12–375 *are adopted.* Pursuant to Executive Order 14215, 90 FR 10447 (Feb. 20, 2025), this regulatory action has been determined to be not significant under Executive Order 12866.

139. Accordingly, *it is further ordered,* pursuant to the authority contained in sections 1, 2, 4(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 716 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 201(b), 218, 220, 276, 403, and 617, and the Martha Wright-Reed Just and Reasonable Communications Act of 2022, Public Law 117–338, 136 Stat. 6156 (2022), that this joint Report and

Order and Order on Reconsideration *shall be effective* upon publication of a summary of it in the **Federal Register**, compliance with which shall be required one hundred and twenty (120) days after such publication. The effective date and compliance date of this joint Report and Order and Order on Reconsideration supersede the extended deadline established by the *2025 Waiver Order* previously adopted by the Wireline Competition Bureau. The Commission directs the Wireline Competition Bureau to announce the effective date and compliance date by subsequent Public Notice.

140. *It is further ordered* that, pursuant to the authority contained in sections 1, 2, 4(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 716, of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 617, and the Martha Wright-Reed Just and Reasonable Communications Act of 2022, Public Law 117–338, 136 Stat 6156 (2022), the Petition for Reconsideration, filed October 21, 2024, by NCIC Inmate Communications *is granted in part* as described herein.

141. *It is further ordered* that the Commission's Office of the Secretary, *shall send* a copy of this Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis and the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

142. *It is further ordered* that the Office of the Managing Director, Performance and Program Management, *shall include* a copy of this Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking in a report to be sent to Congress and the Government Accountability Officer pursuant to the Congressional Review Act, 5 U.S.C. 801(a)(1)(A).

List of Subjects in 47 CFR Part 64

Communications, Communications common carriers, Incarcerated people, Inmates, Security measures, Telecommunications, Telephone, Video.

Federal Communications Commission.

Marlene Dortch,

Secretary.

Final Rules

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 64 as follows:

PART 64—MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

■ 1. The authority citation for part 64 continues to read as follows:

Authority: 47 U.S.C. 151, 152, 154, 201, 202, 217, 218, 220, 222, 225, 226, 227, 227b, 228, 251(a), 251(e), 254(k), 255, 262, 276, 403(b)(2)(B), (c), 616, 620, 716, 1401–1473, unless otherwise noted; Pub. L. 115–141, Div. P, sec. 503, 132 Stat. 348, 1091; Pub. L. 117–338, 136 Stat. 6156.

Subpart FF—Incarcerated People's Communications Services

■ 2. Amend § 64.6010 by:
■ a. Removing and reserving paragraphs (a) through (d); and
■ b. Revising paragraph (e).
The revision reads as follows:

§ 64.6010 Incarcerated People's Communications Services rate caps.

* * * * *

(e) A Provider must not charge a per-minute rate for international audio Incarcerated People's Communications Services in each Prison or Jail it serves in excess of the applicable interim interstate and intrastate cap set forth in § 64.6030 plus the average amount that the Provider paid its underlying international service providers for audio communications to the International Destination of that communication, on a per-minute basis. A Provider shall determine the average amount paid for communications to each International Destination for each calendar quarter and shall adjust its maximum rates based on such determination within one month of the end of each calendar quarter.

■ 3. Revise § 64.6015 to read as follows:

§ 64.6015 Prohibition against Site Commissions.

A Provider must not pay any Site Commissions associated with its provision of Incarcerated People's Communications Services.

■ 4. Revise § 64.6030 to read as follows:

§ 64.6030 Incarcerated People's Communications Services interim rate caps.

(a) A Provider must offer each Incarcerated People's Communications Service at a per-minute rate. A Provider may also offer an Incarcerated People's Communications Service under one or more Alternate Pricing Plans, pursuant to § 64.6140.

(b) A Provider must not charge a per-minute rate for intrastate or interstate audio Incarcerated People's Communications Services in excess of the following interim rate caps:

(1) $0.09 per minute for each Prison;

(2) $0.08 per minute for each Jail having an Average Daily Population of 1,000 or more Incarcerated People;

(3) $0.10 per minute for each Jail having an Average Daily Population of between and including 350 and 999 Incarcerated People;

(4) $0.11 per minute for each Jail having an Average Daily Population of between and including 100 and 349 Incarcerated People;

(5) $0.13 per minute for each Jail having an Average Daily Population of between and including 50 and 99 Incarcerated People; and

(6) $0.17 per minute for each Jail having an Average Daily Population below and including 49 Incarcerated People.

(c) A Provider must not charge a per-minute rate for video Incarcerated People's Communications Services in excess of the following interim rate caps:

(1) $0.23 per minute for each Prison;

(2) $0.17 per minute for each Jail having an Average Daily Population of 1,000 or more Incarcerated People;

(3) $0.17 per minute for each Jail having an Average Daily Population of between and including 350 and 999 Incarcerated People;

(4) $0.19 per minute for each Jail having an Average Daily Population of between and including 100 and 349 Incarcerated People;

(5) $0.23 per minute for each Jail having an Average Daily Population of between and including 50 and 99 Incarcerated People; and

(6) $0.42 per minute for each Jail having an Average Daily Population of below and including 49 Incarcerated People.

(d) Providers may charge up to an additional $0.02 per minute above the audio and video Incarcerated People's Communications Services rate caps in paragraphs (b) and (c) of this section to recover the costs that a Correctional Facility may incur in making Incarcerated People's Communications Services available.

[FR Doc. 2025–22125 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 76

[MB Docket Nos. 02–144; MM Docket Nos. 92–266, 93–215; CS Docket No. 94–28; FCC 25–33; FR ID 320818]

Cable Television Rates

AGENCY: Federal Communications Commission.

ACTION: Final rule; announcement of effective date.

SUMMARY: In this document, the Federal Communications Commission (FCC) announces that the Office of Management and Budget (OMB) has approved the information collection under OMB Control Number 3060–0703 and announces the effective date for amendments adopted by the Report and Order, FCC 25–33, 90 FR 31145 (Order), which were delayed. This document is consistent with the Order, which states that the Media Bureau will publish a document in the **Federal Register** announcing the effective date of the delayed amendment.

DATES: Amendatory instruction 7 (47 CFR 76.923), published at 90 FR 31145 on July 14, 2025, is effective January 1, 2026.

FOR FURTHER INFORMATION CONTACT: For additional information on this proceeding, contact Katie Costello, Policy Division, Media Bureau at *Katie.Costello@fcc.gov* or (202) 418–2233.

SUPPLEMENTARY INFORMATION: This document announces that OMB approved the modifications to the information collection requirements in 47 CFR 76.923, associated with FCC Form 1205, on November 26, 2025. This rule section was modified in the Order, FCC 25–33, published at 90 FR 31145 on July 14, 2025. The Commission publishes this document as an announcement of the effective date of January 1, 2026 for 47 CFR 76.923.

Synopsis

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), the FCC is notifying the public that it received final OMB approval on November 26, 2025 for the information collection requirements contained in 47 CFR 76.923, associated with FCC Form 1205. Further, the FCC is notifying the public that revisions to 47 CFR 76.923 are effective January 1, 2026. Under 5 CFR part 1320, an agency may not conduct or sponsor a collection of information unless it displays a current, valid OMB Control Number.

No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act that does not display a current, valid OMB Control Number. The OMB Control Number is 3060–0703.

The foregoing notice is required by the Paperwork Reduction Act of 1995, Public Law 104–13, October 1, 1995, and 44 U.S.C. 3507.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2025–22062 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 250312–0036, RTID 0648–XF360]

Fisheries of the Exclusive Economic Zone Off Alaska; Reapportionment of Halibut Prohibited Species Catch Limits in the Bering Sea and Aleutian Islands Management Area

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; reallocation.

SUMMARY: NMFS is reapportioning the unused amounts of Pacific cod Trawl Cooperative (PCTC) Program halibut prohibited species catch (PSC) limits to the Pacific cod limited access trawl catcher vessel sector C season in the Bering Sea and Aleutian Islands management area (BSAI).

DATES: Effective December 4, 2025, through 2400 hours, Alaska local time (A.l.t.), December 31, 2025.

FOR FURTHER INFORMATION CONTACT: Andrew Olson, 907–206–5813.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the BSAI according to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP) prepared and recommended by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2025 Pacific cod fishery halibut PSC limits specified for the PCTC Program A and B seasons (January 20–June 10) is 220 metric tons (mt) and for trawl catcher vessel C season (June 10–November 1) is 15 mt as established by the final 2025 and 2026 harvest specifications for groundfish in the BSAI (90 FR 12640, March 18, 2025). Halibut PSC limits for the Pacific cod fishery are apportioned between the PCTC Program, the trawl catcher vessel limited access C season, and American Fisheries Act catcher/processors as established under § 679.131(c). Any unused PCTC Program halibut PSC limits may be reapportioned to the trawl catcher vessel C season under § 679.131(c)(3).

The Administrator, Alaska Region, NMFS has determined that during the A and B seasons 137 mt of halibut PSC limit apportioned to the PCTC Program was not caught. The B season closed on June 10. Therefore, in accordance with § 679.131(c)(3), NMFS reapportions 137 mt of the halibut PSC limit for the PCTC Program to the limited access trawl catcher vessel sector C season, which increases this sector's halibut PSC limit apportionment to 152 mt. This action is authorized by § 679.131(c)(3), which allows for unused halibut PSC limits to be reapportioned to the C season, and is necessary to account for the trawl catcher vessel sector's C season halibut PSC.

Classification

NMFS issues this action pursuant to section 305(d) of the Magnuson-Stevens Act. This action is required by 50 CFR part 679, which was issued pursuant to section 304(b) of the Magnuson-Stevens Act, and is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(B), there is good cause to waive prior notice and an opportunity for public comment on this action, as notice and comment would be impracticable and contrary to the public interest. This requirement is impracticable and contrary to the public interest as it would prevent NMFS from responding to the most recent fisheries data in a timely fashion and from providing an accounting of the reapportionment of unused halibut PSC limits to the trawl catcher vessel C season under § 679.131. Without this authorized reapportionment, this would result in exceeding halibut PSC limits for the limited access trawl catcher vessel sector. NMFS was unable to publish a notice providing time for public comment because the most recent relevant data for halibut PSC by those sectors harvesting Pacific cod only became available as of December 2, 2025.

There is good cause under 5 U.S.C. 553(d)(3) to waive the 30-day delay in the effective date of this action. This finding is based upon the reasons provided above for waiver of prior notice and opportunity for public comment.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 3, 2025.

Kelly Denit,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–22083 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 250312–0037; RTID 0648–XF307]

Fisheries of the Exclusive Economic Zone Off Alaska; Demersal Shelf Rockfish in the Western, Central, and West Yakutat Regulatory Areas of the Gulf of Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; closure.

SUMMARY: NMFS is prohibiting retention of demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the Gulf of Alaska (GOA). This action is necessary because the 2025 total allowable catch (TAC) of demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA has been or will be reached.

DATES: Effective 1200 hours, Alaska local time (A.l.t.), December 4, 2025, through 2400 hours, A.l.t., December 31, 2025.

FOR FURTHER INFORMATION CONTACT: Adam Zaleski, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared and recommended by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2025 TAC of demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA is 271 metric tons as established by the final 2025 and 2026 harvest specifications for groundfish of the GOA (90 FR 12468, March 18, 2025).

In accordance with § 679.20(d)(2), the Administrator, Alaska Region, NMFS, has determined that the 2025 demersal shelf rockfish TAC in the Western, Central, and West Yakutat Regulatory Areas of the GOA has been or will be reached. Therefore, NMFS is prohibiting retention of demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA and requiring that demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA be treated in the same manner as a prohibited species in accordance with § 679.21(a)(2) for the remainder of the year, except for demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA caught by catcher vessels using hook-and-line, pot, or jig gear as described in § 679.20(j) or caught by catcher vessels using trawl gear participating in the electronic monitoring program as described in § 679.21(a)(2). This action is necessary to prevent exceeding the 2025 TAC of demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA.

Classification

NMFS issues this action pursuant to section 305(d) of the Magnuson-Stevens Act. This action is required by 50 CFR part 679, which was issued pursuant to section 304(b) of the Magnuson-Stevens Act, and is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(B), there is good cause to waive prior notice and an opportunity for public comment on this action, as notice and comment would be impracticable and contrary to the public interest, as it would prevent NMFS from responding to the most recent fisheries data on demersal shelf rockfish catch in a timely fashion and would delay prohibiting retention of demersal shelf rockfish in the Western, Central, and West Yakutat Regulatory Areas of the GOA. NMFS was unable to publish a notice providing time for public comment because the most recent, relevant data on demersal shelf rockfish catch only became available as of December 3, 2025.

There is good cause under 5 U.S.C. 553(d)(3) to waive the 30-day delay in the effective date of this action. This finding is based upon the reasons provided above for waiver of prior notice and opportunity for public comment.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 3, 2025.

Kelly Denit,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–22141 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 250312–0036; RTID 0648–XF359]

Fisheries of the Exclusive Economic Zone Off Alaska; Reallocation of Pacific Cod in the Bering Sea and Aleutian Islands Management Area

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; reallocation.

SUMMARY: NMFS is reallocating the projected unused amount of Pacific cod from catcher vessels greater than or equal to 60 feet (18.3 meters (m)) length overall (LOA) using pot gear to catcher/processors using pot gear in the Bering Sea and Aleutian Islands management area (BSAI). This action is necessary to allow the 2025 total allowable catch (TAC) of Pacific cod to be harvested.

DATES: Effective December 4, 2025, through 2400 hours, Alaska local time (A.l.t.), December 31, 2025.

FOR FURTHER INFORMATION CONTACT: Andrew Olson, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the BSAI according to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP) prepared and recommended by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2025 Pacific cod TAC allocated to catcher vessels greater than or equal to 60 feet (18.3 m) LOA using pot gear in the BSAI is 10,605 mt as established by the final 2025 and 2026 harvest specifications for groundfish in the BSAI (90 FR 12640, March 18, 2025).

The 2025 Pacific cod TAC allocated to catcher/processors using pot gear in the BSAI is 1,894 mt as established by the final 2025 and 2026 harvest specifications for groundfish in the BSAI (90 FR 12640, March 18, 2025).

The Administrator, Alaska Region, NMFS, has determined that catcher vessels greater than or equal to 60 feet (18.3 m) LOA will not be able to harvest 200 mt of the 2025 Pacific cod TAC

allocated to those vessels under § 679.20(a)(7)(ii)(A)(5). Therefore, in accordance with § 679.20(a)(7)(iii)(C), NMFS reallocates 200 mt of Pacific cod from catcher vessels greater than or equal to 60 feet (18.3 m) LOA using pot gear to the annual amount specified for catcher/processers using pot gear.

The harvest specifications for 2025 Pacific cod included in final 2025 and 2026 harvest specifications for groundfish in the BSAI (90 FR 12640, March 18, 2025) are revised as follows: 10,405 mt to catcher vessels greater than or equal to 60 feet (18.3 m) LOA using pot gear and 2,094 mt to catcher/processors using pot gear.

Classification

NMFS issues this action pursuant to section 305(d) of the Magnuson-Stevens Act. This action is required by 50 CFR part 679, which was issued pursuant to section 304(b) of the Magnuson-Stevens Act, and is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(B), there is good cause to waive prior notice and an opportunity for public comment on this action, as notice and comment would be impracticable and contrary to the public interest. This requirement is impracticable and contrary to the public interest as it would prevent NMFS from responding to the most recent fisheries data in a timely fashion and would not allow for the full harvest of the Pacific cod TACs by the sectors with harvesting capability. NMFS was unable to publish a notice providing time for public comment because the most recent, relevant data for Pacific cod harvest by those sectors harvesting Pacific cod, as well as the potential capability to harvest reallocated Pacific cod, only became available as of December 2, 2025.

There is good cause under 5 U.S.C. 553(d)(3) to waive the 30-day delay in the effective date of this action. This finding is based upon the reasons provided above for waiver of prior notice and opportunity for public comment.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 2, 2025.

Kelly Denit,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–22107 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 250312–0036; RTID 0648–XF358]

Fisheries of the Exclusive Economic Zone Off Alaska; Pacific Ocean Perch in the Bering Sea Subarea of the Bering Sea and Aleutian Islands Management Area

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; closure.

SUMMARY: NMFS is prohibiting directed fishing for Pacific Ocean perch in the Bering Sea subarea of the Bering Sea and Aleutian Islands management area (BSAI). This action is necessary to prevent exceeding the 2025 Pacific Ocean perch total allowable catch (TAC) in the Bering Sea subarea of the BSAI.

DATES: Effective 1200 hours, Alaska local time (A.l.t.), December 3, 2025, through 2400 hours, A.l.t., December 31, 2025.

FOR FURTHER INFORMATION CONTACT: Steve Whitney, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the BSAI according to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (FMP) prepared and recommended by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2025 Pacific Ocean perch TAC in the Bering Sea subarea of the BSAI is 10,121 metric tons (mt) as established by the final 2025 and 2026 harvest specifications for groundfish in the BSAI (90 FR 12640, March 18, 2025) and reapportionment of reserves (90 FR 27483, June 27, 2025).

In accordance with § 679.20(d)(1)(iii), the Regional Administrator has determined that the 2025 TAC for Pacific Ocean perch in the Bering Sea subarea of the BSAI will be or has been reached. Therefore, the Regional Administrator is establishing a directed fishing allowance of 10,111 mt, and is setting aside the remaining 10 mt as incidental catch because it is necessary to support other anticipated groundfish fisheries. Consequently, NMFS is prohibiting directed fishing for Pacific Ocean perch in the Bering Sea subarea of the BSAI to prevent exceeding this sectors allowance of Pacific Ocean perch TAC.

While this closure remains in effect the maximum retainable amounts at § 679.20(e) and (f) apply at any time during a trip.

Classification

NMFS issues this action pursuant to section 305(d) of the Magnuson-Stevens Act. This action is required by 50 CFR part 679, which was issued pursuant to section 304(b) of the Magnuson-Stevens Act, and is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(B), there is good cause to waive prior notice and an opportunity for public comment on this action, as notice and comment would be impracticable and contrary to the public interest, as it would prevent NMFS from responding to the most recent fisheries data in a timely fashion and would delay the closure of Pacific Ocean perch in the Bering Sea subarea of the BSAI. NMFS was unable to publish a notice providing time for public comment because the most recent, relevant data only became available as of December 2, 2025.

There is good cause under 5 U.S.C. 553(d)(3) to waive the 30-day delay in the effective date of this action. This finding is based upon the reasons provided above for waiver of prior notice and opportunity for public comment.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 3, 2025.

Kelly Denit,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–22100 Filed 12–3–25; 4:15 pm]

BILLING CODE 3510–22–P

Proposed Rules

Federal Register
Vol. 90, No. 232
Friday, December 5, 2025

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

FARM CREDIT ADMINISTRATION

12 CFR Part 621

RIN 3052–AD63

Loan Performance Categories and Financial Reporting

AGENCY: Farm Credit Administration.

ACTION: Proposed rule and request for comment.

SUMMARY: The Farm Credit Administration (FCA, we, or our) proposes to amend our regulatory high-risk loan performance categories by removing ''Formally restructured loans (TDR),'' also known as troubled debt restructurings. In 2022, changes in generally accepted accounting principles (GAAP) eliminated the accounting guidance for TDRs, enhanced disclosure requirements for certain loan refinancings and restructurings undertaken when a borrower is experiencing financial difficulty and changed existing vintage year disclosure requirements for public business entities. We propose removing TDRs from our regulatory loan performance categories to reflect changes in GAAP. Further, we seek comments on our determination no regulatory changes are needed for the enhanced disclosures related to loan refinancings and restructurings or the amended vintage year disclosure requirements, as these disclosures are already required under applicable GAAP. Additionally, comments are requested on retaining the ''90 days past due still accruing interest'' loan performance category.

DATES: Comments on this proposed rule must be submitted on or before February 3, 2026.

ADDRESSES: For accuracy and efficiency, please submit comments by email or through FCA's website. We do not accept comments submitted by fax because faxes are difficult to process. Also, please do not submit comments multiple times; submit your comment only once, using one of the following methods:

- Send an email to *reg-comm@fca.gov.*
- *Use the public comment form on our website:*

1. Go to *https://www.fca.gov.*
2. Click inside the ''I want to . . .'' field near the top of the page.
3. Select ''comment on a pending regulation'' from the dropdown menu.
4. Click ''Go.'' This takes you to the comment form.

- *Send the comment by mail to the following:* Autumn R. Agans, Deputy Director, Office of Regulatory Policy, Farm Credit Administration, 1501 Farm Credit Drive, McLean, VA 22102–5090.

We post all comments on the FCA website. We will show your comments as submitted, including any supporting information; however, for technical reasons, we may omit items such as logos and special characters. Personal information that you provide, such as phone numbers and addresses, will be publicly available. However, we will attempt to remove email addresses to help reduce internet spam.

To review comments on our website, go to *https://www.fca.gov* and follow these steps:

1. Click inside the ''I want to . . .'' field near the top of the page.
2. Select ''find comments on a pending regulation'' from the dropdown menu.
3. Click ''Go.'' This will take you to a list of regulatory projects.
4. Select the project in which you're interested. If we have received comments on that project, you will see a list of links to the individual comments.

You may also review comments in person at the FCA office in McLean, Virginia between 9:00 a.m. and 3:00 p.m., Eastern Time, Monday through Friday of each week except Federal holidays. Please call us at (703) 883–4056 or email us at *reg-comm@fca.gov* to make an appointment.

Assistance to Individuals with Disabilities in Reviewing the Rulemaking Record: On request, we will provide an appropriate accommodation or auxiliary aid to an individual with a disability who needs assistance to review the comments or other documents in the public rulemaking record for the proposed regulation. To schedule an appointment for this type of accommodation or auxiliary aid, please contact (703) 883–4056.

FOR FURTHER INFORMATION CONTACT:

Technical information: Sherita J. Olla, Senior Policy Analyst, Office of Regulatory Policy, Farm Credit Administration, 703–883–4414, TTY (703) 883–4056.

Legal information: Laura McFarland, Senior Counsel, Office of General Counsel, Farm Credit Administration, 703–883–4020, TTY (703) 883–4056.

SUPPLEMENTARY INFORMATION:

I. Objectives

The objectives of this proposed rule are to:

- Amend FCA's high-risk loan performance categories due to changes in GAAP; and
- Clarify Farm Credit bank and association reporting expectations for vintage disclosures and disclosures of loan modifications to borrowers experiencing financial difficulties.

II. Background

The Farm Credit Act of 1971, as amended (Farm Credit Act), establishes Farm Credit System (System) institutions as federally chartered instrumentalities of the United States.[1] The Farm Credit Act, at section 5.19(b), requires each System institution to prepare audited financial statements in accordance with GAAP [2] for inclusion in the respective institution's annual report of condition.[3] This provision of the Farm Credit Act also requires annual reports to ''contain such additional information'' as FCA, by regulation, may require. Various FCA regulations in 12 CFR parts 620, 621, 630 and 655 implement the Farm Credit Act's financial reporting requirements.[4]

Relevant to this proposed rulemaking is FCA regulation § 621.6 on high-risk

[1] *See, for example,* 12 U.S.C. 2011, 2071, 2091 and 2121.

[2] GAAP, as issued and revised by the Financial Accounting Standards Board, are the standard accounting rules for preparing, presenting, and reporting financial statements in the United States.

[3] 12 U.S.C. 2254(b).

[4] FCA regulations in Part 621 generally apply to all chartered System institutions. However, the Federal Agricultural Mortgage Corporation (Farmer Mac) is required to follow only those provisions where specifically indicated, which would include section 621.6. For purposes of this preamble, we do not include separate exceptions for Farmer Mac but expect Farmer Mac to self-identify those areas. *Refer to* 12 CFR 621.1 and 621.2 (which defines the term ''institution'' within part 621 to include Farmer Mac).

loan performance categories, located in subpart C of 12 CFR part 621, ''Loan Performance and Valuation Assessment.'' [5] The current § 621.6 high-risk loan performance categories include TDRs. We have historically based our part 621 regulatory performance categories on information from various sources, including SEC Industry Guide 3, ''Statistical Disclosure by Bank Holding Companies,'' [6] the Federal Financial Institutions Examination Council's (FFIEC) [7] guidance on nonperforming loans, and GAAP. FCA last updated the § 621.6 regulatory high risk performance categories in a 2020 rulemaking on nonaccrual loans.[8]

On March 31, 2022, the Financial Accounting Standards Board (FASB) [9] issued Accounting Standards Update (ASU) No. 2022–02, ''Financial Instruments—Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures,'' which, in part, eliminated TDR recognition and measurement guidance under GAAP.[10] Now, entities that follow GAAP are to evaluate those loans, which previously would have been TDRs, in a manner consistent with the guidance for other loan modifications. Additionally, ASU 2022–02 requires enhanced disclosures for certain loan modifications when a borrower is experiencing financial difficulty.

The ASU 2022–02 updates related to TDRs affect all entities adopting ASU 2016–13 ''Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments'' and the current expected credit losses (CECL) methodology.[11] Under ASU 2022–02, when evaluating loan modifications made to borrowers experiencing financial difficulty (hereafter referred to as ''loan modifications''), entities must assess whether the loan modification should be accounted for as a new loan or a continuation of an existing loan.[12]

ASU 2022–02 also introduced qualitative and quantitative disclosure requirements for loan modifications provided in the form of principal forgiveness, interest rate reductions, other-than-insignificant payment delays, or term extensions (or a combination thereof) in the current reporting period. For each period the income statement is presented, the disclosures are to provide information on the type and magnitude of loan modifications, the financial effect of the loan modifications (by modification type), and their performance in the 12 months after modification.

On December 30, 2022, FCA issued Informational Memorandum, ''Accounting standards update on troubled debt restructuring (TDR)'' to provide interim guidance to the System on the changes in GAAP related to TDRs until FCA regulation § 621.6(b) is amended.[13] Specifically, the informational memorandum instructed System institutions to implement the change in GAAP and disclose modifications to borrowers experiencing financial difficulty beginning with the first quarterly report for fiscal year 2023.

III. Proposed Rule Changes to Loan Performance Categories. [Existing § 621.6]

This proposed rule would revise our accounting and reporting regulations in subpart C of 12 CFR part 621 to incorporate changes in GAAP that took effect January 1, 2023.[14] Specifically, we propose to remove references to TDRs and to make conforming technical changes.

Our regulation at § 621.6(b) currently requires System institutions to categorize high-risk loans as TDRs when required to do so under GAAP and FASB guidance. ASU 2022–02 eliminated TDR recognition and related measurement guidance under GAAP for all entities that adopt CECL. The System now uses the CECL methodology, so the TDR categorization in § 621.6(b) is no longer supported by GAAP.[15] Additionally, in response to our 2022 regulatory burden solicitation,[16] the Farm Credit Council (FCC), on behalf of its membership, as well as various System institutions, asked us to remove § 621.6(b) from our regulations. On March 3, 2025, we published a ''Statement on Regulatory Burden,'' which at III.A identified this request as meriting a rule change.[17]

In response to changes in GAAP, and supported by prior comments received, we propose removing § 621.6(b). As a conforming technical change, we propose renumbering existing paragraphs (c) and (d) as new § 621.6(b) and (c), respectively. We similarly propose a corresponding numbering change to the cross-reference in § 621.6(a)(2) from ''under paragraph (c)'' to read ''under paragraph (b).''

Prior to developing this proposed rule, we also received comments from the FCC and various System institutions on our § 621.6(c) high-risk loan category, ''loans 90 days past due and still accruing interest.'' These comments requested removal of the ''loans 90 days past due and still accruing interest'' category. The FCC stated it believed removing § 621.6(c) would conform with GAAP and explained that in the System's experience, loans 90 days past due still accruing interest were usually fully guaranteed, thus mitigating credit risk. The FCC contended that under the CECL methodology, the performance categories for high-risk loans and loan-related assets should be limited to nonaccrual loans and other property owned.

We evaluated these comments on § 621.6(c) during this rulemaking but do not propose removing the ''90 days past

[5] FCA first adopted regulations on accounting for high risk assets on March 13, 1986 (51 FR 8644), explaining at the time that performance categories serve two purposes: (1) to communicate to readers of the annual report the risks associated with loans that do not perform according to contractual terms, and (2) to establish objective standards consistently applied by System institutions for both FCA oversight purposes and the consolidation of ''accurate and meaningful aggregate [financial] data'' in the Systemwide Report to Investors.

[6] SEC Guide 3 was rescinded, effective January 1, 2023.

[7] The FFEIC is an interagency body that establishes consistent principles, standards, and report forms for the banking regulators' federal examinations. Neither FCA, nor the System, is subject to the FFIEC's reporting standards. However, FCA's high-risk accounting classification rules are generally similar, though not identical, to FFIEC standards.

[8] 85 FR 52253, August 25, 2020.

[9] FASB is an independent, private sector organization responsible for establishing accounting and financial reporting standards in the United States for nongovernmental organizations that follow GAAP.

[10] The updates in ASU 2022–02 eliminated the accounting guidance for TDRs in Subtopic 310–40, ''Receivables—Troubled Debt Restructurings by Creditors'' and enhanced disclosure requirements for certain loan refinancings and restructurings by creditors when borrowers are experiencing financial difficulty.

[11] The System adopted the CECL methodology in accordance with the FCA final rule, ''Implementation of the Current Expected Credit Losses Methodology for Allowances, Related Adjustments to the Tier 1/Tier 2 Capital Rule, and Conforming Amendments.'' (87 FR 27483, May 9, 2022). The CECL final rule went into effect on January 1, 2023.

[12] The loan refinancing and restructuring guidance in ASC 2022–02 used to evaluate whether a loan modification to a borrower experiencing financial difficulty is a new loan or a continuation of an existing loan was carried forward from the prior ASC paragraphs 310–20–35–9 through 35–11.

[13] *See* Accounting standards update on troubled debt restructuring (TDR) (*fca.gov*).

[14] The GAAP changes took effect when the System adopted CECL. January 1, 2023, was the effective date of the System's adoption of CECL.

[15] The TDR changes included in ASU 2022–02 were not incorporated into FCA's CECL rule as those changes were not finalized until March 31, 2022. FCA's notice and comment rulemaking process for CECL was in the final rule stages, so incorporating the technical changes as contained in this proposed rule was not appropriate under the Administrative Procedure Act's standards for rules that had undergone a proposed rule stage.

[16] FCA Notice of Intent; request for comment, ''Statement on Regulatory Burden.'' 87 FR 43227 (July 20, 2022).

[17] 90 FR 11013, 11013 (March 3, 2025).

due and still accruing interest'' high-risk loan performance category. This loan category can be a leading indicator of increased credit risk. While loans categorized as ''90 days past due and still accruing interest'' often possess a government guarantee, not all do. Further, we believe it would be misleading to consider loans 90 days or more past due still accruing interest, but otherwise adequately secured, and in the process of collection, as ''performing.'' We continue to see value in applying the performance category as a factor in the risk weights used to determine the capital adequacy of System institutions and in the credit review function since, as previously stated, it can be a leading indicator of increased credit risk. Also, we do not believe the ''90 days past due and still accruing interest'' loan performance category is contrary to GAAP. The amortized cost basis of financial assets that are 90 days or more past due, but not on nonaccrual status as of the reporting date, are a required GAAP disclosure.[18] Moreover, FCA's ''loans 90 days past due still accruing interest'' performance category provides stockholder-owners, as well as other users of System institutions' annual reports, valuable information regarding the severity, trend, and migration of nonperforming loans and, therefore, the financial condition of Farm Credit banks and associations as these are loans that have not performed according to contractual terms.

As explained in the 1986 rulemaking, this performance category was developed from the FFIEC guidance on nonperforming loans, which identified three categories: nonaccrual, loans 90 days past due still accruing interest, and renegotiated troubled debt. At that time, FCA included loans 90 days past due still accruing interest in an ''other high risk'' category (which also included loans held as current but otherwise in severe default, bankruptcies, and foreclosures). In 1993, FCA amended the high-risk loan performance categories to further align System financial statement disclosures with those of the financial services industry.[19] This resulted in separating the category of ''loans 90 days past due and still accruing interest'' from other high risk loan categories.[20] The ''loans 90 days past due and still accruing interest'' category was again amended in 2020 to clarify that past due loans not adequately secured may be placed in this category if it is likely they will become current in the near future. The 2020 rulemaking also increased comparability to FFIEC's loan performance categories by specifying those loans 90 days *or more* past due are to be included in the ''loans 90 days past due and still accruing interest'' category. The 2020 rule remained consistent with GAAP requirements when making these changes.

However, FCA requests comments on whether retaining the ''loans 90 days past due and still accruing interest'' performance category is unduly burdensome as suggested by the FCC given the benefits it provides, especially since removing it may otherwise deviate from the FFIEC's definition of a nonperforming loan. We ask that any comments submitted on this subject include empirically derived evidence in support of retention or removal of the ''90 days past due still accruing interest'' high-risk loan performance category.

IV. Disclosure Expectations for Loan Modifications and Vintage Year Disclosures. [Existing §§ 620.5, 620.11, 630.20, 630.40, and 655.10]

ASU 2022–02 requires all entities to provide financial statement disclosures for loan modifications by modification type, expected financial effect of those modifications, their performance in the 12 months after modification, and payment defaults on modifications granted within the previous 12 months (if any). Additionally, these disclosures, made by portfolio segment, should also provide qualitative information on how the entity factored the loan modifications, the borrowers' subsequent performance, and payment defaults (if any) into the allowance for credit losses (ACL). ASU 2022–02 also amended the vintage year requirement of public business entities to require disclosure of current period gross write-offs by year of origination for financing receivables and net investments in leases (''vintage disclosures'').

FCA reviewed these disclosure requirements to determine if a regulatory change was necessary instead of guidance. We reviewed our existing financial reporting regulations in 12 CFR 620.5 and 620.11 to determine if the ASU 2022–02 disclosures could be made using existing regulatory provisions or if they would require new regulations. Based on our review, we do not believe additional regulatory change is required. Existing regulatory disclosure provisions in §§ 620.5, 620.11, 630.20, and 630.40 provide appropriate categories in which to place the ASU 2022–02 disclosures.

Our financial reporting regulations are designed to balance GAAP compliance with ensuring stockholder-owners of Farm Credit banks and associations receive clear, beneficial information that is reported consistently for optimal stockholder-owner use and for consolidation within the Systemwide combined financial statements. Also, FCA regulations §§ 620.3(a), 620.4(c), and 620.10(b) prohibit making misleading disclosures. The consistent placement of ASU 2022–02 disclosures by all System institutions in the same location of financial reports furthers the objectives of §§ 620.3(a), 620.4(c), and 620.10(b). For this reason, and to provide meaningful disclosures, this preamble discussion provides compliance information for placing the enhanced GAAP disclosures within an institution's annual and quarterly reports to stockholders using the existing provisions of §§ 620.5 and 620.11. We do not believe similar compliance information is required for the Systemwide Report to Investors, as existing FCA regulation § 630.3(e) authorizes the Funding Corporation to present the information in the Systemwide report ''in any order deemed suitable'' to ensure disclosures are meaningful to investors and the general public. While not required, we encourage the Funding Corporation to consider FCA compliance information given to Farm Credit banks and associations on making these disclosures. In preparing its annual and quarterly reports Farmer Mac follows the provisions of 12 CFR 655.10 and it should use the information in this preamble as appropriate to its operations.

Although we do not propose regulatory changes for the ASU 2022–02 GAAP disclosures, we request comments on our expectations for consistent reporting of these core qualitative disclosures. We also seek comments on our determination that no regulatory changes are necessary for the ASU 2022–02 GAAP disclosures. We further welcome suggested alternatives for placement of the disclosures discussed below.

A. Disclosure of Loans to Borrowers Experiencing Financial Difficulty (Loan Modifications). [Existing §§ 620.5(g)(1), 620.5(j)(1), 620.11(c)(1), and 620.11(c)(2)]

ASU 2022–02 enhanced financial disclosures for certain loans that may previously have been considered TDRs. As a result, disclosures for loan modifications are made by class of

[18] *See* ASC paragraph 326–20–50–16.

[19] 58 FR 48780, Sept. 20, 1993.

[20] In 1993, the performance category provisions were moved from 621.3(a) to 621.6 and the category of ''loans 90 days past due and still accruing interest'' was placed in 12 CFR 621.6(c).

financing receivable and by portfolio segment.[21] The disclosures contain both qualitative and quantitative information, explaining the type and magnitude of loan modifications, the financial effect of the loan modifications, and the performance of the loans in the 12 months after modification.

FCA regulation § 620.5(j)(1) provides, in part, that banks and associations must ''furnish financial statements and related footnotes that have been prepared in accordance with generally accepted accounting principles and instructions and other requirements of the Farm Credit Administration.'' While GAAP requires disclosure of loan modifications in the financial statements and related footnotes, bank and association financial reports are for the benefit of the stockholder-owners. As such, FCA regulation § 620.2(g) requires Farm credit bank and association financial reports to not only follow GAAP but to present information in a manner that provides the ''most meaningful disclosure to shareholders.'' Accordingly, each Farm Credit bank and association is expected to make the required GAAP loan modification disclosures in the financial statements and related footnotes as required per §§ 620.5(j)(1) and 620.11(c)(2) and include in the management's discussion and analysis (MD&A) loan portfolio section a core loan modification qualitative disclosure (core disclosure) per §§ 620.5(g)(1) and 620.11(c)(1). The core disclosure should be a short, qualitative summary of how the modifications, subsequent performance of the borrowers, and payment defaults (if any) impacted the ACL and portfolio segments during the reporting period. Further, the core disclosure should be adequate to aid shareholder understanding and awareness of the GAAP loan modification disclosures in the financial statements and related footnotes. As such, the GAAP disclosures included in the financial statements and related footnotes should include a reference to the core disclosure in MD&A and vice versa.

B. Disclosure of Current-Period Gross Write-Offs (Vintage Disclosures). [Existing § 621.3]

ASU 2022–02 changed the vintage year disclosure requirements of public business entities.[22] Specifically, the ASU's update requires disclosure of current period gross write-offs by year of origination, or vintage year, for financing receivables and net investment in leases within the scope of Subtopic 326–20, ''Financial Instruments—Credit Losses—Measured at Amortized Cost,'' starting with the period of adoption. The vintage disclosures include gross write-offs under the guidance included in ASC paragraph 326–20–50–6, which requires that a public business entity disclose the amortized cost basis of financing receivables within each credit quality indicator and by year of origination (or vintage year).

FCA does not propose any regulatory changes for this disclosure.[23] FCA regulation § 621.3(b) requires preparation of financial statements and reports in accordance with GAAP. Therefore, Farm Credit banks and associations are to make vintage disclosures as required by GAAP, which we understand to require placement of vintage disclosures, or gross write-offs, in the footnotes to the financial statements.

C. Loan Refinancing and Restructuring (Loan Modification) Guidance and System Credit Activities

FCA expects to issue separate guidance on the relationship of GAAP's loan modification accounting instructions and System compliance with the distressed loan servicing provisions of the Farm Credit Act. In particular, the guidance will discuss GAAP accounting on loan modifications for borrowers experiencing financial difficulty and its impact on what constitutes a new or restructured loan for other purposes under the Farm Credit Act. We anticipate issuing this guidance soon, either before or after the publication timeline and comment period of this rulemaking.

[21] Disclosures made by portfolio segment provide qualitative information on how the entity factored the modifications and the borrower's subsequent performance, as well as payment defaults on modifications granted in the previous 12 months (if any) into determining the ACL.

[22] ASU 2022–02 amended the guidance on vintage disclosures to require disclosure of current-period gross write-offs by year of origination. In comparison, ASU 2016–13 required disclosure of the amortized cost basis within each credit-quality indicator by year of origination (vintage year) for each class of financing receivable and net investment in leases. Notwithstanding, the CECL final rule, which contained regulatory changes warranted by updates included in ASU 2016–13, did not include a vintage year requirement.

[23] The preamble to CECL final rule preamble stated FCA ''removed'' the vintage disclosure requirement of §§ 620.5(g)(1)(iv)(B) and 630.20(g)(1)(ii)(B) because of the similarity of the vintage disclosures made per ASU 2016–13 and FCA's requirements for an analysis of the allowance for credit losses-to-loans. *See* 87 FR 27483, 27490, May 9, 2022.

V. Regulatory Matters

A. Determination Under Executive Order 12866 and Expected Determination Under Executive Order 14192

The Office of Management and Budget's Office of Information and Regulatory Affairs has determined that this proposed rule is not a ''significant regulatory action'' as defined by Section 3(f) of Executive Order 12866, made applicable to FCA by Executive Order 14215. This action, if finalized as proposed, is expected to be an Executive Order 14192 deregulatory action.

B. Regulatory Flexibility Act

Pursuant to section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), FCA hereby certifies that this proposed rule will not have a significant economic impact on a substantial number of small entities. Each of the banks in the System, considered together with its affiliated associations, has assets and annual income in excess of the amounts that would qualify them as small entities. Therefore, System institutions are not ''small entities'' as defined in the Regulatory Flexibility Act.

C. Providing Accountability Through Transparency Act of 2023

The Providing Accountability Through Transparency Act of 2023 [24] requires a notice of proposed rulemaking to include the internet address of a posted summary of the proposed rule, in plain language and less than 100 words.

Public commenters may access the summary for this rulemaking under the identifier of RIN 3052–AD63 at: *https://www.fca.gov/laws-and-regulations/regulatory-projects-plan.*

List of Subjects in 12 CFR Part 621

Accounting, Agriculture, Banks, Banking, Government securities, Investments, Reporting and recordkeeping requirements, Rural areas.

For the reasons stated in the preamble, the Farm Credit Administration proposes to amend part 621 of chapter VI, title 12 of the Code of Federal Regulations as follows:

PART 621—ACCOUNTING AND REPORTING REQUIREMENTS

■ 1. The authority citation for part 621 is revised to read as follows:

Authority: Secs. 4.12(b)(5), 4.14, 4.14A, 4.14D, 5.17, 5.19, 5.22A, 8.11 of the Farm

[24] 5 U.S.C. 553(b)(4).

Credit Act (12 U.S.C. 2183, 2202, 2202a, 2202d, 2252, 2254, 2257a, 2279aa–11); sec. 514 of Pub. L. 102–552.

Subpart C—Loan Performance and Valuation Assessment

■ 2. Section 621.6 is amended by:
■ a. Removing paragraph (b);
■ b. Renumbering paragraphs (c) and (d) as new paragraph (b) and (c); and
■ c. Replacing the phrase ''under paragraph (c)'' in § 621.6(a)(2) with ''under paragraph (b)''.

§ 621.6 [Amended].

* * * * *

Dated: December 2, 2025.

Ashley Waldron,

Secretary to the Board, Farm Credit Administration.

[FR Doc. 2025–22015 Filed 12–4–25; 8:45 am]

BILLING CODE 6705–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2025–5040; Project Identifier MCAI–2022–01516–R]

RIN 2120–AA64

Airworthiness Directives; Airbus Helicopters Deutschland GmbH Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Airbus Helicopters Deutschland GmbH Model MBB–BK 117 D–3 helicopters. This proposed AD was prompted by a determination that certain bolts installed on the horizontal control rods of the flight controls were not dye penetrant inspected for cracks during manufacturing and thus could lead to bolt failure. This proposed AD would require replacement of affected bolts with bolts that are eligible for installation. This proposed AD would also prohibit installing an affected bolt on any helicopter. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this NPRM by January 20, 2026.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2025–5040; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For European Union Aviation Safety Agency (EASA) material identified in this proposed AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu;* website: *easa.europa.eu.* You may find this material on the EASA website at *ad.easa.europa.eu.*
- You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Parkway, Room 6N–321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222–5110. It is also available at *regulations.gov* under Docket No. FAA–2025–5040.

FOR FURTHER INFORMATION CONTACT: Aryanna Sanchez, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (817) 222–4058; email: *aryanna.t.sanchez@faa.gov*.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments using a method listed under **ADDRESSES**. Include ''Docket No. FAA–2025–5040; Project Identifier MCAI–2022–01516–R'' at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPIN.'' The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Joe Salameh, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2022–0228, dated November 28, 2022 (EASA AD 2022–0228) (also referred to as the MCAI), to correct an unsafe condition on Airbus Helicopters Deutschland GmbH Model MBB–BK117 D–3 and D–3m helicopters. The MCAI states it has been determined that bolts on the horizontal control rods of the flight controls having part-number D671M7051211 and with a serial number listed in the applicable material were not subject to a dye penetrant inspection for cracks during manufacturing and thus are subject to bolt failure.

The FAA is proposing this AD to prevent bolt failure, which if not addressed, could result in loss of control of the helicopter.

You may examine the MCAI in the AD docket at *regulations.gov* under Docket No. FAA–2025–5040.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed EASA AD 2022–0228, which specifies procedures for checking (inspecting) the serial number (S/N) of the bolt, and depending on the results of the inspection, replacing any affected bolts with serviceable bolts. EASA AD 2022–0228 also prohibits installing an affected bolt on any helicopter.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

FAA's Determination

These products have been approved by the civil aviation authority (CAA) of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, that authority has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in This NPRM

This proposed AD would require accomplishing the actions specified in EASA AD 2022–0228, described previously, as incorporated by reference, except for any exceptions identified in the regulatory text of this proposed AD. See ''Differences Between this Proposed AD and the MCAI'' for a discussion of the general differences included in this proposed AD.

Differences Between This Proposed AD and the MCAI

The MCAI applies to Airbus Helicopters Deutschland GmbH Model D–3m helicopters, whereas this proposed AD would not because that model does not have an FAA type certificate.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some CAA ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, the FAA proposes to incorporate EASA AD 2022–0228 by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2022–0228 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Using common terms that are the same as the heading of a particular section in EASA AD 2022–0228 does not mean that operators need to comply only with that section. For example, where the AD requirement refers to ''all required actions and compliance times,'' compliance with this AD requirement is not limited to the section titled ''Required Action(s) and Compliance Time(s)'' in EASA AD 2022–0228. Material required in EASA AD 2022–0228 for compliance will be available at *regulations.gov* under Docket No. FAA–2025–5040 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 146 helicopters of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD.

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace bolt	4 work-hours × $85 per hour = $340	$101	$441	$64,386

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Airbus Helicopters Deutschland GmbH: Docket No. FAA–2025–5040; Project Identifier MCAI–2022–01516–R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by January 20, 2026.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Helicopters Deutschland GmbH Model MBB–BK 117 D–3 helicopters, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 6700, Rotorcraft Flight Control.

(e) Unsafe Condition

This AD was prompted by a determination that certain bolts installed on the horizontal control rods of the flight controls were not dye penetrant inspected for cracks during manufacturing and thus are subject to bolt failure. The FAA is issuing this AD to prevent bolt failure, which if not addressed, could result in loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with European Union Aviation Safety Agency (EASA) AD 2022–0228, dated November 28, 2022 (EASA AD 2022–0228).

(h) Exceptions to EASA AD 2022–0228

(1) Where EASA AD 2022–0228 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2022–0228 defines affected bolt as ''Bolts, having part number D671M7051211 and a s/n [serial number] as listed in the ASB'', this AD requires replacing that text with ''bolts, having part number D671M7051211 and a serial number as listed in Airbus Helicopters Alert Service Bulletin ASB MBB–BK117 D–3–67A–002, Revision 1, dated July 29, 2024''.

(3) Where EASA AD 2022–0228 refers to flight hours, this AD requires using hours time-in-service (TIS).

(4) Where the material referenced in EASA AD 2022–0228 specifies ''check'', this AD requires replacing that text with ''inspect''.

(5) Where the material referenced in EASA AD 2022–0228 specifies ''discard'', this AD requires replacing that text with ''remove from service''.

(6) Where the material referenced in EASA AD 2022–0228 specifies to make the bolt unserviceable, this AD does not require those actions.

(7) This AD does not adopt the ''Remarks'' section of EASA AD 2022–0228.

(i) No Reporting Requirement

Although the material referenced in EASA AD 2022–0228 specifies to submit certain information to the manufacturer, this AD does not require that action.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to: *AMOC@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact Aryanna Sanchez, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (817) 222–4058; email: *aryanna.t.sanchez@faa.gov.*

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2022–0228, dated November 28, 2022.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu;* website: *easa.europa.eu.* You may find this material on the EASA website at *ad.easa.europa.eu.*

(4) You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Parkway, Room 6N–321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222–5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locationsoremailfr.inspection@nara.gov.*

Issued on December 2, 2025.

Steven W. Thompson,

Acting Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2025–21999 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2025–5042; Project Identifier MCAI–2025–00438–T]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2024–24–09, which applies to all Airbus SAS Model A318 and A320 series airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, –133, –151N, –153N, and –171N airplanes; and Model A321–111, –112, –131, –211, –212, –213, –231, –232, –251N, –251NX, –252N, –252NX, –253N, –253NX, –271N, –271NX, –272N, and –272NX airplanes. AD 2024–24–09 requires the actions in AD 2022–24–05, provides optional terminating action for the repetitive inspections, revises the list of affected parts, and prohibits the installation of affected parts under certain conditions. Since the FAA issued AD 2024–24–09, the list of additional affected galley part numbers has been revised. This proposed AD would continue to require the actions in AD 2024–24–09 and would revise the list of affected parts. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by January 20, 2026.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2025–5042; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For European Union Aviation Safety Agency (EASA) material identified in this proposed AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu.* You may find this material on the EASA

website at *ad.easa.europa.eu.* It is also available at *regulations.gov* under Docket No. FAA–2025–5042.

• You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

FOR FURTHER INFORMATION CONTACT: Evan Weaver, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 316–944–8910; email: *Evan.P.Weaver@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments using a method listed under the **ADDRESSES** section. Include ''Docket No. FAA–2025–5042; Project Identifier MCAI–2025–00438–T'' at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPIN.'' The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Evan Weaver, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 316–944–8910; email: *Evan.P.Weaver@faa.gov.* Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2024–24–09, Amendment 39–22899 (89 FR 97499, December 9, 2024) (AD 2024–24–09), for all Airbus SAS Model A318, and A320 series airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, –133, –151N, –153N, and –171N airplanes; and Model A321–111, –112, –131, –211, –212, –213, –231, –232, –251N, –251NX, –252N, –252NX, –253N, –253NX, –271N, –271NX, –272N, and –272NX airplanes. AD 2024–24–09 was prompted by an MCAI originated by EASA, which is the Technical Agent for the Member States of the European Union. EASA issued AD 2024–0038, dated February 5, 2024, to correct an unsafe condition.

AD 2024–24–09 requires repetitive inspections of certain galleys for corrosion of trolley retainer aluminum blocks and delamination of the upper panel of the trolley compartment, and applicable corrective action; provides optional terminating action for the repetitive inspections; revises the list of affected parts; and prohibits the installation of affected parts under certain conditions. The FAA issued AD 2024–24–09 to address damage that could affect the galley's capability to hold the trolley under emergency landing loads, which could lead to trolley detachment, possibly resulting in blocking of an escape path during an emergency exit.

Actions Since AD 2024–24–09 Was Issued

Since the FAA issued AD 2024–24–09, EASA superseded EASA AD 2024–0038, dated February 5, 2024 (EASA AD 2024–0038) and issued EASA AD 2025–0068, dated March 28, 2025 (EASA AD 2025–0068) (also referred to as the MCAI), to correct an unsafe condition for all Airbus SAS Model A318–111, –112, –121, and –122 airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, –133, –151N, –153N, and –171N airplanes; Model A320–211, –212, –214, –215, –216, –231, –232, –233, –251N, –252N, –253N, –271N, –272N, and –273N airplanes; and Model A321–111, –112, –131, –211, –212, –213, –231, –232, –251N, –252N, –253N, –271N, –272N, –251NX, –252NX, –253NX, –271NX, and –272NX airplanes. Model A320–215 airplanes are not certificated by the FAA and are not included on the U.S. type certificate data sheet; this proposed AD therefore does not include those airplanes in the applicability. The MCAI states that it was identified that galleys having part numbers 601891–006801, 601891–003701, and 601891–010001 were missing in Appendix 1 of EASA AD 2024–0038, and it was identified that galleys having part number 6019A3–000101 are not affected by the unsafe condition addressed by that AD. Damage, if not detected and corrected, could affect the galley's capability to hold the trolley under emergency landing loads, which could lead to trolley detachment, possibly resulting in blocking of an escape path during an emergency exit.

The FAA is proposing this AD to address the unsafe condition on these products. You may examine the MCAI in the AD docket at *regulations.gov* under Docket No. FAA–2025–5042.

Explanation of Retained Requirements

Although this proposed AD does not explicitly restate the requirements of AD 2024–24–09, this proposed AD would retain all of the requirements of AD 2024–24–09. Those requirements are referenced in EASA AD 2025–0068, which, in turn, is referenced in paragraph (g) of this proposed AD.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed EASA AD 2025–0068, which includes the following provisions:

• Procedures for repetitive general visual inspections of certain galleys for discrepancies including cracks and corrosion of trolley retainer aluminum blocks and delamination of upper panel of trolley compartment;

• Corrective actions including repeating the inspection, repairing the trolley compartment upper panel, and limiting the trolley weight;

• Procedures for modifying the affected galleys as optional terminating action for the repetitive inspections;

• A revised the list of affected galleys; and

• Prohibition of the installation of affected parts unless the parts are inspected and corrected.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

FAA's Determination

These products have been approved by the civil aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, that authority

has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements in This NPRM

This proposed AD would retain all requirements of AD 2024–24–09. This proposed AD would require accomplishing the actions specified in EASA AD 2025–0068 described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

Explanation of Required Compliance Information

In the FAA's ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some civil aviation authority (CAA) ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, the FAA proposes to incorporate EASA AD 2025–0068 by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2025–0068 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Using common terms that are the same as the heading of a particular section in EASA AD 2025–0068 does not mean that operators need comply only with that section. For example, where the AD requirement refers to ''all required actions and compliance times,'' compliance with this AD requirement is not limited to the section titled ''Required Action(s) and Compliance Time(s)'' in EASA AD 2025–0068. Material required by EASA AD 2025–0068 for compliance will be available at *regulations.gov* under Docket No. FAA–2025–5042 after the FAA final rule is published.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 1,985 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2024–24–09	2 work-hours × $85 per hour = $170	$0	$170	$337,450

ESTIMATED COSTS FOR OPTIONAL ACTIONS

Labor cost	Parts cost	Cost per product
Up to 40 work-hours × $85 per hour = $3,400	(*)	Up to $3,400.*

*The FAA has received no definitive data on which to base the cost estimates for the parts associated with the modification specified in this proposed AD.

The FAA estimates the following costs to do any necessary on-condition action that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need this on-condition action:

ESTIMATED COSTS OF ON-CONDITION ACTIONS

Labor cost	Parts cost	Cost per product
1 work-hour × $85 per hour = $85	$0	$85

The FAA has included all known costs in its cost estimate. According to the parts manufacturer, however, some or all of the costs of the optional modification specified in this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by:

■ a. Removing Airworthiness Directive (AD) 2024–24–09, Amendment 39–22899 (89 FR 97499, December 9, 2024); and

■ b. Adding the following new AD:

Airbus SAS: Docket No. FAA–2025–5042; Project Identifier MCAI–2025–00438–T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by January 20, 2026.

(b) Affected ADs

This AD replaces AD 2024–24–09, Amendment 39–22899 (89 FR 97499, December 9, 2024) (AD 2024–24–09).

(c) Applicability

This AD applies to all Airbus SAS airplanes specified in paragraphs (c)(1) through (4) of this AD, certificated in any category.

(1) Model A318–111, –112, –121, and –122 airplanes.

(2) Model A319–111, –112, –113, –114, –115, –131, –132, –133, –151N, –153N, and –171N airplanes.

(3) Model A320–211, –212, –214, –216, –231, –232, –233, –251N, –252N, –253N, –271N, –272N, and –273N airplanes.

(4) Model A321–111, –112, –131, –211, –212, –213, –231, –232, –251N, –251NX, –252N, –252NX, –253N, –253NX, –271N, –271NX, –272N, and –272NX airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/Furnishings.

(e) Unsafe Condition

This AD was prompted by a report that damage (including delamination of work deck and corroded and cracked retainer blocks) was found during inspection of certain galleys. The FAA is issuing this AD to address damage that could affect the galley's capability to hold the trolley under emergency landing loads, which could lead to trolley detachment. The unsafe condition, if not addressed, could result in blockage of an escape path during an emergency exit.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2025–0068, dated March 28, 2025 (EASA AD 2025–0068).

(h) Exceptions to EASA AD 2025–0068

(1) Where EASA AD 2025–0068 refers to ''18 August 2021 [the effective date of the EASA AD 2021–0183 at original issue],'' this AD requires using January 9, 2023 (the effective date of AD 2022–24–05 Amendment 39–22245 (87 FR 74291, December 5, 2022)).

(2) Where EASA AD 2025–0068 refers to ''19 February 2024 [the effective date of EASA AD 2024–0038],'' this AD requires using January 13, 2025 (the effective date of AD 2024–24–09).

(3) Where EASA AD 2025–0068 refers to ''the effective date of this AD,'' this AD requires using the effective date of this AD.

(4) Where EASA AD 2025–0068 does not specify corrective action after a post-repair inspection that has findings of damage, this AD requires obtaining repair instructions before further flight from the FAA, EASA, or Airbus SAS's EASA Design Organization Approval (DOA), and accomplishing those actions accordingly. Any approval by the DOA must include the DOA-authorized signature.

(5) Where the second row of Table 1 of EASA AD 2025–0068 specifies ''P/N 6018A7–000101 or P/N 6018C1–000101'', for this AD, replace that text with ''P/N 6018A7–000101 or P/N 6018C1–000101 or P/N 601891–006801''.

(6) Where the third row of Table 1 of EASA AD 2025–0068 specifies ''P/N 601891–006801 or P/N 601891–003701 or P/N 601891–010001'', for this AD, replace that text with ''P/N 601891–003701 or P/N 601891–010001''.

(7) Where Table 2 of EASA AD 2025–0068 specifies ''P/N 601891–006801 or P/N 601891–003701 or P/N 601891–010001'', for this AD, replace that text with ''P/N 601891–003701 or P/N 601891–010001''.

(8) This AD does not adopt the ''Remarks'' section of EASA AD 2025–0068.

(i) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, AIR–520, Continued Operational Safety Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (j) of this AD and email to: *AMOC@faa.gov*.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(ii) AMOCs approved previously for AD 2024–24–09 are approved as AMOCs for the corresponding provisions of EASA AD 2025–0068 that are required by paragraph (g) of this AD.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, AIR–520, Continued Operational Safety Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraph (i)(2) of this AD, if any material contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(j) Additional Information

For more information about this AD, contact Evan Weaver, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 316–944–8910; email: *Evan.P.Weaver@faa.gov*.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2025–0068, dated March 28, 2025.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu*. You may find this material on the EASA website at *ad.easa.europa.eu*.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*.

Issued on December 3, 2025.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2025–22106 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 1

[Docket No. USCG–2008–1259]

RIN 1625–AB32

Assessment Framework and Organizational Restatement Regarding Preemption for Certain Regulations Issued by the Coast Guard

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking, withdrawal.

SUMMARY: The Coast Guard is withdrawing the proposed rule entitled ''Assessment Framework and Organizational Restatement Regarding Preemption for Certain Regulations Issued by the Coast Guard,'' published in the **Federal Register** on December 27, 2013. The Coast Guard is withdrawing the proposed rule because our practice of discussing the preemptive effect of the Coast Guard's legal authorities and regulations in the preamble of our rulemaking documents is sufficient to identify any preemptive effects.

DATES: The notice of proposed rulemaking published on December 27, 2013 (78 FR 79242) and comment period extension published on March 28, 2014 (79 FR 17482) are withdrawn as of December 5, 2025.

ADDRESSES: The docket for this withdrawal is available at the Federal eRulemaking Portal at *www.regulations.gov.* Please search for docket number USCG–2008–1259.

FOR FURTHER INFORMATION CONTACT: For information about this document call or email Stephen Hubchen, Coast Guard; telephone 202–372–1198, email *Stephen.K.Hubchen@uscg.mil.*

SUPPLEMENTARY INFORMATION:

Background

On December 27, 2013, the Coast Guard published a notice of proposed rulemaking (NPRM) titled ''Assessment Framework and Organizational Restatement Regarding Preemption for Certain Regulations Issued by the Coast Guard,'' at 78 FR 79242 (hereafter ''the Framework''). On March 28, 2014, the comment period on the NPRM was reopened for an additional 60 days, at 79 FR 17482.

The Coast Guard received many comments on the NPRM that helped inform this decision to withdraw the rulemaking. The comments are available in the docket. Several commenters shared a concern that the breadth of the Framework's assertions of field preemption made it difficult to determine with certainty what the Framework's full impact would be on state laws. In addition, some commenters requested that the Coast Guard withdraw the proposed rule.

The Coast Guard also held two public meetings related to the NPRM, as announced in the notice published at 79 FR 22071 on April 21, 2014. Since 2014, the Coast Guard has not published any other actions related to this rulemaking and has decided to withdraw the NPRM.

Withdrawal

The Coast Guard is withdrawing the proposed rule because our practice of discussing the preemptive effect of the Coast Guard's legal authorities and regulations in the preamble of our rulemaking documents is sufficient to identify any preemptive effects. The Coast Guard has determined that the implied and express preemptive effects of our federal regulations, as established in statutory authorities and case law, do not require a blanket, general restatement in the Code of Federal Regulations of their preemptive effects.

The Coast Guard has taken, and will continue to take, a targeted approach to clarify its authorities in the preamble of each rulemaking document. The Coast Guard believes this approach is more aligned with the principles identified in Executive Order 13132 on Federalism than an organizational preemption statement that would be applied across different Coast Guard authorities. Therefore, the proposed rulemaking is not needed.

Upon publication of this notice, the Coast Guard will classify the corresponding Unified Agenda as a completed action.

This notice is issued under authority of 5 U.S.C. 552(a) and is consistent with the procedures set forth in 5 U.S.C. 533 of the Administrative Procedure Act.

Dated: December 2, 2025.

Giovanna M. Cinelli,

Judge Advocate General and Chief Counsel, Acting, U.S. Coast Guard.

[FR Doc. 2025–22011 Filed 12–4–25; 8:45 am]

BILLING CODE 9110–04–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1, 2, 25, and 27

[GN Docket No. 25–59; FCC 25–78; FR ID 319865]

In the Matter of Upper C-band (3.98–4.2 GHz)

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this Notice of Proposed Rulemaking (*NPRM*), the Federal Communications Commission (Commission) seeks comment on proposed rule changes that would expand the ecosystem for next generation wireless services in the 3.7–4.2 GHz band (C-band) by making as much as 180, and at least 100, megahertz of the 3.98–4.2 GHz band (Upper C-band) available for terrestrial wireless flexible use via a system of competitive bidding. This action would be in furtherance of Congress' direction in the One Big Beautiful Bill Act (OBBB Act) to ''complet[e] a system of competitive bidding not later than 2 years after the date of enactment of this Act for not less than 100 megahertz in the band between 3.98 gigahertz and 4.2 gigahertz.'' The *NPRM* seeks comment on options for reconfiguring the Upper C-band in the contiguous United States ranging from 180 megahertz (3.98–4.16 GHz) to the congressionally mandated minimum of 100 megahertz (3.98–4.08 GHz) for terrestrial wireless use. The *NPRM* seeks comment on how much Upper C-band spectrum—beyond the minimum 100 megahertz required by the OBBB Act—could be repurposed by incumbent fixed satellite service (FSS) space station operators and on how the transition could be effectuated if their existing customers relocate out of the C-band. Under any of the reconfiguration options under consideration, the *NPRM*'s baseline proposition is to apply the existing 3.7 GHz Service rules (applicable in the Lower C-band from 3.7–3.98 GHz) to any newly authorized terrestrial wireless operations. Any other rules and requirements, including those relating to the transition process, would be modeled to the greatest extent possible on those that applied to the Lower C-band transition. The *NPRM* also seeks comment on a range of issues associated with repurposing some portion of the Upper C-band, including: reallocation of the 4.0–4.2 GHz band; competitive bidding procedures for an eventual auction; licensing, operating, and technical rules for any new wireless services; (4) transitioning incumbent

FSS operations; and promoting co-existence with adjacent band radio altimeters.

DATES: Comments are due on or before January 5, 2026; reply comments are due on or before February 3, 2026. Written comments on the Paperwork Reduction Act (PRA) proposed information collection requirements must be submitted by the public, Office of Management and Budget (OMB), and other interested parties on or before February 3, 2026.

ADDRESSES: Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). You may submit comments, identified by GN Docket No. 25–59, by any of the following methods:

- *Electronic Filers:* Comments may be filed electronically using the internet by accessing the ECFS: *https://www.fcc.gov/ecfs.*
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing.
- Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. All filings must be addressed to the Secretary, Federal Communications Commission.
- Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701. Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.
- *People with Disabilities.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document. Send a copy of your comment on any proposed information collection to Cathy Williams, FCC, via email to *PRA@fcc.gov* and to *Cathy.Williams@fcc.gov.*

FOR FURTHER INFORMATION CONTACT: For additional information on this proceeding, contact Paul Powell, *Paul.Powell@fcc.gov,* of the Wireless Telecommunications Bureau, Mobility Division, (202) 418–1613. Direct press inquiries to *MediaRelations@fcc.gov.* For additional information concerning the Paperwork Reduction Act of 1995, send an email to *PRA@fcc.gov* or contact Cathy Williams, Office of Managing Director, at (202) 418–2918 or *Cathy.Williams@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rulemaking (*NPRM*), FCC 25–78, adopted on November 20, 2025 and released on November 21, 2025. The full text of this document is available electronically via the FCC's Electronic Document Management System (EDOCS) website at *https://www.fcc.gov/edocs* (search using FCC number) or via the FCC's Electronic Comment Filing System (ECFS) website at *https://www.fcc.gov/ecfs* (search using docket number). (Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.)

Providing Accountability Through Transparency Act. Consistent with the Providing Accountability Through Transparency Act, Public Law 118–9, a summary of this document will be available on *https://www.fcc.gov/proposed-rulemakings.*

Paperwork Reduction Act. This *NPRM* may contain proposed new or modified information collections. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on any information collections contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104–13. Public and agency comments are due February 3, 2026.

Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and (e) way to further reduce the information collection burden on small business concerns with fewer than 25 employees. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, see 44 U.S.C. 3506(c)(4), the Commission seeks specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.

Synopsis

I. Introduction

1. In July 2025, Congress adopted, and President Trump signed, the One Big Beautiful Bill Act (OBBB Act), Public Law 119–21, 40002(b)(2). The OBBB Act re-instituted the Commission's general auction authority and specifically directed the Commission to ''grant licenses through systems of competitive bidding, before the expiration of the general auction authority . . . for not less than 300 megahertz, including by completing a system of competitive bidding not later than 2 years after the date of enactment of this Act for not less than 100 megahertz in the band between 3.98 gigahertz and 4.2 gigahertz.'' Consistent with this directive, we propose today to further expand the ecosystem for next generation wireless services in the 3.7–4.2 GHz band (C-band) by making as much as 180, and at least 100, megahertz of the 3.98–4.2 GHz band (Upper C-band) available for terrestrial wireless flexible use via a system of competitive bidding.

2. To satisfy our congressional mandate and rapidly make more valuable mid-band spectrum available for terrestrial wireless services, we have identified several key goals for this proceeding. First, we propose to make additional spectrum in the Upper C-band available for new terrestrial wireless operations within the congressionally mandated timeframe. Next, as with the earlier 3.7–3.98 GHz (Lower C-band) transition, we seek to expeditiously transition incumbent operations in the Upper C-band in keeping with our *Emerging Technologies* precedent. The Commission's *Emerging Technologies* framework has been relied on since the early 1990s to facilitate the swift transition of spectrum from one use to another. In the Lower C-band, it was used to require new 3.7 GHz Service licensees, as a condition of their licenses, to make ''all necessary relocation and accelerated relocation payments before they are allowed to deploy in the spectrum made available for flexible use.'' Finally, we look to

reinforce a successful coexistence environment by facilitating the timely introduction of new, high-powered terrestrial wireless operations in the Upper C-band alongside a generational upgrade to radio altimeters that facilitates aviation safety through operations in the adjacent 4.2–4.4 GHz band that can safely coexist with wireless services. We therefore seek comment on proposals to enable terrestrial wireless operations in a segment of the Upper C-band in the contiguous United States, to reserve no more than 20 megahertz as a guard band between those wireless operations and Fixed Satellite Services (FSS), and to generally apply the part 27 licensing and operating rules that presently govern wireless operations in the Lower C-band to new full-power commercial operations in the Upper C-band. We ask commenters to provide specifics on the costs and benefits of these proposals, and of potential alternatives, in addition to detailed technical analyses and other studies in support of their positions.

3. Accomplishing these tasks within the timeframe established by the OBBB Act will necessitate broad-based and proactive engagement from relevant industry stakeholders as well as our federal partners. To that end, we look forward to robust participation in this proceeding from entities with current and prospective in-band equities, including Upper C-band incumbents (*e.g.,* FSS space and earth station operators, content providers, and other contractual customers that use FSS services), wireless carriers, and proponents of alternative distribution technologies. In terms of adjacent band equities, we note that the wireless and aviation industries are already engaged in ongoing discussions about how to promote the effective coexistence between any new terrestrial wireless operations in the Upper C-band and radio altimeters in the 4.2–4.4 GHz band. We similarly anticipate continued dialogue and close coordination with the National Telecommunications and Information Administration (NTIA), the Federal Aviation Administration (FAA), and other federal stakeholders in areas of mutual interest. In particular, we expect that FAA will soon initiate a synchronized rulemaking to update its radio altimeter standards to complement our efforts to repurpose the Upper C-band. Although radio altimeters operate in an adjacent band (4.2–4.4 GHz), coordinated timing for these parallel processes will be important to provide certainty for stakeholders and to ensure a successful spectral coexistence environment. We believe that these collective efforts will help us meet the mandatory deadlines established by Congress and bring the benefits of expanded access to advanced wireless services, including 5G and, eventually 6G, to the American people.

II. Background

A. Current Allocation and Use of the Upper C-Band and Adjacent Bands

4. *Upper C-band.* The 4.0–4.2 GHz portion of the Upper C-band is currently allocated for non-federal use on a primary basis for FSS and Fixed Service (FS) links throughout the United States although FS operations were sunset in the contiguous United States throughout the entire C-band as part of the earlier Lower C-band transition. Space station operators use 4.0–4.2 GHz nationwide to provide space-to-earth signals (*i.e.,* downlink) of various bandwidths to licensed transmit-receive, registered receive-only, and unregistered receive-only earth stations nationwide. These signals primarily deliver programming content to television and radio broadcasters throughout the country, as well as telephone, data, and satellite communications services to customers, including federal users, on a contractual basis. FS links remain in use in these frequencies outside the contiguous United States only.

5. The 3.98–4.0 GHz portion of the Upper C-band was reallocated as part of the earlier lower band transition in the contiguous United States, and is reserved as a guard band to protect adjacent incumbent operations in the remainder of the Upper C-band from potential harmful interference. 3.98–4.0 GHz is allocated in the continental United States for non-federal use on a primary basis for FS and Mobile, except aeronautical mobile, Service, but there are no service rules established for that portion of the band. Outside the contiguous United States, these frequencies are allocated for and used by FSS and FS services. Outside of the contiguous United States, authorized FSS and FS providers were allowed to continue operating throughout the entire 3.7–4.2 GHz band.

6. *Lower C-band.* The adjacent Lower C-band from 3.7–3.98 GHz is allocated on a primary basis for non-federal Fixed and Mobile, except aeronautical mobile, services in addition to FS service within the contiguous United States, although as a practical matter only flexible use terrestrial wireless operations remain given the earlier sunset of FS uses. Outside of the contiguous United States, the Lower C-band remains allocated for, and used by, FSS and FS services.

7. *4.2–4.4 GHz.* The adjacent 4.2–4.4 GHz band is allocated in the United States on a primary basis for federal and non-federal Aeronautical Radionavigation Services for radio altimeters, which are aeronautical safety systems primarily used at altitudes under 2500 feet above ground level to measure aircraft height above terrain and obstacles in all phases of flight. The band is also allocated worldwide on a co-primary basis for wireless avionics intra-communications systems; these systems provide communications over short distances between points on a single aircraft and are not intended to provide air-to-ground communications or communications between two or more aircraft.

B. Procedural History

1. Lower C-Band

8. In the *2020 C-band R&O,* the Commission authorized flexible use terrestrial operations in the 3.7 GHz Service from 3.7–3.98 GHz, reserved 3.98–4.0 GHz as a guard band, and migrated incumbent operations into 4.0–4.2 GHz throughout the contiguous United States. To effectuate this transition and clear incumbent operations in the lower portion of the band, the Commission modified the licenses and market access authorizations of incumbent FSS operators, transmit-receive earth station licensees, and FS licensees. The Commission also adopted a freeze on the filing of new or modified earth station applications across the 3.7–4.2 band, and it remains in place. The Commission also assigned overlay licenses for the 3.7 GHz Service through an auction, and adopted service rules requiring those licensees to comply with certain part 27 licensing, operating, and technical rules to encourage efficient use of the spectrum and protect incumbent users both in-band and in adjacent bands. As discussed below, the 3.7 GHz Service licensees subsequently made temporary, voluntary commitments to adjust certain technical parameters in support of both full power deployments across the Lower C-band and the coexistence environment with adjacent band radio altimeters.

9. The *2020 C-band R&O* required 3.7 GHz Service licensees to reimburse the reasonable relocation costs of eligible FSS space station operators, incumbent FSS earth station operators, and incumbent FS licensees, with a third-party Relocation Payment Clearinghouse (Clearinghouse) overseeing the cost-related aspects of the transition. The practical aspects of the FSS transition were managed by the eligible space

station operators who were required to submit public transition plans and work with a Relocation Coordinator to ensure a timely and orderly process. The Commission established an ultimate deadline of December 5, 2025, by which the eligible space station operators were to complete the transition of FSS operations to the upper portion of the band, and also provided incentives for an accelerated clearing process by allowing eligible space station operators to voluntarily commit to relocate on a two-phased accelerated schedule, with a Phase I deadline of December 5, 2021, and a Phase II deadline of December 5, 2023.

10. All five eligible space station operators elected accelerated relocation, subsequently met the respective Phase I and II deadlines, and became eligible for the designated accelerated relocation payments. As a result, the practical work of the transition was completed in 2023, and 3.7 GHz Service licensees are now providing 5G service using these frequencies in markets throughout the contiguous United States. Residual cost-related aspects of the transition were effectively completed by June 2025, and the relocation cost reimbursement program officially ended as of August 21, 2025.

2. 2025 Upper C-Band Notice of Inquiry

11. In February 2025, the Commission issued the *Upper C-band NOI,* which outlined the successful lower band transition, the current state of allocations and services across the C-band, and the Commission's interest in exploring the potential for new services in the Upper C-band. The Commission solicited feedback on the appropriate parameters for additional opportunities for robust connectivity in the Upper C-band and asked commenters to identify how much spectrum in the Upper C-band could be repurposed for new uses. The Commission also sought comment on whether and how to amend the U.S. Table of Frequency Allocations to facilitate new opportunities in the band, either by aligning the Upper C-band's allocations with those in the Lower C-band, or by taking a different approach. The *Upper C-band NOI* asked questions about the structure and mechanics of a potential transition to new operations in the Upper C-band, including whether to utilize some or all of the aspects of the Lower C-band transition, as a means to manage the practical and financial aspects of any new transition effort. The Commission also sought input on the appropriate service and technical rules for any new operations in the Upper C-band.

12. The *Upper C-band NOI* asked Upper C-band incumbents—including FSS space and earth station operators, content providers, and other contractual customers (including federal users) that rely on FSS services—about how the introduction of new services might affect their current and future operations in the band. The *Upper C-band NOI* also noted the proximity and sensitivity of the radio altimeter operations in the 4.2–4.4 GHz band, the steps that were taken to protect those operations in the *2020 C-band R&O,* and technical work that has been undertaken in the years since that action. Recognizing the successful coexistence environment that has been fostered between the 3.7 GHz Service and radio altimeters at 4.2–4.4 GHz, we requested further information regarding advancements in radio altimeter resiliency and sought comment on appropriate technical and service rules that would further promote coexistence in light of potential new operations in the Upper C-band.

13. The *Upper C-band NOI* generated a wide array of comments from incumbent FSS operators, 3.7 GHz Service licensees and other wireless providers, content providers and other FSS customers, as well as aviation interests with adjacent band equities. Since that record closed earlier this year, the OBBB Act passed and was signed into law. The proposals set forth in this *NPRM* have been specifically developed to fulfill the directive in the OBBB Act to auction for terrestrial use not less than 100 megahertz of the Upper C-band; we look forward to commenters refining their earlier *Upper C-band NOI* input in response to the specific proposals in this *NPRM,* and with our new legislative remit in mind.

3. The One Big Beautiful Bill Act

14. In July 2025, as part of the OBBB Act, Congress reinstituted the Commission's general authority to grant licenses through systems of competitive bidding through September 2034 and established a path forward for the eventual repurposing of 800 megahertz to be licensed through competitive bidding, including at least 500 megahertz for full power commercial licensed use cases. The OBBB Act also specifically directed the Commission to ''grant licenses through systems of competitive bidding, before the expiration of the general auction authority for not less than 300 megahertz, including by completing a system of competitive bidding not later than 2 years after the date of enactment of this Act for not less than 100 megahertz in the band between 3.98 gigahertz and 4.2 gigahertz.'' In light of this direction, we are quickly moving forward to fulfill our Congressional mandate and seek comment below on reconfiguration alternatives for the Upper C-band which are designed to meet this goal.

III. Notice of Proposed Rulemaking

A. Reconfiguration and Allocation of the Upper C-Band

1. Reconfiguration Options

15. In this *NPRM,* we seek comment on options for reconfiguring the Upper C-band in the contiguous United States ranging from 180 megahertz (3.98–4.16 GHz) to the congressionally mandated minimum of 100 megahertz (3.98–4.08 GHz) for terrestrial wireless use. Under any approach we may adopt within this range, we propose that the remainder of the Upper C-band would be used for repacked FSS operations with a guard band of no more than 20 megahertz. For clarity, we note that the total amount of spectrum ultimately repurposed will include both the spectrum designated for auction as well as any guard band. Thus, to auction 100 megahertz, that amount plus any guard band (*e.g.,* 20 megahertz, for a total of 120 megahertz) will need to be repurposed. Our consideration of the optimal amount of spectrum to repurpose for terrestrial wireless use will take into account what may be achievable in terms of the further transitioning of in-band incumbent FSS operations in the contiguous United States. Notably, incumbent satellite operators serving a majority of the C-band earth stations in CONUS have already stated that it is possible for them to repurpose at least 100 megahertz of the Upper C-band for terrestrial wireless use. We seek comment on how much Upper C-band spectrum—beyond the minimum 100 megahertz required by the OBBB Act—could be repurposed by incumbent FSS space station operators and on how the transition could be effectuated if their existing customers relocate out of the C-band.

16. Our ultimate decision regarding the amount of spectrum to repurpose will depend on a variety of additional factors. Specifically, we seek input on the economic benefits and costs of repurposing spectrum for terrestrial wireless and how that value could be affected by the amount of spectrum that is ultimately repurposed and the clearing timeline. We also will consider the capabilities of adjacent band radio altimeters which are expected to undergo upgrades that will further enhance their signal rejection capabilities and bolster the existing

successful spectral co-existence environment to facilitate a further repurposing in the Upper C-band. We believe that appropriately balancing all these factors will help to further our ultimate goal of repurposing the maximum amount of spectrum for terrestrial mobile broadband as the United States continues to deploy 5G systems and plan for future 6G systems.

17. Under any of the reconfiguration options under consideration, our baseline proposition is that we would apply the existing 3.7 GHz Service rules to any newly authorized terrestrial wireless operations. Any other rules and requirements, including those relating to the transition process, would be modeled to the greatest extent possible on those that applied to the Lower C-band transition. We recognize, however, that certain modifications may be necessary in light of our experiences during that earlier transition with the Lower C-band, with the unique parameters of the Upper C-band and the instant transition in mind, and as a result of the band reconfiguration option we ultimately adopt. We seek comment on these reconfiguration options generally, and specifically as to how each of the topics addressed throughout this *NPRM* might be impacted depending on the amount of spectrum that we ultimately repurpose. We also seek input on how these reconfiguration options might be adjusted or better tailored to the specific circumstances of the Upper C-band, and how they might impact existing and future incumbent services, both in-band and in adjacent bands.

2. Reallocation of the 4.0–4.2 GHz Band

18. To implement any reconfiguration proposal in effectuating the OBBB Act's Upper C-band directive, we propose to add a primary, non-federal mobile, except aeronautical mobile, allocation to whatever portion of the 4.0–4.2 GHz band we reconfigure in the contiguous United States. We also propose to remove the FSS allocation from the reconfigured portion of the Upper C-band in the contiguous United States. This proposal would harmonize the allocations in the immediately adjacent Upper C-band with those in the 3.7–4.0 GHz portion of the band and thus make a wider band of contiguous mid-band spectrum available for next generation wireless services. As noted *supra,* before its 2020 reallocation, the Lower C-band had exclusive non-federal allocations for FSS and FS, as does 4.0–4.2 GHz today. In the *2020 C-band R&O,* the Commission added a primary non-federal mobile, except aeronautical mobile, allocation to the 3.7–4.0 GHz band in the contiguous United States. The Commission also reserved a guard band at 3.98–4.0 GHz to protect adjacent operations.

19. We propose to closely align the allocations across the C-band for reasons similar to those that prompted the Commission's 2020 reallocation of 3.7–4.0 GHz. Mid-band spectrum is crucial for next-generation wireless broadband service due to its favorable propagation and capacity characteristics. As before, we believe that adding a primary non-federal mobile, except aeronautical mobile, allocation to whatever portion of the 4.0–4.2 GHz band that is eventually repurposed in the contiguous United States will foster more efficient and intensive use of mid-band spectrum and facilitate investment in next generation wireless services. Recognizing that FS operations have been sunset in those areas, we further propose to retain exclusive non-federal allocations for FSS and FS in whatever portion of that band is *not* repurposed for terrestrial commercial wireless use in the contiguous United States. The OBBB Act established a compressed deadline to complete an Upper C-band auction. Given our clear mandate to repurpose the Upper C-band for terrestrial wireless services, coupled with the complexity of implementing that legislative directive by July 2027, we propose to not allow any additional satellite or other uses in the Upper C-band at this time. Although the *Upper C-band NOI* sought comment on these issues, we received sparse record evidence in response, particularly with respect to potential impacts on incumbent in-band and adjacent band services. We nevertheless welcome further comment on these issues; we encourage technical specificity on how next generation satellite services could potentially coexist with incumbent or new operations in the 3.98–4.2 GHz or 4.2–4.4 GHz bands after the Upper C-band transition is complete.

20. Although we propose to remove the FSS allocation from the reconfigured portion of the Upper C-band in the contiguous United States, we also propose to preserve the status quo regarding FSS and FS allocations and operations outside of the contiguous United States, which would be permitted to continue in the entire C-band. This proposal would ensure the ongoing provision of C-band services necessary to protect life and property—including national security, telehealth, E911, and education services—for which C-band service may be the only option available, such as in remote areas of Alaska.

21. We seek comment on the above reallocation proposals. What are the benefits and potential drawbacks of adding a mobile allocation, except aeronautical mobile, in some portion of the 4.0–4.2 GHz band in the contiguous United States? Do our reallocation proposals strike the proper balance between enabling more intensive flexible use of the band and reserving spectrum for existing incumbent FSS operations which—based on information previously provided by certain C-band satellite operators—are declining in use over time? What are the potential economic and operational/service impacts of our reallocation proposals, and of any potential alternatives that commenters may advance? Commenters are encouraged to provide specific data in support of any views on existing or future service trends that may inform the reconfiguration approach we adopt, and the resulting allocations that will be needed to implement that decision.

B. Auction of Upper C-Band Spectrum for Flexible Use

1. Competitive Bidding Procedures

22. Consistent with our statutory mandate to grant licenses in the 3.98–4.2 GHz band through a system of competitive bidding, and to complete competitive bidding for such licenses within two years, we propose to conduct an auction of licenses in this band in conformity with the general competitive bidding rules set forth in part 1, subpart Q, of the Commission's rules. As we have done in all recently conducted Commission spectrum auctions, we propose to employ the part 1 rules governing competitive bidding design, designated entity preferences, unjust enrichment, application and certification procedures, payment procedures, reporting requirements, and the prohibition on certain communications between auction applicants. Under this proposal, such rules would be subject to any modifications that the Commission may adopt for its part 1 general competitive bidding rules in the future. We seek comment on whether any of those rules would be inappropriate or should be modified for an auction of licenses in the Upper C-band. Consistent with our longstanding approach, we will initiate a public notice process to solicit input on certain details of auction design and the auction procedures.

23. We also seek comment on the specific implementation of designated entity preferences available in the Upper C-band. Consistent with every recent Commission auction of 5G-

capable spectrum, including the Lower C-band, we propose to offer small business bidding credits to eligible entities, subject to the cap of no less than $25 million, as described in § 1.2110(f)(2)(ii) of the Commission's rules. If we decide to offer small business bidding credits, we seek comment on how to define a small business. In all auctions of licenses likely to be used to provide 5G services in a variety of bands since the part 1 schedule of bidding credits was updated in 2015, we have adopted bidding credits for the two larger designated entity business sizes provided in the Commission's part 1 standardized schedule of bidding credits. We propose to use the same definitions here. Accordingly, we propose to define a small business as an entity with average gross revenues for the preceding five years not exceeding $55 million, and a very small business as an entity with average gross revenues for the preceding five years not exceeding $20 million. A qualifying ''small business'' would be eligible for a bidding credit of 15% and a qualifying ''very small business'' would be eligible for a bidding credit of 25%, subject to the use of a bidding credit cap specified in § 1.2110(f)(2)(ii) of the Commission's rules. We also seek comment on whether the characteristics of the frequencies in the Upper C-band and our proposed licensing model suggest that we should adopt different small business size standards and associated bidding credits than we have in the past. Commenters advocating different standards and/or bidding credits are encouraged to identify specific circumstances and characteristics of licenses in the Upper C-band and to provide specific, data-driven arguments in support of their proposals.

24. Additionally, we propose to offer rural service providers a designated entity bidding credit for licenses in the Upper C-band. Consistent with the findings in the *Updated Part 1 Report and Order* and our approach in other bands where the spectrum is likely to be used to provide 5G services, including the Lower C-band, we propose to offer a 15% bidding credit to any eligible rural service provider, as defined in § 1.2110(f)(4)(i) of the Commission's rules, and subject to the bidding credit cap of no less than $10 million, as described in § 1.2110(f)(4)(ii) of the Commission's rules, that has not claimed a small business bidding credit. Our past experience with the rural service provider credit indicates that the existing part 1 rural service provider bidding credit achieves an appropriate balance of statutory obligations that the Commission is charged with pursuing, while sufficiently enabling rural service providers to compete for spectrum licenses. Commenters addressing this proposal should consider what details of licenses in the band may affect whether rural service providers will apply for them. Those advocating for any alternatives should provide data-driven arguments in support of their proposals.

25. In the *Upper C-band NOI,* we sought comment on steps the Commission could consider to promote connectivity in historically unserved or underserved areas, citing in particular the Commission's earlier Tribal licensing window in the 2.5 GHz band. Mindful of our ''baseline proposition'' to adopt rules that mirror those in the Lower C-band to the greatest extent possible, we seek further comment on these issues here—specifically on the feasibility of conducting a pre-auction or concurrent Tribal licensing window while satisfying our legal requirement under the OBBB Act to assign licenses in the Upper C-band through a system of competitive bidding by July 4, 2027, and on any other differences between the Upper C-band and 2.5 GHz band contexts. For example, in contrast with the 2.5 GHz band, here we are not proposing to reconfigure and auction the Upper C-band for terrestrial wireless use in Alaska or Hawaii, nor is there a pre-existing and mature equipment ecosystem to facilitate Tribal licensee deployments and use of the spectrum in the near term.

2. Licensing and Operating Rules

26. In the *2020 C-band R&O,* the Commission adopted licensing, operating, and technical rules to encourage efficient use of spectrum resources and promote investment in the Lower C-band while protecting incumbent users both in-band and in adjacent bands. Building on the Commission's prior decision to license terrestrial mobile operations in the 3.7–3.98 GHz portion of the C-band under our part 27 flexible use rules, we propose to adopt similar licensing and operating rules that provide the flexibility to align new licenses in the Upper C-band with existing licenses in the Lower C-band already governed by part 27. By providing a consistent framework for development and implementation across the Upper and Lower C-band, we aim to harmonize the entire repurposed band for mobile terrestrial use with the expectation that it will yield significant economies of scale and accelerate the deployment of cutting-edge technologies, such as 5G and eventually 6G. We invite comment on this approach.

27. We also seek to afford new terrestrial wireless licensees the flexibility to align licenses in the Upper and Lower C-band with licenses in other spectrum bands also governed by part 27 of the Commission's rules. We therefore propose that new licensees in the Upper C-band comply with licensing and operating rules that are applicable to all part 27 services, including those rules relating to the assignment of licenses by competitive bidding, flexible use, regulatory status, foreign ownership reporting, compliance with construction requirements, renewal criteria, permanent discontinuance of operations, partitioning and disaggregation, and spectrum leasing. We seek comment on this approach and ask commenters to identify any aspects of our general part 27 service rules that should be modified to accommodate the particular characteristics of the Upper C-band.

28. In addition, we seek comment on whether to adopt service-specific rules in several areas for the Upper C-band, or integrate the Upper C-band into those rules already applicable to the Lower C-band, including eligibility, license term, performance requirements, renewal term construction obligations, and other licensing and operating rules. In addressing these issues, commenters should discuss the costs and benefits associated with these proposals and any alternatives that commenters propose.

a. Band Plan

29. *Block Size.* For the Lower C-band, the Commission issued licenses in 20 megahertz sub-blocks to provide sufficient flexibility for interested bidders to tailor their decisions based on the anticipated clearing costs and accelerated relocation payment obligations associated with a particular amount of spectrum or geographic license area. To facilitate the provision of 5G services, the Commission defined uniform block sizes of 100 megahertz that would run across the entire Lower C-band and allowed new flexible-use licensees to acquire 100 megahertz blocks by aggregating 20 megahertz sub-blocks through the competitive bidding process. In doing so, the Commission ensured that Lower C-band spectrum was licensed in sufficiently wide bandwidths to enable 5G deployments. Moreover, the use of 20 megahertz sub-blocks provided sufficient flexibility for manufacturers and licensees to tailor application of the band to suit future needs, especially when considering that LTE can be made to coexist within or

adjacent to 5G operations. Consistent with Lower C-band, we propose to issue at least 100 megahertz of Upper C-band licenses in 20 megahertz blocks, to facilitate the ability of licensees in both portions of the band to further aggregate mid-band spectrum they need for 5G deployment and enable complementary deployments across the entire band. We invite comment on this proposal. Correspondingly, we also seek comment on whether a block size approach similar to Lower C-band would be appropriate for the wireless technologies that are likely to be deployed in Upper C-band and whether 20 megahertz continues to be the appropriate block size to accommodate a wide range of terrestrial wireless services and provide sufficient bandwidth to support 5G and eventually 6G services.

30. Alternatively, would a mix of channel sizes improve efficiency and flexibility for a wider variety of users in the band? Should we consider smaller block sizes to create opportunities for a wider variety of entities to compete for licenses at auction? For example, in the *3.45 GHz Band 2d R&O,* where only 100 megahertz was available for auction, the Commission determined that smaller 10-megahertz blocks would best serve our dual goals of making spectrum available to a diverse array of entities while also enabling licensees to obtain sufficient spectrum rights for deploying wideband networks. Or should we license the Upper C-band in larger block sizes (*e.g.,* 50–100 megahertz)? Should the specific transition mechanism ultimately adopted by the Commission dictate the appropriate block size for the Upper C-band? What types of services or applications do prospective licensees envision providing using this spectrum? How does the choice of channel block size impact the ability to deliver these services and applications in terms of sufficient capacity as well as network robustness? Commenters who support an alternative approach should support their proposals with detailed cost benefit analyses.

31. *Spectrum Block Configuration.* In the *2020 C-band R&O,* the Commission found that an unpaired spectrum block configuration provides licensees the flexibility necessary to increase the capacity of their networks and make the most efficient use of Lower C-band spectrum. We propose to adopt the same unpaired spectrum block configuration to ensure continuity, spectral efficiency and maximum flexibility for licensees across the Upper and Lower C-band. We invite comment on this approach and on any alternate proposals, including auctioning paired spectrum blocks. Commenters who support an alternative approach should support their proposals with detailed cost benefit analyses.

32. *Use of Geographic Licensing.* Consistent with our approach in other bands used to provide fixed and mobile services, we propose to license the Upper C-band on an exclusive, geographic area basis. Geographic area licensing provides flexibility to licensees, promotes efficient spectrum use, and helps facilitate rapid assignment of licenses, utilizing competitive bidding when necessary. We seek comment on this approach, including the costs and benefits of adopting a geographic area licensing scheme. Parties who do not support the use of geographic licensing should explain their position, describe the type of licensing scheme they prefer, and identify the costs and benefits associated with an alternative licensing proposal.

33. *Geographic License Area.* For Lower C-band, the Commission decided to issue flexible-use licenses on a Partial Economic Area (PEA) basis for 20 megahertz sub-blocks in the contiguous United States and the District of Columbia because the PEA license-area size best optimizes and balances our statutory and regulatory objectives in licensing spectrum. Consistent with that approach, we propose to license the Upper C-band on a PEA basis as well and invite commenters to indicate whether they support the continued use of PEA service areas to issue additional flexible use licenses in the Upper C-band. In line with our proposal to align both portions of the band by adopting a common part 27 flexible-use licensing approach and similar technical rules, we tentatively conclude that licensing on a PEA basis would further facilitate harmonization in the Upper and Lower C-band, increase the availability of spectrum aggregation opportunities for 5G services across the entire band, and encourage auction participation for large, regional, and small carriers for new Upper C-band licenses. Based on our experience with the Lower C-band, we also tentatively conclude that licensing on a PEA basis in the contiguous United States and the District of Columbia is likely to increase competition, spur investment, and make next generation technologies available sooner and on a larger scale than smaller or larger license areas would. Parties who oppose the use of PEAs should explain their position, describe the type of geographic licensing areas they prefer instead, and identify the costs and benefits associated with a different service area approach.

34. While the reconfiguration options discussed *supra* do not anticipate issuing licenses for areas outside the contiguous United States in the Upper C-band, we nonetheless seek comment on whether we should adopt a licensing approach for certain areas outside the contiguous United States. In AWS–1, AWS–3, AWS–4, and the H Block, the Commission issued separate licenses for the Gulf area. In the Lower C-band, the Commission decided not to issue flexible-use licenses for PEAs including Honolulu, Anchorage, Kodiak, Fairbanks, Juneau, Puerto Rico, Guam-Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and the Gulf. Commenters who advocate for this approach should discuss what boundaries should be used, and whether special interference protection criteria or performance requirements may be necessary due to the unique radio propagation characteristics and antenna siting challenges that may exist in these areas, and address any unique impacts on these markets were we to reallocate them from FSS service to terrestrial wireless service.

b. Application Requirements and Eligibility

35. *Eligibility.* Consistent with established Commission practice in the Lower C-band and elsewhere, we propose to adopt an open eligibility standard for licenses in the Upper C-band. We seek comment on this approach and whether it would encourage efforts to develop new technologies, products, and services, while helping to ensure efficient use of this spectrum. We note that an open eligibility approach would not affect citizenship, character, or other generally applicable qualifications that may apply under our rules. Commenters should discuss the costs and benefits of the open eligibility proposal on competition, innovation, and investment. Finally, we note that a person who has been, for reasons of national security, barred by any agency of the federal government from bidding on a contract, participating in an auction, or receiving a grant is ineligible to hold a license that is required by 47 U.S.C. chapter 13 (the Spectrum Act) to be assigned by a system of competitive bidding under Section 309(j) of the Communications Act. In the event that we assign licenses through competitive bidding, we propose to apply this ineligibility provision to the Upper C-band.

c. Mobile Spectrum Holdings

36. Spectrum is an essential input for the provision of mobile wireless

services, and to implement provisions of the Communications Act, the Commission has developed policies to ensure that spectrum is assigned in a manner that promotes competition, innovation, and efficient use. We seek comment generally on whether and how to address any mobile spectrum holdings issues involving the Upper C-band spectrum to meet our statutory requirements and ensure competitive access to the band. Similar to the Commission's approach in the *2020 C-band R&O,* we propose not to adopt a pre-auction bright-line limit on the ability of any entity to acquire spectrum in the Upper C-band through competitive bidding at auction. Since such pre-auction limits may unnecessarily restrict the ability of entities to participate in and acquire spectrum in an auction, we are not inclined to adopt such limits absent a clear indication that they are necessary to address a specific competitive concern, and we seek comment on any specific concerns of this type. Additionally, we propose to review holdings on a case-by-case basis when applications for initial licenses are filed post-auction to ensure that the public interest benefits of having a threshold on spectrum applicable to secondary market transactions are not rendered ineffective. Finally, we propose to include the Upper C-band spectrum in the Commission's spectrum screen, which helps to identify markets that may warrant further competitive analysis, for evaluating proposed secondary market transactions.

d. License Term

37. We propose a 15-year term for licenses in the Upper C-band. In the *2020 C-band R&O,* the Commission found that a 15-year license term was warranted as it would afford licensees sufficient time to achieve significant build-out obligations post-transition and also encourage investment in the Lower C-band given the clearing, relocation, and repacking that had to occur prior to the introduction of mobile operations. We seek comment on the costs and benefits of using the same term in the instant context. In addition, we invite commenters to submit alternate proposals for the appropriate license term, which should include a discussion on the costs and benefits. Commenters seeking to make adjustments to our proposal should explain how their proposals reflect the process for any incumbent transition work that has to occur before mobile operations can be deployed in the Upper C-band.

e. Performance Requirements; Renewal

38. Performance requirements play a critical role in ensuring that licensed spectrum does not lie fallow, and are required for licenses issued through competitive bidding. To that end, the Commission has imposed different performance and construction requirements in various spectrum bands based on the specific characteristics of each band in order to ensure that spectrum is intensely and efficiently utilized in the public interest. Although we propose to use the performance requirements previously adopted for the Lower C-band, we also seek comment on possible alternative approaches to each of the performance requirements proposed below, including how we might facilitate access to portions of this band or geographic areas that are not ultimately assigned or used.

39. *Mobile or Point-to-Multipoint Performance Requirements.* In the *2020 C-band R&O,* the Commission required Lower C-band licensees offering mobile or point-to-multipoint services to provide reliable signal coverage and offer service to at least 45% of the population in each of their license areas within eight years of the license issue date (first performance benchmark), and to at least 80% of the population in each of their license areas within 12 years from the license issue date (second performance benchmark). These performance milestones were designed to provide sufficient time for incumbent operations to transition out of the Lower C-band given that new flexible-use licensees could not commence operations until the necessary band clearing had been completed. Faced with a similar but potentially more complex transition in the current context, we propose to apply the same benchmarks for new terrestrial mobile licensees in the Upper C-band as we did in the Lower C-band. We believe that our proposal will provide sufficient time for incumbents to transition their operations and for new Upper C-band flexible-use licensees to deploy and meet the requisite coverage requirements once the license area has been cleared. We also believe that providing clear benchmarks will provide greater certainty for licensees, ensure investment, and encourage robust deployment of valuable mid-band spectrum in the public interest. We seek comment on this proposal, and whether it strikes the appropriate balance between license-term length and a significant final build-out requirement.

40. We also seek comment on any potential alternatives. We invite commenters to indicate whether we should consider adjustments to the proposed performance benchmarks for the Upper C-band and explain their rationale for proposing such adjustments. We also seek comment on whether small entities face any special or unique issues with respect to build-out requirements such that they require certain accommodations or additional time to comply. Commenters should discuss and quantify how any build-out requirements they support will affect investment and innovation, as well as discuss and quantify other associated costs and benefits.

41. *Alternate internet-of-Things (IoT) Performance Requirements.* We note that licensees providing IoT-type fixed and mobile services may benefit from an alternative performance benchmark metric in contrast with those we may impose on fixed and mobile services. In the *2020 C-band R&O,* the Commission found that the use of geographic coverage levels would maintain reasonable parity between performance requirements for IoT providers and performance requirements for mobile providers relying on population-based coverage metrics. As a result, the Commission provided Lower C-band licensees the flexibility to demonstrate that they offer geographic area coverage of 35% of the license area at the first (eight-year) performance benchmark, and geographic area coverage of 65% of the license area at the second (12-year) performance benchmark. The Commission adopted this framework to provide enough certainty to licensees to encourage investment and deployment as soon as possible, while retaining enough flexibility to accommodate both traditional services and innovative services or deployment patterns. In addition, the Commission asserted that a performance metric based on geographic area coverage (or presence) allows for networks that provide meaningful service but deploy along lines other than residential population. Although the Commission adopted an additional performance metric to facilitate the deployment of IoT and other innovative services, it also emphasized that there is no requirement that a licensee build a particular type of network or provide a particular type of service in order to use whatever metric it selects to meet its performance requirement.

42. We propose to adopt the geographic area coverage levels applied in the Lower C-band as alternative IoT performance benchmarks for the Upper C-band and invite commenters to provide input on our proposal, which we believe will provide sufficient time

for FSS incumbent operators to transition their operations and for new Upper C-band flexible-use licensees to deploy and meet the requisite coverage requirements. We also believe that our proposed benchmarks will provide enough certainty to licensees to encourage investment and deployment as soon as possible, while affording them enough flexibility to accommodate both traditional services and innovative services or deployment patterns. We invite commenters to submit alternate proposals or to indicate whether we should consider adjustments to the proposed performance benchmarks and explain their rationale for proposing such adjustments.

43. *Fixed Point-to-Point under Flexible Use.* For licensees providing fixed, point-to-point links, the Commission generally has evaluated build-out by comparing the number of links in operation to the population of the license area. In the *2020 C-band R&O,* the Commission adopted a requirement that part 27 geographic area licensees providing Fixed Service in the Lower C-band must demonstrate within eight years of the license issue date (first performance benchmark) that they have four links operating and providing service, either to customers or for internal use, if the population within the license area is equal to or less than 268,000. If the population within the license area is greater than 268,000, the Commission required licensees providing point-to-point service to demonstrate they have at least one link in operation and providing service, either to customers or for internal use, per every 67,000 persons within a license area. Licensees relying on point-to-point service were required to demonstrate within 12 years of the license issue date (final performance benchmark) that they have eight links operating and providing service, either to customers or for internal use, if the population within the license area is equal to or less than 268,000. If the population within the license area is greater than 268,000, the Commission required a demonstration that the licensee is providing service and has at least two links in operation per every 67,000 persons within a license area.

44. We propose adopting performance standards that are consistent with the benchmarks for Lower C-band for Upper C-band licensees relying on point-to-point service. For the same reasons as stated above, we believe that extending the Lower C-band framework will afford sufficient time for FSS incumbent operators to transition their operations and for new Upper C-band flexible-use licensees to deploy and meet the requisite coverage requirements once the license area has been cleared of FSS operations. We invite the public to comment on this proposal and on any adjustments or alternative proposals, as well as their basis for proposing such adjustments or alternatives. Commenters should also discuss and quantify how any proposed performance requirements will impact investment and innovation, as well as discuss and quantify other costs and benefits associated with the proposal in question.

45. *Penalty for Failure to Meet Performance Requirements.* To encourage compliance with our performance benchmarks, we propose imposing meaningful and enforceable penalties on Upper C-band licensees that fail to timely build-out. Consistent with our decision in the *2020 C-band R&O,* we propose to adopt a rule requiring that, in the event a licensee fails to meet the first performance benchmark, the licensee's second benchmark and license term would be reduced by two years, thereby requiring it to meet the second performance benchmark two years sooner (at 10 years into the license term) and correspondingly reducing its license term to 13 years. As with the approach the Commission took in the Lower C-band, we further propose that, in the event a licensee fails to meet the second performance benchmark for a particular license area, its authorization for each license area in which it fails to meet the performance requirement shall terminate automatically without Commission action.

46. In the event a licensee's authority to operate terminates automatically, we propose that the licensee's spectrum rights would become available for reassignment pursuant to the competitive bidding provisions of Section 309(j) of the Communications Act. Consistent with the Commission's rules applicable to Lower C-band and in other bands, we propose that any Upper C-band licensee that forfeits its license for failing to meet its performance requirements would be precluded from regaining the spectrum rights covered by the license. We invite comments on these proposals. Is the approach that the Commission adopted for the Lower C-band transition appropriate for the Upper C-band? Commenters should address the costs and benefits of our proposals, and of any suggested alternatives.

47. *Compliance Procedures.* In addition to the compliance procedures applicable to all part 27 licensees, including the filing of electronic coverage maps and supporting documentation, we propose that such electronic coverage maps must accurately depict both the boundaries of each licensed area and the coverage boundaries of the actual areas to which the licensee provides service. If a licensee does not provide reliable signal coverage to its entire license area, we propose that its map must accurately depict the boundaries of the area or areas within each license area not being served. Further, we propose that each licensee also must file supporting documentation certifying the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal strength necessary to provide reliable service with the licensee's technology. We seek comment on our proposal. We also seek comment on whether small entities face any special or unique issues with respect to the transition such that they would require additional time to comply.

48. *License Renewal.* We propose applying the general renewal requirements applicable to all Wireless Radio Services (WRS) licensees to licensees in the Upper C-band. As explained in further detail below, we believe that this approach will promote consistency across the Upper and Lower C-band.

49. *Renewal Term Construction Obligation.* We propose to apply our general part 27 renewal requirements for wireless licenses to the Upper C-band, as the Commission has for the Lower C-band, 3.45 GHz band, and the 3.55–3.7 GHz band. Correspondingly, we propose to include the Upper C-band in the unified renewal framework for WRS. This means that Upper C-band licensees will be required to comply with § 1.949 of our rules by demonstrating that, over the course of their license term, they either: (1) provided and continue to provide service to the public, or (2) operated and continue to operate the license to meet the licensee's private, internal communications needs. Licensees can demonstrate compliance with this requirement either through the renewal showing in § (f) of that rule, or the relevant safe harbor found in § (e). Consistent with other licensing rules we are proposing to adopt in this item, we believe that our proposal to apply this renewal standard to the Upper C-band will help create uniform flexible-use licensing rules across the Upper and Lower C-band and facilitate the deployment of next-generation wireless technologies.

50. In addition to, and independent of, the general renewal provisions set forth in our rules, we seek comment on applying specific renewal term construction obligations to Upper C-band licensees. In particular, we invite comment on whether there are unique characteristics of the Upper C-band that might warrant a different approach than the general renewal requirements applicable to all WRS. Do any of our proposals for the Upper C-band, such as longer license terms, necessitate a more tailored approach than our general part 27 renewal requirements? Commenters advocating rules specific to the Upper C-band should address the costs and benefits of their proposed rules and discuss how a given proposal will encourage investment and deployment in areas that might not otherwise benefit from significant wireless coverage.

3. Technical Rules

51. In addition to the proposed licensing and operating rules discussed *supra,* we seek comment on adopting technical rules that will maximize potential uses of the Upper C-band for next generation wireless technologies, encourage efficient use of spectrum resources, and promote investment in the Upper C-band. As a general matter, we propose to align the technical rules for this band segment with those previously adopted for the adjacent Lower C-band to promote harmony and standardization across the Upper and Lower C-band, to produce significant economies of scale resulting in more affordable products and services, rapid operational expansion, and deployment of high-powered terrestrial 5G, and to align with global efforts. We seek comment on this overarching proposal and its potential impact on operations in adjacent bands, as well as on alternative approaches. Specifically, we seek comment on appropriate power limits, out-of-band emissions limits, antenna height limits, service area boundary limits, international coordination requirements, and any other technical rules that would provide the flexibility necessary to maximize use of the band. We also ask that commenters provide detailed technical data in support of their positions and any alternative approaches they may advance in each of these areas.

a. Power Levels

52. *Power Limits for Fixed and Base Stations.* We propose to permit base stations in non-rural areas to operate at power levels up to 1640 watts per megahertz EIRP and base stations in rural areas to operate with double the non-rural power limits (3280 watts per megahertz EIRP). Our proposal mirrors the Commission's decision to adopt power limits under the part 27 flexible use rules for the Lower C-band and the 3.45 GHz band that are consistent with other broadband mobile services in nearby bands (AWS–1, AWS–3, AWS–4, and PCS). Consistent with our decisions in those bands, we believe that setting a higher power limit for rural areas will further the Commission's objective of fostering rural deployment of broadband services. Further, consistent with our approach in the Lower C-band, we propose to adopt for the Upper C-band the part 27 requirement that, in measuring transmissions using an average power technique, the peak-to-average ratio (PAR) may not exceed 13 dB.

53. In the *2020 C-band R&O,* the Commission provided 3.7 GHz Service licensees with the flexibility to optimize their system designs to offer wide area coverage without sacrificing the flexibility needed to address coexistence issues with incumbent FSS operations. Specifically, we applied the same power density limit to all channel bandwidths to facilitate uniform power distribution across a licensee's authorized band, regardless of whether wideband or narrowband technologies are being deployed. This approach aligns with that also adopted in the 3.45 GHz band, where such limit applies to emissions of all bandwidths, including those of less than one megahertz, to facilitate uniform power distribution across a licensee's authorized band regardless of whether it deploys wideband or narrowband technologies.

54. Because advanced antenna systems often have multiple radiating elements in the same sector, the Commission adopted power limits in the 3.45 GHz and Lower C-bands that apply to the aggregate power of all antenna elements in any given sector of a base station. The Commission found that adopting power levels consistent with other bands used for wide area wireless operations (*e.g.,* AWS) would permit the Lower C-band to reach its full potential and licensees to achieve similar coverage, creating network efficiencies between network deployments in different spectrum bands. By adopting base station power limits that have spurred development in other bands, the Commission sought in the Lower C-band to promote investment and facilitate the rapid and robust deployment of next-generation mobile broadband services, including 5G. On this basis, we similarly propose to apply § 27.50(j)(1) through (2) and (4) through (5) of the Commission's rules to both fixed and base stations operating in the Upper C-band. We invite comment on this proposal.

55. We also seek comment on alternative base station power limits. We invite commenters who propose alternative solutions to provide specific technical details and thorough analyses to support their proposals, including the effect on receiver blocking or other aggregate interference issues impacting receivers operating above and below the band. In addition to providing this technical support, proponents should outline the corresponding costs and benefits underlying their proposals. Should power be composed of transmit conducted power and antenna gain with some flexibility to ''mix and match'' both, or should the rule only define the final power in EIRP? Although higher power limits can facilitate deployment, what impact might this approach have on adjacent bands? Are there particular circumstances or locations where a different approach may be merited in consideration of adjacent band operations?

56. *Power Limits for Mobiles and Portables.* We propose to adopt a 1 Watt (30 dBm) EIRP power limit for mobile devices, matching the standards adopted for the Lower C-band and the 3.45 GHz band. In the *2020 C-band R&O,* the Commission found that a 1 Watt limit provides adequate power for robust mobile service deployment and also permits operation of mobile device power classes as outlined in the 5G standards given that mobile devices typically operate at levels below 1 Watt to preserve battery life and meet both human exposure limits and power control requirements. In recognition that 3.7 GHz Service licensees are expected to deploy much wider channel bandwidths and will operate in exclusively licensed spectrum, the Commission indicated that it was adopting a mobile device power limit intended to provide consistency between mobile 5G deployments in the Lower C-band and comparable macro cell deployment in the PCS, AWS, and similar bands.

57. Similarly, in the *3.45 GHz Band 2d R&O,* the Commission found that providing consistency between mobile 5G deployments in various bands is crucial for the entire 3 GHz band to reach its full potential and therefore aligned the mobile power limit for the 3.45 GHz band with that adopted for the Lower C-band. The Commission concluded that this mobile power limit will provide an adequate range for operation of different mobile and fixed broadband deployments across a wide variety of use cases and permit operation of mobile power classes as

outlined in the 3GPP standards. In light of this precedent, we invite comment on our proposed power limit for mobiles and portables operating in the Upper C-band. We also seek comment on whether alternative mobile station power limits should be considered based on expected use cases. Commenters supporting alternative mobile power limits should include a technical justification for such power limits and a detailed evaluation of any coexistence issues. Commenters should also provide an analysis of the costs and benefits of their proposals.

b. Out-of-Band Emissions

58. *Base Station Out-of-Band Emissions.* As a baseline matter, we propose here to adopt base station out-of-band emission (OOBE) requirements consistent with the limits adopted for the Lower C-band. For the Lower C-band, base stations were required to suppress their emissions beyond the edge of their authorization to a conducted power level of −13 dBm/MHz. The Commission adopted this limit because it is consistent with emission limits established for many other mobile broadband services as well as those established for 5G technologies by standards bodies, and has been widely accepted as being adequate for reducing unwanted emissions into adjacent bands. We seek comment on whether to harmonize the limits applied to the Lower and Upper C-bands, generally on what the appropriate limits should be, and whether they should diverge from the baseline cited *supra.* We also seek comment on whether the same or different OOBE limits should be applied to emissions within the band as compared to those at either edge of the band. Should we consider additional requirements beyond the upper and lower band edges similar to the two-step limits adopted in the 3.45 GHz and CBRS bands to facilitate widespread deployment of next-generation wireless services while ensuring effective coexistence with incumbent federal and non-federal services operating in adjacent bands?

59. For base station OOBE, we also propose to adopt the same part 27 measurement procedures and resolution bandwidth that are currently used for the Lower C-band. Specifically, the resolution bandwidth used to determine compliance with the base station limit is 1 megahertz or greater, except that within the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block where a resolution bandwidth of at least 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. We seek comment on our proposal to apply the part 27 measurement procedures and resolution bandwidth and invite input on alternative approaches to defining resolution bandwidth.

60. *Mobile Out-of-Band Emissions.* We propose to adopt a mobile OOBE limit that is consistent with the service rules adopted for the Lower C-band. Specifically, we propose to require mobile units to suppress their conducted emissions to no more than −13 dBm/MHz outside their authorized frequency band, *i.e.,* at the authorized channel edge as measured at the antenna terminals. We also propose to adopt the same measurement procedure as we adopted for the Lower C-band where a narrower resolution bandwidth can be used to measure the OOBE limits in the spectrum immediately adjacent to the channel edge. For emissions within 1 megahertz from the channel edge, the minimum resolution bandwidth would be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kilohertz. In the bands between one and five megahertz removed from the licensee's authorized frequency block, the minimum resolution bandwidth would be 500 kilohertz. We believe that this proposal will promote consistency between mobile 5G deployments in various bands and does not increase the potential for OOBE to cause harmful interference and seek comment on that belief. We seek comment generally on whether to harmonize the mobile OOBE limits applied to the Lower and Upper C-bands, generally on what the appropriate limits should be, and whether they should diverge from the baseline cited *supra.*

61. *Other OOBE Limit Issues.* As noted in the *2020 C-band R&O,* the Commission adopted provisions that permit licensees in the Lower C-band to implement private agreements with adjacent block licensees to exceed the adopted OOBE limits. In addition, like other part 27 services, the *2020 C-band R&O* applied § 27.53(i) to the Lower C-band, providing that the Commission may, in its discretion, require greater attenuation than specified in the rules if an emission outside of the authorized bandwidth causes harmful interference. Consistent with this approach, we propose to apply §§ 27.53(h)(4) and 27.53(i) to the Upper C-band as well. We seek comment on our proposal and invite commenters to indicate whether harmonizing the OOBE limit for Upper and Lower C-band segments will help facilitate broader deployment of multi-band 5G radio equipment that can operate across the 3 GHz bands. What would be the impact of implementing a consistent OOBE limit across Upper and Lower C-band segments relative to immediately adjacent FSS operations or operations in nearby channels in the 3.5 GHz band? How might any such impacts be addressed? Finally, we also seek comment on whether base station power levels or OOBE limits should be adjusted to promote coexistence with radio altimeters operating in the adjacent 4.2–4.4 GHz band.

c. Antenna Height Limits

62. Consistent with the existing part 27 AWS rules and Lower C-band and 3.45 GHz band requirements, none of which impose antenna height limits on antenna structures, we propose to not restrict antenna heights for Upper C-band operations beyond any requirements necessary to ensure air navigation safety. In both the Lower C-band and 3.45 GHz proceedings, the Commission noted that rather than using antenna height limits to reduce interference between mobile service licensees, as had been done in the past, it has more recently used field strength limits at service boundaries to provide licensees more flexibility to design their systems while still ensuring harmful interference protection between systems. Furthermore, the limitations of field strength at the geographical boundary of the license also effectively limit antenna heights. Given its success in other services, the Commission adopted the same approach in the Lower C-band as well as the 3.45 GHz band. We propose to take the same approach here as well and seek comment on this proposal, including its costs and benefits along with those associated with any alternative approaches that may be advanced.

d. Service Area Boundary Limit

63. In the *2020 C-band R&O,* the Commission adopted a −76 dBm/m^2/MHz power flux density (PFD) limit at a height of 1.5 meters above ground at the geographical border of 3.7 GHz Service licensees' service areas. We propose to apply the same service area boundary limit for any new terrestrial wireless licensees in the upper portion of the band. As the Commission previously observed, the −76 dBm/m^2/MHz PFD limit is the same as what we established for the Upper Microwave Flexible Use Service (UMFUS), and it is both easy to measure and scales with channel bandwidth to offer licensees flexibility for demonstrating compliance. We seek comment on this proposal. Is this an appropriate limit in the Upper C-band, or should we impose a different service area boundary power

limit than that which applies to the 3.7 GHz Service in the lower portion of the band? Would some other limit better protect geographically adjacent licensees from co-channel interference?

e. International Boundary Requirements

64. We propose to apply § 27.57(c) of the Commission's rules to terrestrial licensees in the Upper C-band, consistent with the approach that was adopted for the Lower C-band. Section 27.57(c) requires all part 27 operations to comply with international agreements for operations near the Mexican and Canadian borders. Under this provision, licensee operations must not cause harmful co-interference across the border, consistent with the terms of agreements currently in force. We note that modification of the existing rules might be necessary in order to comply with any future agreements with Canada and Mexico regarding the use of these bands. We seek comment on this proposal, including the costs and benefits of any alternative approaches.

f. Other Part 27 Rules

65. Consistent with the approach taken in the Lower C-band, we propose to once again adopt several additional technical rules that are applicable to all part 27 services, including §§ 27.51 (Equipment authorization), 27.52 (RF safety), 27.54 (Frequency stability), and part 1, subpart BB of the Commission's rules (Disturbance of AM Broadcast Station Antenna Patterns) for new terrestrial commercial wireless operations in the Upper C-band. As observed in the *2020 C-band R&O,* because the Upper C-band will be a part 27 service, we believe that these rules implement important safeguards for all wireless services to ensure that devices meet RF safety limits and that the potential for harmful interference to other operations is minimized. We seek comment on this proposal. Should we consider a different approach with respect to the adoption of these generally applicable part 27 technical rules to govern new terrestrial wireless licenses in the Upper C-band? Are there other generally applicable rules, not listed above, that we should apply to these new Upper C-band operations?

66. We also propose to require client devices to be capable of operating across any portion of the Upper C-band that is allocated for terrestrial commercial wireless operations, as the Commission has done for other part 27 services since 2014. Specifically, we propose to add any such portion of the Upper C-band to § 27.75, which requires mobile and portable stations operating in the 600 MHz band and certain AWS–3 bands to be capable of operating across the relevant band using the same air interfaces that the equipment uses on any frequency in the band. The Commission observed in the *2020 C-band R&O* that cross-band operability is important to ensure a robust equipment market for all licensees. We seek comment on this proposal. Is there a reason not to apply § 27.75 to new terrestrial wireless licensees in the Upper C-band?

g. Protection of Incumbent FSS Earth Stations

67. For any repacked FSS operations in the C-band band after the proposed transition is complete, we propose to incorporate the existing incumbent protection measures that apply to 3.7 GHz Service operations in the Lower C-band and to apply them to new terrestrial wireless licensees in the Upper C-band. These measures include: (1) a PFD limit to protect registered FSS earth stations from out-of-band emissions from Upper C-band operations; (2) a PFD limit to protect against receiver blocking resulting from Upper C-band operations; and (3) allowing full band/full arc use of the Upper C-band by FSS earth stations.

68. To safeguard against out-of-band emissions, we propose to require a PFD limit of -124 dBW/m^2/MHz within the portion of the Upper C-band that will continue to be used for FSS operations, as measured at the registered incumbent earth station antenna. As with the existing 3.7 GHz Service licensees in the Lower C-band, this PFD limit would apply to all emissions within the earth station's authorized band of operation, from both base and mobile stations. The Commission concluded in the *2020 C-band R&O* that compliance with a PFD limit like the one we now propose was simpler and less burdensome on both FSS earth station licensees and on new licensees in the 3.7 GHz Service to implement than a power spectral density (PSD) limit would be. We seek comment on this proposal in the instant context. Are the assumptions from the past proceeding accurate and applicable to our proposed licensing regime for the Upper C-band? If not, what alternative approaches should we consider, and what costs and benefits would such approaches entail?

69. In order to protect earth stations from receiver blocking, we propose to require a PFD limit of -16 dBW/m^2/MHz within the portion of the Upper C-band that is repurposed for terrestrial wireless use, as measured at the registered incumbent earth station antenna, and applied across the transitioned frequency range. This blocking limit would apply to all emissions within the new terrestrial wireless licensee's authorized frequency range, and it is the same limit that we applied to protect earth stations during the Lower C-band transition. Are the assumptions from the past proceeding accurate and applicable to our proposed licensing regime for the Upper C-band? If not, what alternative approaches should we consider, and what costs and benefits would such approaches entail?

70. Finally, we propose to allow full band/full arc use by FSS earth stations that continue to operate in the band during and after the transition process. In the *2020 C-band R&O,* the Commission noted the need to offer flexibility to earth stations that, in that proceeding, were transitioned above 4.0 GHz. We seek comment on this proposal in the current context. Does the need for operational flexibility still recommend retention of full band/full arc use? What consequences would elimination of the policy hold for earth stations and for new terrestrial wireless licensees in the Upper C-band? Should we consider any alternative approaches, and what consequences such alternatives impose?

h. Protection of TT&C Earth Stations

71. In the *2020 C-band R&O,* the Commission established protection measures to safeguard Telemetry, Tracking, and Command (TT&C) operations throughout the C-band until such operations can be relocated to other bands. Incumbent space station operators were required to identify and consolidate their TT&C operations to four locations within the contiguous United States by December 5, 2021, and the Commission indicated that it would not authorize any new TT&C operations elsewhere in CONUS, except to facilitate that consolidation. TT&C operations are protected at the consolidated locations until December 5, 2030, in order to allow time for the launching of replacement satellites, and after that date TT&C operations may operate in the C-band on an unprotected basis. The Commission also authorized private negotiation between incumbent space station operators and 3.7 GHz Service licensees regarding TT&C sites, including early entry of 3.7 GHz Service operations, and prolonged TT&C operations.

72. Are there additional TT&C sites which were not identified for purposes of the Lower C-band transition that are active in the Upper C-band? If so, could operations at those sites be consolidated or co-located at already protected facilities? If additional sites are identified, should they be protected from harmful interference through

December 5, 2030, consistent with our approach in the Lower C-band?

73. *Co-channel Protection Criteria.* We propose to maintain and apply existing co-channel protection criteria to safeguard TT&C operations in the C-band. In the *2020 C-band R&O,* the Commission required 3.7 GHz Service licensees to ensure that the aggregated power from their operations meet an interference to noise ratio (I/N) of −;6 dB as received by the TT&C earth station. The Commission also required 3.7 GHz Service licensees to coordinate their co-channel operations within 70 km of TT&C earth stations that continued to operate in the Lower C-band. The Commission observed in the *2020 C-band R&O* that there are few TT&C earth stations relative to other FSS earth stations, they are run by highly qualified technical staff, and that a coordination process accounting for terrain, shielding, polarization, and other technical parameters will result in adequate earth station protection and permit terrestrial use at a closer distance. Further, the usual coordination process would presumably minimize the risk of harmful interference; this process includes the expectation the 3.7 GHz Service licensees take all practical steps necessary to protect TT&C operations, operate in good faith, and cooperate to resolve any interference issues via mutually satisfactory arrangements.

74. We seek comment on our proposal to apply the existing co-channel protection criteria to TT&C operations throughout the C-band. Do the assumptions that the Commission made in the *2020 C-band R&O* regarding aggregated power and coordination distance remain accurate and applicable? Has the coordination framework proven to be sufficient and workable for affected operators? Have the protection criteria sufficed, both for 3.7 GHz Service licensees and for TT&C operations? Should we consider alternative protection criteria, and if so, what criteria would be appropriate? Commenters proposing alternatives should supply detailed technical information to support their positions.

75. *Adjacent Channel Protection Criteria.* We also propose to maintain existing criteria to protect TT&C operations in the C-band from adjacent channel interference due to out-of-band emissions, including: (1) aggregated power from adjacent 3.7 GHz Service operations must meet a −6 dB I/N ratio, and the limit would apply to all emissions removed from the TT&C's center frequency by more than 150% of the TT&C's necessary emission bandwidth; (2) we would not require prior coordination between adjacent operations, but 3.7 GHz Service licensees and TT&C earth station operators would be expected to cooperate in good faith and make reasonable efforts to anticipate and resolve technical problems that may inhibit effective and efficient use of the spectrum; and (3) TT&C operators would be expected to make available pertinent technical information about their systems upon request by the 3.7 GHz Service licensees, and licensees of stations suffering or causing harmful interference would be expected to cooperate and resolve the problem by mutually satisfactory arrangements.

76. To provide protection from potential receiver overload, we propose to require that: (1) base stations and mobile devices meet a PFD limit of −16 dBW/m²/MHz, as measured at the TT&C earth station antenna; (2) this blocking limit applies to all emissions within the 3.7 GHz Service licensee's authorized band of operation and protect TT&C earth stations based on the assumption that robust, custom filters have been installed at those facilities, like other FSS earth stations; (3) TT&C filter quality must provide a minimum of 60 dB of rejection, and the frequency at which the filter must meet this 60 dB of rejection would vary with the bandwidth; (4) TT&C filters must meet 60 dB of rejection for all frequencies removed from the center frequency by more than 150% of the TT&C's emission bandwidth, both above and below the channel; (5) the filter must provide 70 dB of rejection for all frequencies removed from the TT&C's center frequency by more than 250% of the TT&C's emission bandwidth, both above and below; and (6) in the event of a claim of harmful interference, the earth station operator must demonstrate that they have installed a filter that complies with the mask described above, and if they have not installed such a filter or are unable to make such a demonstration, and the 3.7 GHz Service licensee can confirm it meets the PFD, the TT&C operator would have to accept the interference.

77. We seek comment on our proposal to maintain the existing adjacent channel interference protection criteria for TT&C operations. Do our previous assumptions regarding aggregated power, blocking protections, and the workability of the coordination framework remain true? What, if any, alternatives might be appropriate in light of the past several years of experience and technical developments?

i. Other Matters

78. Lastly, in its *Upper C-band NOI* comments, NTIA stated that in the 3.98–4.2 GHz band there are a limited number of radio astronomy sites that operate on an opportunistic basis (*i.e.,* no primary allocation), primarily located in remote areas where natural isolation aids in mitigating interference. We seek comment on whether we should take steps to facilitate coordination between wireless operations in the band and operations at these radio astronomy sites, including the costs and benefits of any proposed measures.

C. The Transition of FSS Operations

79. In the *2020 C-band R&O,* the Commission transitioned incumbent services out of the Lower C-band and into the upper 200 megahertz of the C-band by relying on the *Emerging Technologies* framework to facilitate the swift transition of spectrum from one use to another. Specifically for incumbent FSS services, the Commission required overlay licensees to pay for the reasonable transition costs of eligible space station operators and incumbent earth station operators that were required to clear the lower 300 megahertz of the C-band spectrum in the contiguous United States.

80. As discussed in further detail below, we propose adopting many of the same transition framework elements used for the Lower C-band for the Upper C-band transition of incumbent FSS operations. We seek comment on this proposal. We also seek comment on whether there are any improvements that should be made to certain elements of the Lower C-band transition framework based on technological advances or lessons learned during that process which will facilitate our efforts to meet Congress' mandate of completing a system of competitive bidding ''for not less than 100 megahertz in the band between 3.98 gigahertz and 4.2 gigahertz'' by July 4, 2027. In addition, we seek comment on whether modifications to the elements of the transition framework are necessary to accommodate whatever reconfiguration option we elect for the Upper C-band.

1. Definition of Incumbent FSS Operations

81. In the *2020 C-band R&O,* the Commission defined the classes of incumbent FSS space station and earth station operations that would be transitioned out of the Lower C-band and reimbursed for their transition costs consistent with our *Emerging*

Technologies precedent. Identification of these incumbent FSS operations was an important step toward providing clarity about the transition process and informing auction bidders about the costs they would incur as a condition of their overlay license. With these same goals in mind, below we seek comment on the appropriate definitions to identify the specific incumbent FSS space station and incumbent earth station operators that are relevant for purposes of the next proposed transition, using the Lower C-band model as a guide.

82. *Incumbent Space Station Operators.* For purposes of the Lower C-band transition, the Commission determined that ''incumbent space station operators'' would generally include all space station operators authorized to provide C-band service to any part of the contiguous United States pursuant to an FCC-issued license or grant of market access as of June 21, 2018. On that date, the Commission's former International Bureau issued a temporary freeze on certain new space station applications in order to preserve the landscape of authorized operations in the 3.7–4.2 GHz band, and that freeze remains in place. At the time of the *2020 C-band R&O,* eight entities qualified under this definition, but since then certain of those entities have either ceased operations in the contiguous United States or merged with other incumbent space station operators. Today, the remaining entities that qualify under this definition are: Empresa, Eutelsat, Hispasat, SES, and Telesat. We propose to use the same baseline definition of incumbent space station operators for purposes of the forthcoming Upper C-band transition, while accounting for any intervening changes in the legal or operational status of those entities since the Lower C-band transition, and seek comment on this proposal.

83. For purposes of transition cost reimbursement, the Commission defined an ''eligible space station operator'' as an incumbent space station operator that has demonstrated as of February 1, 2020, that it has an existing relationship to provide service via C-band satellite transmission to one or more incumbent earth stations in the contiguous United States. At the time of the *2020 C-band R&O,* five of the incumbent space station operators qualified as 'eligible' under this definition. Today, the remaining entities that would qualify under this definition and continue to provide service to one or more incumbent earth stations within the contiguous United States are: Eutelsat, SES, and Telesat. We propose to use the same baseline definition of eligible space station operators for purposes of the forthcoming Upper C-band transition, with the requirement that each must still provide service to one or more incumbent earth stations within the contiguous United States, and seek comment on this proposal.

84. *Incumbent Earth Stations.* The Commission previously defined ''incumbent earth stations'' for the Lower C-band transition to include fixed and temporary fixed earth stations that were operational as of April 19, 2018, and that: (1) continue to be operational; (2) were licensed or registered in the ICFS database on November 7, 2018; and (3) timely certified the accuracy of the information on file with the Commission by May 28, 2019. As with space stations, a freeze on the filing of new or modified earth station applications throughout the entire C-band was issued on April 19, 2018—the qualifying date for incumbency—and the freeze remains in place. Throughout the Lower C-band transition, Commission staff continuously updated its list of incumbent earth stations found to qualify under these criteria, the most recent of which was issued on November 19, 2025.

85. We propose to retain the existing definition of incumbent earth stations for purposes of the Upper C-band transition, using the most recently released incumbent earth station list for the Lower C-band transition as the baseline going forward. We seek comment on this proposal, and any considerations we should keep in mind given the passage of time since the Lower C-band transition.

2. Clearing FSS Operations in the Upper C-band

86. As noted above, we propose to adopt rules to reconfigure the Upper C-band landscape. and to use our authority under Section 316 of the Communications Act to modify, as needed, the existing licenses, market access authorizations, and registrations currently held by FSS C-band incumbents to clear whatever portion of the Upper C-band we ultimately reallocate.

a. Clearing Space Station Operations

87. The OBBB Act directs the Commission to grant licenses through a system of competitive bidding for at least 100 megahertz of the Upper C-band. This directive necessitates modification of the space station operator licenses and market authorizations that operate in whatever portion of the band we ultimately reallocate. We again propose to use our authority under Section 316 of the Communications Act to accomplish the legislative mandate in this context. We also propose to further modify our existing rules to prohibit new applications for space station licenses and new petitions for market access concerning space-to-Earth operations in whatever portion of the band we reallocate in the contiguous United States.

88. As observed in the *2020 C-band R&O,* ''[s]ection 316 of the Communications Act vests the Commission with broad authority to modify licenses 'if in the judgment of the Commission such action will promote the public interest, convenience, and necessity.' '' Here we similarly believe that modifying the authorizations of incumbent space station operators to clear at least 100 megahertz of the Upper C-band for auction as required by Congress is within the Commission's statutory authority, consistent with prior Commission practice, and will promote the public interest, convenience, and necessity by increasing the availability of wireless broadband services throughout the contiguous United States. Commenters should explain any concerns with the proposed reconfiguration options, which were proposed in furtherance of a clear directive from Congress, and submit technical and other supporting documents to inform the Commission's consideration of these issues. We also seek comment on the extent to which implementation of our reconfiguration proposals in the instant *NPRM* align with the clearing approach taken in the Lower C-band transition.

89. We also seek comment on the specific clearing targets, steps, and timing for any further FSS transition in the Upper C-band. Space station operators have indicated that greater use of advanced compression technologies, combined with the ongoing trend of customer migrations to alternative distribution mechanisms, means that a repacking and clearing of some portion of the Upper C-band might be achievable in a shorter timeframe than that required for the Lower C-band. We seek additional input and specifics from the incumbent space station operators about their anticipated customer needs, the trajectory of their capacity demands, the extent of potential capacity gains that can be achieved by greater use of advanced compression, and any other factors and considerations relating to the potential future transition of their existing services. To the extent that any such information may be confidential or

business sensitive in nature, we note that the incumbent space station operators may request confidential treatment of some or all of the information that they submit, consistent with the Commission's rules.

b. Clearing Earth Station Operations

90. In the *2020 C-band R&O,* the Commission modified the registrations of receive-only earth stations but noted that, unlike transmitting space stations, they are not licensees. Title III of the Communications Act requires a license for ''the *transmission* of energy or communications or signals by radio.'' The Commission has long concluded that, because receive-only earth stations do not transmit, they do not require a license under Section 301 of the Communications Act. As such, past regulatory actions relating to receive-only earth stations have been predicated on our Title I ancillary authority as part of ''other regulatory responsibilities to maximize effective use of satellite communications'' over which the Commission has express Title III authority. The Commission is also empowered to make reasonable regulations to prevent harmful interference to and among its licensed users. We thus have an ongoing responsibility to modify this registration regime for receive-only earth stations as appropriate to ensure that it remains consistent with our regulation, in the public interest, of the licensed satellite stations.

91. Accordingly, the Commission previously modified all necessary earth station registrations to comport with the Lower C-band reconfiguration adopted in the *2020 C-band R&O.* Those modifications limited the frequencies on which incumbent earth stations may receive interference protection to the upper 200 megahertz of the C-band. As the Commission further observed in the *2020 C-band R&O,* a relatively small number of earth stations that receive in the 4.0–4.2 GHz band are licensed to transmit in another band (*i.e.,* licensed transmit-receive earth stations). Those licenses to transmit do not provide the earth station operators with the right to do so in the C-band, where they hold no licensed spectrum usage rights. To the extent that certain incumbent earth stations have licenses to transmit in another band, we believe that we have ample authority to propose to modify their authorizations and their interference protection rights in the Upper C-band once incumbent satellite operations have been relocated consistent with our Section 316 authority. In light of the foregoing, we again propose to modify incumbent earth station registrations consistent with our regulation of the corresponding incumbent space stations, regardless of the reconfiguration option we ultimately adopt for the Upper C-band. We seek comment on this proposal. Commenters should explain any concerns with the proposed reconfiguration options, which were proposed in furtherance of a clear directive from Congress, and submit technical and other supporting documents to inform the Commission's consideration of these issues.

92. As noted by the incumbent space station operators, any transition of existing C-band services will necessarily impact and must be carefully coordinated with their customers. That said, C-band utilization is gradually declining, particularly in terms of media content services, with C-band customers switching to alternative distribution technologies (including but not limited to Ku-band, fiber, and content delivery networks) over time. To this end, we seek additional information and input on how this trend may impact any clearing of incumbent earth stations from the Upper C-band and on any considerations specific classes of earth station operators, including those in rural locations and with transportable facilities, may have.

3. Transition Schedule

93. We propose to set a specific transition deadline to ensure that all incumbent FSS operations are cleared in a timely manner to facilitate the introduction of terrestrial wireless services in the Upper C-band and to provide potential auction bidders with some certainty as to when they will be able to obtain access to Upper C-band spectrum. In the *2020 C-band R&O,* the Commission found that it was in the public interest to adopt a December 5, 2025 final deadline as it would ensure that Lower C-band spectrum would be made available for flexible use in a timely manner, while ensuring a smooth and predictable transition of incumbent FSS services to the upper 200 megahertz of the band. The Commission also noted that setting a specific transition deadline would make sure that eligible space station operators, incumbent earth station operators, and other stakeholders have the necessary time to complete the transition in a careful, fair, and cost-effective manner. In addition to setting a final transition deadline, the Commission also adopted a two-phased accelerated schedule for eligible space station operators in the Lower C-band who opted to transition on this basis in order to become eligible for certain incentives.

94. We seek comment on whether a transition timeline of a similar length (*i.e.,* approximately five-and-a-half years from the adoption of final rules) would be appropriate here as well and, if not, whether one or more different deadline(s) should be used. We invite commenters to indicate how quickly eligible space station operators and incumbent earth station operators will be able to transition their Upper C-band operations to make spectrum available for new terrestrial wireless licensees. Specifically, commenters are encouraged to propose one or more FSS transition deadline(s) they believe to be achievable and to provide a step-by-step breakdown of what would be required from a technical and operational standpoint to achieve a transition in a timely manner, including but not limited to a description of the technical steps of repacking or relocating incumbent FSS services, any necessary compression equipment upgrades, and the need for construction and launch of any new satellites, along with the corresponding time frames for achieving each step. Parties commenting on the transition timeline should address the extent of any transition-related information needed at particular points in time for potential bidders to participate effectively in an auction for any new licenses. Commenters proposing one or more specific spectrum clearing deadlines are also encouraged to indicate how their proposed deadline(s) might change under the band reconfiguration options under consideration, and how any in-band FSS transition timelines align with adjacent band considerations discussed *infra.* We also seek comment on whether to retain or modify the certification process by which eligible space station operators, on an individual basis, demonstrated compliance with the relevant Lower C-band deadlines, and on the potential costs and penalties in the event that an incumbent space station operator fails to clear their existing services by any final transition deadline that we establish. Incumbent space station operators that failed to clear their existing services by the final deadline for the Lower C-band transition would not be eligible to receive reimbursement for their reasonable transition costs or receive Accelerated Relocation Payments, and could also be subject to penalties for violation of the conditions of their license authorization. Further, we seek comment on the viability of private negotiations among relevant parties to accomplish earlier clearing than any

deadlines established by the Commission.

4. Transition Cost Reimbursement

95. As discussed in further detail *infra,* we propose to establish an FSS transition cost reimbursement structure that is generally consistent with the approach adopted by the Commission in the *2020 C-band R&O.* That model required new terrestrial wireless licensees in the Upper C-band to reimburse the reasonable transition costs incurred by eligible FSS space station and incumbent earth station operators allocated the responsibility for those costs among the new terrestrial wireless licensees on a *pro rata* basis. We further offered incumbent earth station operators the choice of either accepting reimbursement for their actual reasonable transition costs or accepting a lump sum reimbursement for *all* of their incumbent earth stations based on the average, estimated cost of transitioning those facilities. We seek comment on the potential repurposing of these reimbursement mechanisms and standards in the instant context, as well as whether there are any improvements that could be made based on lessons learned from the Lower C-band transition process. We acknowledge that, depending on the reconfiguration option we ultimately adopt in the instant context, the transition of the Upper C-band may differ in some important respects from that in the Lower C-band including as to key transition actions and related costs incurred. As such, we also seek comment on estimates for the potential total amount of transition cost reimbursements for FSS services in the Upper C-band for a given clearing target, and how we may need to modify certain reimbursement mechanisms and standards depending on what reconfiguration approach we ultimately adopt and how incumbent services may be transitioned.

96. *Compensable Transition Costs.* In the Lower C-band proceeding, the Commission set guidelines for compensable costs, *i.e.,* those reasonable transition costs for which eligible space station operators and incumbent earth station operators were able to seek actual cost reimbursement. In doing so, the Commission required all such transition costs to be reasonable, and indicated that such expenses would be compensable so long as they were both reasonable in cost and reasonably necessary to complete the transition in a timely manner. While the Commission allowed reimbursement for the reasonable replacement cost of newer equipment needed to carry out the transition, it also indicated that it would not permit reimbursement for equipment upgrades beyond what was necessary to clear the lower portion of the band and cautioned incumbents against attempts to gold-plate their systems. The Commission emphasized that compensable transition costs were only those that are reasonable and needed to transition *existing* operations in the contiguous United States out of the lower 300 megahertz of the C-band. Consistent with this approach, and as relevant to the reconfiguration option we ultimately adopt in the instant proceeding, we propose to again require any actual transition costs needed to clear existing Upper C-band operations in the contiguous United States to be ''reasonable'' in order to qualify for reimbursement and will not permit reimbursement for equipment upgrades beyond what is necessary to clear the band. We further seek comment on whether the type of reimbursable transition activities may differ in an Upper C-band transition, particularly as to current FSS C-band customers that may migrate to another satellite band or alternative delivery mechanism. We also propose not to reimburse incumbents for the speculative value of any business opportunities they claim they would lose as a result of the transition, and any ''soft costs'' would again be subject to a rebuttable presumption for a cap of 2% of the hard costs involved in the transition. We invite comment on this proposal, and on whether any clarifications or adjustments are needed to delineate what constitutes reasonable in the context of the forthcoming Upper C-band transition.

97. In this context, we seek comment on certain issues relating to compensable transition costs that were raised by stakeholders during the Lower C-band transition which may likewise be relevant for an Upper C-band transition depending on which reconfiguration option we ultimately adopt. As in the Lower C-band transition, to the extent that any unregistered earth stations, or registered earth stations that do not meet the existing definition of an incumbent earth station, remain operational in the C-band in the contiguous United States, our intent is that such stations would *not* be eligible for reimbursement of transition costs in the Upper C-band transition. We similarly clarify our intent that—assuming that the Upper C-band transition is limited to operations in CONUS, as proposed—earth stations outside CONUS but within the United States would only be eligible for reimbursement of transition costs where they ''demonstrate that they were required to make the system modifications for which they seek reimbursement as a direct result of the transition in the contiguous United States.'' Further, we propose that costs associated with facilities outside the United States would *not* be eligible for any reimbursement of transition costs, independent of any arguable relationship to the transition in the contiguous United States. To be clear, with the limited exception referenced above for earth stations within the United States but outside the contiguous United States, the only C-band earth stations that we propose would be eligible to have any reasonable transition costs reimbursed in connection with the Upper C-band transition are those within the contiguous United States that meet the proposed incumbent earth station definition, are currently on the most recent incumbent earth station list released by the Space Bureau, and that remain on any successor lists issued in the future. In a similar vein, we clarify our intent that any incumbent space station operators seeking reimbursement for new satellites may only seek reimbursement for reasonable transition costs that directly relate to and are necessary to continue to offer C-band service to one or more incumbent earth stations in the contiguous United States. As such, for any new satellites that may carry other payloads, transmit using other spectrum bands, or transmit C-band service into locations outside the contiguous United States, we anticipate that the only costs which will be compensable are those directly relating to the transition of C-band services in the contiguous United States. We seek comment on this approach, and how it might align with the different reconfiguration options under consideration, and the potential migration of existing C-band customers to Ku-band satellite service or other distribution technologies.

98. *Lump Sum Reimbursement Option.* As noted *supra,* in the *2020 C-band R&*O, the Commission provided incumbent earth station operators with the choice to either accept reimbursement for their actual reasonable transition costs in maintaining C-band satellite reception, or instead accept a lump sum reimbursement based on the average, estimated costs of transitioning *all* of their incumbent earth stations. The decision to accept a lump sum reimbursement was irrevocable—by accepting the lump sum, the incumbent took on the risk that the lump sum

would be insufficient to cover all its relocation costs—to ensure that incumbents had the appropriate incentive to accept the lump sum only if doing so is truly the more efficient option. Earth station operators that elected the lump sum payment and were intending to remain operating in the band were responsible for performing any necessary transition actions themselves, and they were required to complete any such work consistent with the space station operator's deadlines for transition.

99. We propose to give incumbent earth station operators the same choice in the instant transition to opt out of the formal transition process through a lump sum reimbursement option, and seek comment on whether we should again utilize the lump sum categories and general procedures set forth in our cost category schedule (Cost Catalog) for the Lower C-band transition. Proponents of any changes to the lump sum reimbursement option should describe both the scope of intended lump sum reimbursements as well as any new basis upon which to calculate the lump sum amounts, or other adjustments thereto, such as for inflation. For example, should lump sum payments now be premised on the cost of potentially moving incumbent earth station operators to an alternate distribution technology? How might the scope of lump sum reimbursements differ under the band reconfiguration options we are considering for Upper C-band? Could a modified and expanded lump sum regime essentially replace or obviate the need to reimburse actual costs, resulting in a more streamlined and efficient cost reimbursement program? We encourage commenters to submit detailed breakdowns of any potential alternative approaches to the lump sum option and also describe in detail the methodology they would use to determine an appropriate lump sum payment in lieu of actual cost reimbursement for incumbent earth station operators in the instant context.

100. *Allocating Payment Obligations Among Overlay Licensees.* For Lower C-band, the Commission explained the financial responsibilities that each 3.7 GHz Service licensee would incur to reimburse incumbent space station operators for clearing the band, as well as our authority to require such payments as license conditions on the new 3.7 GHz Service licensees consistent with our *Emerging Technologies* precedent. Specifically, the Commission found it reasonable to generally base the share for each 3.7 GHz Service licensee on that licensee's *pro rata* share of gross winning bids in the underlying auction, with specific allocation formulas governing each type of payment obligation. We propose to utilize the same general payment obligation structure and mechanisms used in Lower C-band and to again base the share of transition costs for each new 3.7 GHz Service licensee on that licensee's *pro rata* share of gross winning bids in the competitive bidding process. We seek comment on this proposal. Commenters are invited to recommend alternative approaches with a detailed description of the methodology behind their proposals. Would our methodology for allocating payment obligations have to be modified based on whatever reconfiguration option we adopt for the Upper C-band?

5. Incentives

101. We seek comment on the possible use of incentives to facilitate the timely introduction of new terrestrial wireless operations in the Upper C-band. For example, in the Lower C-band, the Commission used incentives in the form of accelerated relocation payments to eligible space station operators that voluntarily committed to relocate on an accelerated two-phase schedule and met those deadlines. The use of accelerated relocation payments to incentivize eligible space station operators to voluntarily relocate by early clearance benchmarks sought to leverage the technical and operational knowledge of incumbent space station operators, align their incentives to achieve a timely transition, and enable that transition to begin as quickly as possible. As further incentive, the Commission determined that eligible space station operators which failed to clear their existing C-band services out of the lower band by either of the Accelerated Relocation Deadlines would receive an incremental reduction in the amount of accelerated relocation payment based on the number of days that had passed since the deadline, with a payment of zero after more than 180 days.

102. Given the different circumstances in the Upper and Lower C-band—including the scope and scale of parties that may be seeking transition cost reimbursement as well as the timing of any adjacent band altimeter retrofits—would a similar incentive structure be appropriate for eligible space station operators in the forthcoming transition process? Will successful completion of the Upper C-band transition to terrestrial wireless services be primarily dependent on the expeditious clearing of incumbent FSS operations or will other factors and other parties be the primary drivers of the transition timeline? In light of these different considerations, what is the economic value of accelerating the FSS transition in this instance? We encourage parties supporting incentives for eligible space station operators in the Upper C-band to submit detailed arguments, including cost-benefit analyses, underlying their perspectives.

103. We also seek comment more generally on whether we should consider incentives—monetary or otherwise—to facilitate expeditious clearing of the Upper C-band. If so, who should be eligible for such incentives, how should any responsibility thereto be allocated, and what benchmarks should they be aligned with? If monetary in nature, how should such incentives be calculated, and should there be any reduction or elimination of incentives if the requisite deadlines are missed? Commenters should also indicate how such an estimate would be impacted by either of the band reconfiguration options we are considering. For example, should any incentives hinge on the amount of spectrum to be cleared?

6. Relocation Payment Clearinghouse

104. Consistent with our approach in the earlier transition, we propose to again use an independent Clearinghouse to oversee the cost-related aspects of the eventual Upper C-band transition, using a similar selection process and imposing the same broad responsibilities that were outlined in the *2020 C-band R&O.* The Commission there noted that selecting an independent third party for this purpose, subject to the Commission's rules and oversight, would help to ensure fairness and transparency in the handling of the reimbursement obligations associated with the Lower C-band transition. At the time, the Commission observed that it had previously and successfully adopted cost-sharing plans that utilized private clearinghouses to administer such reimbursement obligations among affected licensees. We believe, based on the experience of the earlier C-band transition, that such an approach would once again be in the public interest here. We seek comment on this proposal and on ways to build upon the success of the Lower C-band Clearinghouse in terms of potential improvements to any new transition cost reimbursement program.

a. Duties of the Clearinghouse

105. In the *2020 C-band R&O,* the Commission established that a Clearinghouse would be responsible for carrying out four categories of essential duties in connection with overseeing

the financial aspects of the Lower C-band transition. We propose to task any new Clearinghouse that is ultimately selected to oversee the financial aspects of the Upper C-band transition with broadly the same responsibilities, described in more detail below.

106. First, the Commission charged the Clearinghouse with collecting from all eligible space station operators and incumbent earth station operators a showing of their transition relocation costs, as well as a demonstration of those costs' reasonableness. Parties submitted their costs to the Clearinghouse directly, which then ascertained in the first instance whether the costs were reasonable, and allowed submitting parties to supplement claims initially deemed insufficient. Entities seeking reimbursement were required to document all of their costs, and to justify them; these entities were subject to audits and required to make all relevant documentation available to the Clearinghouse upon its request. The Clearinghouse notified requesting parties in the event that it deemed any claimed costs to be unreasonable, and the Wireless Telecommunications Bureau was empowered to make further determinations related to reimbursable costs, as necessary, throughout the transition process.

107. Second, the Clearinghouse was tasked with apportioning costs among new 3.7 GHz Service licensees and distributing payments to eligible space station operators, incumbent earth station operators, and appropriate surrogates of those parties that incurred compensable costs. After the auction, the Clearinghouse calculated each 3.7 GHz Service licensee's estimated share of the eventual relocation costs, as well as an estimate of total costs from before the auction through the first six months after it was complete. Licensees paid their shares of the initial cost estimate into the Clearinghouse-administered relocation fund shortly after the auction was complete, and the Clearinghouse drew from that fund to reimburse approved claims. The Clearinghouse calculated the estimated total program costs for every six-month period until the transition was complete, notified the 3.7 GHz Service licensees of their amounts owed at least 30 days before every six-month payment deadline, and reimbursed approved claims within 30 days of invoice submissions. The Clearinghouse included its own reasonable costs in its six-month estimates and provided an annual financial audit to the Office of the Managing Director and the Wireless Telecommunications Bureau including those costs, which were paid by 3.7 GHz Service licensees once their licenses were issued.

108. Third, the Clearinghouse was directed to, as needed, act as a special master and either mediate disputes related to cost estimates or payments, or refer the parties to alternate dispute resolution fora. The Commission also provided for expedited non-binding arbitration, with costs shared by the disputing parties, and for review of any disputes by the Wireless Telecommunications Bureau, with the opportunity for further review on appeal to the Commission.

109. Fourth, the Clearinghouse was required to provide quarterly information and progress reports to the Commission in order to ensure proper oversight of the Clearinghouse program. These reports included information related to available funds for reimbursement, payments issued, amounts collected from licensees, incumbents' certifications, funds spent on the transition, and description of any disputes and their resolutions. The Clearinghouse was also required to provide additional information upon the request of the Wireless Telecommunications Bureau and the Office of the Managing Director.

110. We propose to task a new independent third-party Clearinghouse with these same broad duties for the Upper C-band transition, and we seek comment on this proposal. Should we retain the basic structure of the processes by which the new 3.7 GHz Service licensees will replenish the reimbursement fund and eligible incumbents submit reimbursement claims for their reasonable transition costs? To the extent that a new terrestrial wireless licensee relinquishes to the Commission its license prior to all its transition payment responsibilities being discharged, we again propose that the remaining payments will be distributed among other similarly situated new terrestrial wireless licensees. If a new license is issued for such previously relinquished rights prior to final payments becoming due, we propose that the new licensee will be responsible for the same pro rata share of the payment obligations as the initial terrestrial wireless licensee. Finally, if a new terrestrial wireless licensee sells its rights on the secondary market, we propose that the new licensee will be obligated to fulfill all payment obligations associated with the license. We again anticipate that each eligible space station operator will be responsible for payment of its own satellite transition costs until the new terrestrial wireless licensees are determined, and those licensees will pay the Clearinghouse's costs throughout the reimbursement program, and thus seek comment on those proposals. Did the dispute resolution process resolve any open issues in a timely manner, or would additional alternative dispute resolution options or a more streamlined appeals process from the Wireless Telecommunications Bureau directly to the Commission facilitate the expeditious resolution of such matters? Were the quarterly Clearinghouse reporting requirements sufficient for the Commission to carry out its transition oversight duties, or would a different cadence of filings serve the same goal? Did the experience of the Lower C-band transition offer any other lessons that should guide us to adopt alternative approaches to any of the duties described above? If so, what are those alternatives, and why should we depart from our previous practice? For example, are there ways in which the new Clearinghouse could streamline the claims review process without compromising its duty to prevent fraud, waste, or abuse in the transition cost reimbursement program? Would any additional Clearinghouse duties, not contemplated in the Lower C-band transition, be useful in administering the cost aspects of the Upper C-band transition?

111. As part of the earlier transition, the Commission directed Wireless Telecommunications Bureau to establish a Cost Catalog which provided guidance to both incumbents and the new 3.7 GHz Service licensees about a range of reasonable transition costs. The Cost Catalog also detailed the process and relevant categories for incumbent earth station operators opting out of the formal transition and seeking a lump sum payment. Consistent with this approach, reimbursement claims that fell within the applicable range in the Cost Catalog were presumed reasonable. Should we once again utilize a Cost Catalog to establish ranges of presumptively reasonable transition costs? If so, should we retain the existing Cost Catalog, adjust it in some way (such as for inflation), or develop an entirely new one for the Upper C-band transition? If we again direct the Wireless Telecommunications Bureau to develop a new Cost Catalog or modify the existing one, how should we develop appropriate ranges identifying presumptively reasonable reimbursement claims?

b. Selecting the Clearinghouse

112. We propose to appoint a search committee tasked with selecting the Clearinghouse for the Upper C-band transition. As in the *2020 C-band R&O,*

we propose to establish a search committee that: (1) represents various stakeholder interests, including space station operators, earth station incumbents, and prospective flexible-use licensees; (2) proceeds by consensus, and, if necessary, selects the Clearinghouse by a majority vote; and (3) notifies the Commission of its choice by an established deadline. In order to streamline the search committee process, in contrast with the lower band transition where the search committee established the Clearinghouse's selection criteria, here we propose the use of selection criteria based upon the Clearinghouse's duties as discussed *supra.* Upon the selection of a Clearinghouse, we propose to direct the Wireless Telecommunications Bureau to issue a public notice seeking comment on whether the entity selected satisfies the selection criteria, and to issue a final order announcing whether the selection criteria has been satisfied. We further propose to again direct and delegate broad authority to the Wireless Telecommunications Bureau to provide the Clearinghouse and incumbent space station operators with any needed clarifications and interpretations of the Commission's orders and rules, and more generally to take such measures as are necessary to ensure the timely and efficient transition of the Upper C-band.

113. We seek comment on our proposal to adopt for the Upper C-band transition a process broadly similar to that used to select the Clearinghouse for the Lower C-band transition, with certain proposed modifications as detailed above. What lessons from the previous transition might inform the composition of the search committee, the substance of the selection criteria, or the procedures for, and timing of, the Clearinghouse's selection? We also seek comment on what should happen in the event that the search committee fails to select a Clearinghouse and notify the Commission by the deadline, including but not limited to procedures similar to those used in the Lower C-band transition?

7. The Logistics of Relocation

114. In order to relocate incumbent FSS operations out of the reconfigured portion of the Upper C-band, we propose to adopt requirements similar to those that governed the transition of FSS operations out of the Lower C-band. We therefore propose to require: (1) the preparation and submission of Transition Plans by the eligible space station operators; (2) a filing deadline for the submission of such Transition Plans, to be followed by a public comment period and the opportunity to update the plans as permitted by the Commission; (3) requirements for the content of eligible satellite operators' Transition Plans; and (4) the submission of quarterly status reports by the eligible space station operators on their implementation efforts; and (5) the selection and appointment of a Relocation Coordinator to ensure that relocation is completed in a timely manner.

115. The Commission previously found that the eligible space station operators possessed the technical and operational expertise that was required to facilitate the transition of FSS services out of the Lower C-band, and that putting them in charge of practical transition logistics—with Commission oversight—would be the most effective approach. Such operators were required to submit formal Transition Plans roughly three months after the Commission adopted the *2020 C-band R&O,* and the public was allowed to comment on those plans. The Commission required that the Transition Plans describe seven items in detail. Should we once again make the eligible space station operators responsible for both establishing and satisfying their clearing obligations? If so, should we adopt similar deadlines and content requirements for eligible space station operators' Transition Plans and status reports, and enable the filing of joint Transition Plans by multiple operators who deem it useful to develop a combined space station grooming plan, as long as it includes all of the required elements? Depending on the reconfiguration option we ultimately adopt, would any changes to the relocation process be appropriate?

116. The Commission previously determined that the establishment of a Relocation Coordinator to oversee the FSS transition was in the public interest, upon a demonstration of its expertise. Should we take the same approach to ensure the timely execution of the Upper C-band transition, or might a different approach be warranted depending on which reconfiguration option is adopted? Should we again establish a search committee of interested parties to select the Relocation Coordinator, or would another approach better suit this transition? What lessons from the Lower C-band transition might inform our approach to using a Relocation Coordinator for this effort? Should the Relocation Coordinator's selection process and responsibilities remain essentially the same as before, or might they change depending on which reconfiguration approach we select?

D. Coexistence With Adjacent Band Radio Altimeters

117. In light of our statutory mandate to complete a system of competitive bidding for licenses for at least 100 megahertz of the Upper C-band by July 4, 2027, we seek comment on how best to promote spectral coexistence between these proposed new wireless services and radio altimeters in the neighboring 4.2–4.4 GHz band. Since this issue was first addressed in the *2020 C-band R&O,* there has been significant technical work done by government and industry stakeholders to better understand any potential for harmful adjacent band interference. In addition, temporary measures were adopted by the wireless industry in the Lower C-band to adjust certain technical parameters in support of both full power deployments across the Lower C-band and the coexistence environment with adjacent band radio altimeters, for which retrofits were required by the FAA for part 121 and certain 129 aircraft in the United States as of February 1, 2024 to improve their signal rejection performance. There are also ongoing aviation industry-led efforts to design next generation radio altimeters that predate the instant FCC proceeding but nonetheless may lead to the production and deployment of more resilient altimeters in the near future. To that end, we expect the FAA to initiate and complete a rulemaking to codify the new radio altimeter standards in parallel with our rulemaking and prior to any auction we are required to commence under the OBBB Act. We believe that the development and installation of more robust radio altimeters will further aviation safety and aligns with other ongoing efforts to improve safety in the national airspace (NAS) including, for example, forthcoming air traffic control improvements recently appropriated for in the OBBB Act. Further, radio altimeter improvements will also reinforce the successful coexistence environment that exists between radio altimeters and operators in the 3.7 GHz Service, and we expect will obviate any need for ongoing mitigations or burdensome regulatory oversight going forward.

118. We seek comment on the current state of radio altimeter performance, and particularly specific technical data about the signal rejection capabilities of existing radio altimeters above 3.98 GHz that have been in use following the 2023 FAA-mandated retrofit. We ask radio altimeter equipment manufacturers and other relevant stakeholders to provide this data in sufficient detail to allow us to independently assess the ability of

post-retrofit radio altimeters, with or without additional modifications such as filtering, to coexist with the planned new adjacent band wireless operations. We are concurrently issuing a protective order in this proceeding to enable requests for the confidential treatment of any data and related business sensitive information. Further, we welcome updates related to ongoing private sector efforts to improve radio altimeter performance. We seek input on the expected level of performance from new radio altimeters based on technical work currently underway, along with the timing for finalization of any new performance standard and its implementation by the aviation industry.

119. In light of the ongoing industry efforts to develop and produce improved radio altimeters, we also seek comment on the substance and timing of the transition process for implementing future radio altimeter upgrades throughout the NAS. Once any new technical requirements are adopted by FAA, what compliance steps would the aviation industry need to undertake, and how long would an altimeter retrofit process last? What steps, if any, can be taken to enable a rapid implementation timeframe for any needed retrofits? Given our statutory mandate to complete a system of competitive bidding for the Upper C-band spectrum by July 2027, and the need to provide bidders with assurances of when they will be able to access the spectrum won at auction, we also seek comment on how the timing of the aviation industry's future implementation efforts can be aligned with the fulfillment of our statutory responsibilities.

120. In this context, we note that the requirement in the OBBB Act to complete a system of competitive bidding for least 100 megahertz of the Upper C-band by July 4, 2027 does not mention adjacent band issues. We also recognize that our established *Emerging Technologies* framework has not previously been used to address adjacent band equities. Nevertheless, we recognize that radio altimeter retrofits by the aviation industry that significantly improve their signal rejection capabilities within an accelerated timeframe would not only promote coexistence with future terrestrial wireless operations in the Upper C-band over the long term, but also support a timely implementation of our legislative remit and a successful conclusion of the competitive bidding process. Therefore, given the unique circumstances and timing considerations involved with the Upper C-band, we seek comment on ways in which any future radio altimeter retrofits can be incentivized and accelerated as part of the overall Upper C-band repurposing and transition process.

121. As an initial matter, and to provide financial certainty and transparency to all stakeholders, we seek comment on the estimated scale and scope of anticipated radio altimeter retrofits as a result of any new technical requirements that FAA may adopt in the near term that would facilitate a predictable and rapid repurposing of the Upper C-band. We also seek comment on specific proposals and mechanisms to facilitate these retrofits from a financial perspective, including how best to design and implement any such regime, as well as the basis for calculating such payments (*e.g.,* number of altimeter retrofits, installation timing). What would be an appropriate underlying rationale or predicate supporting such proposals, such as our *Emerging Technologies* framework? We also seek comment on who might be eligible to receive any such payments from winning bidders (*e.g.,* airlines or other aircraft owners, equipment manufacturers)? Should eligibility be limited to certain types of aircraft or classes of operator? Are there certain such categories, such as foreign aircraft or aircraft operated for personal, private use, for which a right to receive payment would not serve the public interest? We also seek comment on who might be responsible for addressing any payments and how they could be allocated (*e.g.,* the Upper C-band auction winners on a *pro rata* basis, akin to the mechanism used for the Lower C-band FSS transition)? Or would an alternate approach be more appropriate?

122. We further seek comment on how best to manage any potential payments related to radio altimeter retrofits. Specifically, could a list of eligible entities be created and maintained, such as with the incumbent earth station list used in the in-band FSS transition? What mechanism could be used to manage any such process and prevent potential fraud, waste, or abuse? If a third-party clearinghouse were used, could that be the same clearinghouse that we propose would oversee the in-band FSS transition cost reimbursement process? If not, what other type of entity might be appropriate to manage payments relating to an aviation retrofit process, how would it be selected, what would its responsibilities include, and who would be responsible for its operational costs?

123. Finally, in recognition of the evolving spectral environment in the adjacent 4.2–4.4 GHz band, we seek comment on whether the proposed technical rules in the instant proceeding—including limits on maximum base station power and OOBE—would contribute to a successful coexistence environment between new wireless operations in the Upper C-band and current and upgraded radio altimeters. Some commenters have suggested that more stringent limits on power and OOBE than those that were adopted in the *2020 Report and Order* may be appropriate. Accordingly, we seek comment on whether more restrictive limits on power or OOBE are necessary in the face of recent and future radio altimeter improvements to promote effective spectral coexistence. Does the answer depend on which repurposing option the Commission ultimately selects for the Upper C-band? Should any changes to such technical parameters be limited to the block(s) immediately adjacent to the 4.2–4.4 GHz band or within certain geographic areas? What is the minimum size guard band that would be required between terrestrial wireless and altimeters and how might this answer change based on the power and OOBE limits of the adjacent spectrum block(s)? While we seek to avoid ongoing and potentially burdensome oversight that may inhibit the rapid and robust deployment of wireless services in the Upper C-band, we also seek comment on whether other emissions management techniques may help to promote effective coexistence with radio altimeter operations.

IV. Procedural Matters

124. *Ex Parte Rules—Permit-But-Disclose.* This proceeding shall be treated as a ''permit-but-disclose'' proceeding in accordance with the Commission's *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other

filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule § 1.1206(b), 47 CFR 1.1206(b). In proceedings governed by rule § 1.49(f), 47 CFR 1.49(f), or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.,* .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Initial Regulatory Flexibility Analysis

125. As required by the Regulatory Flexibility Act (RFA) of 1980, as amended, Public Law 104–121, the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the policies and rules proposed in the Notice of Proposed Rulemaking (*NPRM*) assessing the possible significant economic impact on a substantial number of small entities. The Commission requests written public comments on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments specified on the first page of the *NPRM.* The Commission will send a copy of the *NPRM,* including this IRFA, to the Chief Counsel for the Small Business Administration (SBA). In addition, the *NPRM* and IRFA (or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Proposed Rules

126. With today's *NPRM,* the Commission seeks comment on proposals to expand next generation wireless services in the 3.7–4.2 GHz band (C-band). As means of furthering its objective of optimizing use of the C-band's versatile coverage, capacity, and propagation characteristics, the Commission in 2020 repurposed the 3.7–3.98 GHz portion of the band (Lower C-band) for flexible use in the contiguous United States. As a result of that effort, Fixed Satellite Service (FSS) space and earth station operators deployed new and improved wireless services that brought 5G to countless communities, including rural, remote, and underserved areas. The *NPRM* takes another step to put vital mid-band spectrum to more intensive, flexible use that will support robust connectivity, spur economic growth, and advance American security interests, in furtherance of the One Big Beautiful Bill Act (OBBB Act), Public Law 119–21, 40002.

127. The *NPRM* proposes to further enable terrestrial wireless operations in a segment of the 3.98–4.2 GHz portion of the C-band (Upper C-band) in the contiguous United States and to generally apply the part 27 licensing and operating rules that presently govern wireless operations in the Lower C-band to new full-power commercial operations in the Upper C-band. In July 2025, as part of the OBBB Act, Congress reinstituted the Commission's general authority to grant licenses through systems of competitive bidding through September 2034 and established a path forward for the eventual repurposing of 800 megahertz to be licensed through competitive bidding, including at least 500 megahertz for full power commercial licensed use cases. OBBB Act, 40002(b)(1); *see also* 47 U.S.C. 309(j)(11). The OBBB Act also specifically directed the Commission to ''grant licenses through systems of competitive bidding, before the expiration of the general auction authority for not less than 300 megahertz, including by completing a system of competitive bidding not later than 2 years after the date of enactment of this Act for not less than 100 megahertz in the band between 3.98 gigahertz and 4.2 gigahertz.'' OBBB Act, 40002(b)(2).

128. Pursuant to this statutory directive, the *NPRM* seeks comment on options for reconfiguration of the Upper C-band. We have developed these options in light of what we believe might be achievable both in terms of further transitioning in-band incumbent FSS operations in the contiguous United States, as well as ongoing technical advancements with adjacent band radio altimeters which will further enhance their signal rejection capabilities and bolster the existing successful spectral co-existence environment. We propose to generally apply the existing 3.7 GHz Service rules to any newly authorized terrestrial wireless operations in any reconfiguration scenario. As discussed in further detail below, any other rules and requirements, including those relating to the transition process, would be modeled to the greatest extent possible on those that applied to the Lower C-band transition.

129. Thus, throughout the *NPRM,* we seek to enable more intensive flexible use of key mid-band spectrum by retaining many elements of the successful Lower C-band transition, and, where appropriate, by leveraging the lessons learned from that process to craft an improved process for transitioning the Upper C-band.

B. Legal Basis

130. The proposed action is authorized pursuant to Sections 1, 2, 4(i), 301, 302(a), 303, 304, 307, 309, 316, and 403 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i), 301, 302(a), 303, 304, 307, 309, 316, and 403, and by Section 40002 of the OBBB Act.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

131. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act (SBA). A ''small business concern'' is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. The SBA establishes small business size standards that agencies are required to use when promulgating regulations relating to small businesses; agencies may establish alternative size standards for use in such programs, but must consult and obtain approval from SBA before doing so.

132. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe three broad groups of small entities that could be directly affected by our actions. In general, a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses. Next, ''small organizations'' are not-for-profit enterprises that are independently owned and operated and not dominant their field. While we do not have data regarding the number of non-profits that meet that criteria, over 99 percent of nonprofits have fewer than

500 employees. Finally, ''small governmental jurisdictions'' are defined as cities, counties, towns, townships, villages, school districts, or special districts with populations of less than fifty thousand. Based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 out of 90,835 local government jurisdictions have a population of less than 50,000.

133. We have identified the Wireless Telecommunications Carriers (except Satellite) and Satellite Telecommunications industries as the most likely to be impacted by the rules proposed in the *NPRM.* These industries are identified in the chart below by their six-digit North American Industry Classification System (NAICS) codes and corresponding SBA size standard. Based on currently available U.S. Census data regarding the estimated number of small firms in each identified industry, we conclude that the proposed rules will impact a substantial number of small entities. Where available, we also provide additional information regarding the number of potentially affected entities in the industries identified below.

Regulated Industry (Footnotes specify potentially affected entities within a regulated industry where applicable)	NAICS code	SBA size standard	Total firms	Total small firms	% Small firms
Wireless Telecommunications Carriers (except Satellite).	517112	1,500 employees	1,184	1,081	91.30
Satellite Telecommunications	517410	$44 million	332	195	58.73

2024 Universal Service Monitoring Report Telecommunications Service Provider Data (Data as of December 2023)	SBA size standard (1,500 Employees)		
Affected entity	Total # FCC Form 499A filers	Small firms	Small entities
Wireless Telecommunications Carriers (except Satellite)	585	498	85.13

D. Description of Economic Impact and Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

134. The RFA directs agencies to describe the economic impact of proposed rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record.

135. The proposed changes in the *NPRM,* if adopted, may require small entities to hire attorneys, engineers, consultants, or other professionals to comply. Although the Commission cannot quantify the cost of compliance, we note that several of the proposed rule changes are consistent with and mirror existing policies and requirements used for other part 27 flexible-use licenses. Therefore, small entities with existing licenses in other bands may already be familiar with such policies and requirements and have the processes and procedures in place to facilitate compliance resulting in minimal incremental costs to comply with our requirements for the Upper C-band. Below is an overview of areas discussed in the *NPRM* that contain proposals that may, if adopted, lead to modified or additional compliance requirements for small entities.

136. *Reconfiguration and Allocation of the Upper C-band.* The *NPRM* seek comment on options for reconfiguring the Upper C-band in the contiguous United States ranging from a minimum of 100 megahertz (3.98–4.08 GHz) for terrestrial wireless use, as required by the OBBB Act, to a maximum of 180 megahertz (3.98–4.16 GHz). Under any approach that may be adopted within this range, the *NPRM* proposes that any remainder of the Upper C-band would be used for repacked FSS operations with a guard band of no more than 20 megahertz. The Commission seeks comment on these reconfiguration options generally, and further seeks input specifically as to how each of the topics addressed throughout the *NPRM* might be impacted depending on which reconfiguration approach we elect.

137. Additionally, the *NPRM* proposes to add a primary, non-federal mobile, except aeronautical mobile, allocation to whatever portion of the 4.0–4.2 GHz band we reconfigure in the contiguous United States. This proposal would harmonize the allocations in the Upper C-band with those in 3.7–4.0 GHz and thus make a wider band of contiguous mid-band spectrum available for next generation wireless services. The *NPRM* further proposes to retain exclusive non-federal allocations for FSS and Fixed Service (FS) in whatever portion of that band is *not* repurposed for terrestrial commercial wireless use in the contiguous United States, recognizing that FS operations have been sunset in those areas, and to preserve the status quo regarding FSS and FS allocations and operations outside of the contiguous United States. We seek comment on the benefits and potential drawbacks of our reconfiguration and reallocation proposals, including their economic impacts, potential alternatives, and whether they strike the right balance between incumbent interests and our goal of enabling more intensive flexible use of the C-band.

138. *Competitive Bidding Procedures.* The *NPRM* proposes to conduct an auction of licenses in the Upper C-band in conformity with the general competitive bidding rules set forth in part 1, subpart Q, of the Commission's rules. As we have in all recent previous Commission spectrum auctions, we propose to employ the part 1 rules governing competitive bidding design, designated entity preferences, unjust enrichment, application and certification procedures, payment procedures, reporting requirements, and the prohibition on certain communications between auction applicants. Under this proposal, such rules would be subject to any modifications that the Commission may adopt for its part 1 general competitive bidding rules in the future. Further, the *NPRM* seeks comment on whether any of those rules would be inappropriate or should be modified for an auction of licenses in the Upper C-band.

139. The *NPRM* also proposes to adopt bidding credits for the two larger designated entity business sizes provided in the Commission's part 1 standardized schedule of bidding credits, as we have done in all auctions

of licenses likely to be used to provide 5G services in a variety of bands since the part 1 schedule of bidding credits was updated in 2015. Further, the *NPRM* proposes to offer rural service providers a designated entity bidding credit for Upper C-band licenses. We seek comment on these proposals, and on whether the characteristics of the Upper C-band and our proposed licensing model suggest that we should adopt different small business size standards and associated bidding credits than we have in the past.

140. *The Transition of FSS Operations.* The *NPRM* proposes to adopt many of the same transition framework elements used for Lower C-band for the Upper C-band transition of incumbent FSS operations. First, the *NPRM* proposes that ''incumbent space station operators'' will generally include all space station operators authorized to provide C-band service to any part of the contiguous United States pursuant to an FCC-issued license or grant of market access as of June 21, 2018. The *NPRM* also proposes to define an ''eligible space station operator'' as an incumbent space station operator that has demonstrated as of February 1, 2020, that it has an existing relationship to provide service via C-band satellite transmission to one or more incumbent earth stations in the contiguous United States. In addition, the *NPRM* proposes to define ''incumbent earth stations'' for the Upper C-band transition to include fixed and temporary fixed earth stations that were operational as of April 19, 2018, and that: (1) continue to be operational; (2) were licensed or registered in the ICFS database on November 7, 2018; and (3) timely certified the accuracy of the information on file with the Commission by May 28, 2019. We seek comment on these proposals to apply the same baseline definitions as in the Lower C-band transition.

141. The *NPRM* also proposes to use our authority under Section 316 of the Communications Act to modify, as needed, the existing licenses, market access authorizations, and registrations currently held by FSS C-band incumbents to clear whatever portion of the Upper C-band we ultimately reallocate. The *NPRM*'s proposals aim to align with the clearing approach that the Commission took in carrying out the Lower C-band transition. We seek comment on this proposal.

142. Regarding the transition schedule, the *NPRM* proposes to set a specific transition deadline to ensure that all incumbent FSS operations are cleared in a timely manner to facilitate the introduction of terrestrial wireless services in the Upper C-band, and to provide potential auction bidders with some certainty as to when they will be able to obtain access to Upper C-band spectrum. As a result, the *NPRM* seeks comment on whether a transition timeline of approximately five and one half years, as was done with the Lower C-band, would be appropriate here and, if not, whether one or more different deadline(s) should be used. We seek comment on this proposal, including how deadlines should shift depending upon which reconfiguration proposal we adopt.

143. As with the Lower C-band transition, the *NPRM* proposes to require new terrestrial wireless licensees in the Upper C-band to reimburse the reasonable transition costs incurred by eligible FSS space station and incumbent earth station operators and to allocate the responsibility for those costs among the new terrestrial wireless licensees on a *pro rata* basis. We again propose to offer incumbent earth station operators the choice of either accepting reimbursement for their actual reasonable transition costs or accepting a lump sum reimbursement for all of their incumbent earth stations based on the average, estimated cost of transitioning those facilities. We seek comment on these proposals, whether improvements can be made in light of lessons learned in the prior transition, and whether the expected amount of transition cost reimbursement for FSS services in the Upper C-band will vary depending upon the reconfiguration option that we ultimately adopt.

144. Consistent with the Lower C-band approach, the *NPRM* also proposes to require all actual transition costs needed to clear existing Upper C-band operations in the contiguous United States to be ''reasonable'' in order to qualify for reimbursement and would not permit reimbursement for equipment upgrades beyond what is necessary to clear the band. The *NPRM* proposes not to reimburse incumbents for the speculative value of any business opportunities they claim they would lose as a result of the transition. The *NPRM* also proposes that any soft costs (*e.g.,* transactional expenses directly attributable to relocation) would again be subject to a rebuttable presumption for a cap of 2% of the hard costs involved in the transition. We seek comment on these proposals.

145. To allocate the transition financial responsibilities of new 3.7 GHz Service licensees, the *NPRM* again proposes to generally base the share for each licensee on that licensee's *pro rata* share of gross winning bids in the underlying auction, with specific allocation formulas governing each type of payment obligation. We seek comment on this proposal, and commenters are invited to recommend alternative approaches with a detailed description of the methodology behind their proposals.

146. The *NPRM* also seeks comment on whether we should consider incentives—monetary or otherwise—to facilitate expeditious clearing of the Upper C-band. We ask commenters to address who should be eligible for such incentives, how any responsibility thereto should be allocated, and what benchmarks they should be aligned with, as well as how incentives should be calculated and whether they would be impacted by adoption of either of the band reconfiguration options we are considering.

147. The *NPRM* proposes to once again use an independent Clearinghouse to oversee the cost-related aspects of the Upper C-band transition, using a similar selection process and imposing the same broad responsibilities as in the Lower C-band transition. We seek comment on this proposal, and on ways to build upon the success of the Lower C-band Clearinghouse by way of potential improvements to any new transition cost reimbursement program. Additionally, we seek comment on whether we should again use a Cost Catalog to establish ranges of presumptively reasonable transition costs, including whether we should retain the existing Cost Catalog, adjust it in some way (such as for inflation), or develop an entirely new one for the Upper C-band transition. The *NPRM* proposes to establish a search committee that will use selection criteria based upon the Clearinghouse's duties, rather than asking the committee to establish those criteria itself. We also seek comment on the proposal to adopt for the Upper C-band transition a process broadly similar to that used to select the Clearinghouse for the Lower C-band transition, with some proposed modifications.

148. In order to relocate incumbent FSS operations out of the reconfigured portion of the Upper C-band, the *NPRM* proposes to adopt requirements similar to those that governed the transition of FSS operations out of the Lower C-band. These requirements would include that eligible space station operators prepare and submit their own Transition Plans by a set deadline, and also submit quarterly status reports on their efforts. We seek comment on this proposal, on whether we should again establish a Relocation Coordinator to oversee the FSS transition, and if so, how we should

select it and with what responsibilities we should task it.

149. *Band Plan.* As with the Lower C-band, the *NPRM* proposes to license at least 100 megahertz of the Upper C-band in 20 megahertz blocks, using an unpaired spectrum block configuration, and on an exclusive, Partial Economic Area (PEA) basis. We seek comment on whether this approach remains appropriate for the wireless technologies likely to be deployed in the Upper C-band, whether PEAs are the appropriate areas, and whether 20 megahertz remains the appropriate block size, or if we should consider smaller or larger block sizes. We also invite comment on the costs and benefits of geographic licensing, and of any alternatives that commenters propose. Although the *NPRM* does not propose licensing areas outside of the contiguous United States, we seek comment on whether we should adopt a licensing approach for certain such areas.

150. *Licensing and Operating Rules.* The *NPRM* proposes to adopt similar licensing and operating rules that provide flexibility to align new licenses in the Upper C-band with existing licenses in the Lower C-band, which are already governed by part 27. In particular, we propose that new licensees in the Upper C-band comply with licensing and operating rules that are applicable to all part 27 services, including those rules relating to the assignment of licenses by competitive bidding, flexible use, regulatory status, foreign ownership reporting, compliance with construction requirements, renewal criteria, permanent discontinuance of operations, partitioning and disaggregation, and spectrum leasing. The *NPRM* asks commenters to identify any aspects of our general part 27 service rules that should be modified to accommodate the particular characteristics of the Upper C-band. Similarly, the *NPRM* seeks comment as to whether we should adopt service-specific rules for the Upper C-band in certain other areas, or if we should integrate the band into the rules that already apply to the Lower C-band. These rules govern eligibility, license term, performance requirements, renewal term construction obligations, and other licensing and operating rules. We also seek comment on a 15-year term for licenses in the Upper C-band. We ask commenters to discuss the costs and benefits associated with these approaches, as well as with any proposed alternatives.

151. In addition, the *NPRM* proposes to adopt an open eligibility standard for Upper C-band licenses. This approach would not affect citizenship, character, or other generally applicable qualifications that apply under our rules, and it would be consistent with that taken in the Lower C-band. We seek comment on the costs and benefits of this standard, including its effects on competition, innovation, and investment.

152. Regarding mobile spectrum holding policies, the *NPRM* proposes to not adopt a pre-auction bright-line limit on the ability of any entity to acquire spectrum in the Upper C-band through competitive bidding at auction. Instead, we propose to review holdings on a case-by-case basis when applications for initial licenses are filed post-auction to ensure that the public interest benefits of having a threshold on spectrum applicable to secondary market transactions are not rendered ineffective. Finally, we propose to include the Upper C-band spectrum in the Commission's spectrum screen, which assists the Commission with identifying markets that may warrant further competitive analysis, as a means of evaluating proposed secondary market transactions.

153. *Performance Requirements.* The *NPRM* proposes to require Upper C-band licensees offering mobile or point-to-multipoint services to provide reliable signal coverage and offer service to at least 45% of the population in each of their license areas within eight years of the license issue date (first performance benchmark), and to at least 80% of the population in each of their license areas within 12 years from the license issue date (second performance benchmark). We propose to once again permit Internet of Things (IoT) providers to instead demonstrate that they offer geographic area coverage of 35% of the license area at the first (eight-year) performance benchmark, and geographic area coverage of 65% of the license area at the second (12-year) performance benchmark. The *NPRM* also seeks comment on proposed requirements for licensees relying on fixed, point-to-point links that would mirror those adopted for the Lower C-band. Specifically, licensees relying on point-to-point links licensees would be required to demonstrate within eight years of the license issue date (first performance benchmark) that they have four links operating and providing service, either to customers or for internal use, if the population within the license area is equal to or less than 268,000. If the population within the license area is greater than 268,000, we propose to require licensees to demonstrate they have at least one link in operation and providing service, either to customers or for internal use, per every 67,000 persons within a license area. Licensees relying on point-to-point service would be required to demonstrate within 12 years of the license issue date (final performance benchmark) that they have eight links operating and providing service, either to customers or for internal use, if the population within the license area is equal to or less than 268,000. If the population within the license area is greater than 268,000, we would require a demonstration that the licensee is providing service and has at least two links in operation per every 67,000 persons within a license area. We seek comments on all of these proposals.

154. Regarding penalties for failure to meet performance requirements, we propose to adopt a rule requiring that, in the event a licensee fails to meet the first performance benchmark, the licensee's second benchmark and license term would be reduced by two years, thereby requiring it to meet the second performance benchmark two years sooner (at 10 years into the license term) and correspondingly reducing its license term to 13 years. As with our approach in the Lower C-band, we further propose that, in the event a licensee fails to meet the second performance benchmark for a particular license area, its authorization for each license area in which it fails to meet the performance requirement shall terminate automatically without Commission action. In the event a licensee's authority to operate terminates automatically, we propose to make the relevant license available for reassignment pursuant to the competitive bidding provisions of § 309(j). Consistent with the Commission's rules applicable to the Lower C-band and other bands, we propose that any Upper C-band licensee that forfeits its license for failing to meet its performance requirements would be precluded from regaining the license. We invite comments on these proposals.

155. *Compliance Procedures.* In addition to the compliance procedures applicable to all part 27 licensees, including the filing of electronic coverage maps and supporting documentation, the *NPRM* proposes to require that the coverage maps accurately depict both the boundaries of each licensed area and the coverage boundaries of the areas to which the licensee actually provides service. Therefore, if a licensee does not provide reliable signal coverage to its entire license area, we propose that its map must accurately depict the boundaries of the area or areas within each license

area not being served. Further, we propose that each licensee also must file supporting documentation certifying the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service. We seek comment on our proposals, as well as whether small entities face any special or unique issues with respect to the transition that would require additional time for them to comply.

156. *License Renewal and Renewal Term Construction Obligations.* We propose to apply the general renewal requirements applicable to all Wireless Radio Services (WRS) licensees to licensees in the Upper C-band. We further propose to apply our general part 27 renewal requirements for wireless licenses to the Upper C-band, as the Commission has for the Lower C-band, the 3.45 GHz band, and the 3.55–3.7 GHz band. Correspondingly, we propose to include the Upper C-band in the unified renewal framework for WRS. This means that Upper C-band licensees will be required to comply with § 1.949 of our rules by demonstrating that, over the course of their license term, they either: (1) provided and continue to provide service to the public, or (2) operated and continue to operate the license to meet the licensee's private, internal communications needs. Licensees can demonstrate compliance with this requirement either through the renewal showing in section (f) of that rule, or through the relevant safe harbor found in section (e).

157. In addition to, and independent of, the general renewal provisions set forth in our rules, we seek comment on applying specific renewal term construction obligations to Upper C-band licensees. We invite comment on whether there are unique characteristics of the Upper C-band that might warrant a different approach than the general renewal requirements. Commenters are encouraged to address the costs and benefits of their proposed rules and discuss how a given proposal will encourage investment and deployment in areas that might not otherwise benefit from significant wireless coverage.

158. *Technical Rules.* Consistent with existing rules for similar wireless services in nearby bands, the *NPRM* proposes to permit base stations in non-rural areas to operate at power levels up to 1640 watts per megahertz EIRP and base stations in rural areas to operate with double the non-rural power limits (3280 watts per megahertz EIRP). The *NPRM* also proposes to apply § 27.50(j)(1) through (2) of the Commission's rules to both fixed and base stations operating in the Upper C-band. For mobiles and portables, the *NPRM* proposes to adopt a 1 Watt (30 dBm) EIRP power limit, matching the standards adopted for the Lower C-band and the 3.45 GHz band. We invite comment on alternative power limits, request technical details in support of any proffered alternatives, and request analyses of the costs and benefits of such proposals.

159. For base station out-of-band emissions (OOBE), the *NPRM* proposes—consistent with the Lower C-band limit—to require base stations to suppress their emissions beyond the edge of their authorization to a conducted power level of −13 dBm/MHz, and to apply the existing part 27 measurement procedures and resolution bandwidth that are used for the Lower C-band. We seek comment on whether the same or different limits should be applied to emissions within the Upper C-band compared to those at the band's edge. For mobile units, the *NPRM* proposes to require that they suppress their conducted emissions to no more than −13 dBm/MHz outside their authorized frequency band, *i.e.,* at the authorized channel edge as measured at the antenna terminals. This proposal is consistent with the mobile OOBE limit that governs the Lower C-band, as is our proposal to adopt a relaxation of the emission limit within the first five megahertz of the channel edge by varying the resolution bandwidth used when measuring the emission. For emissions within 1 megahertz from the channel edge, the minimum resolution bandwidth would be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kilohertz. In the bands between one and five megahertz removed from the licensee's authorized frequency block, the minimum resolution bandwidth would be 500 kilohertz. Finally, the *NPRM* proposes to apply §§ 27.53(h)(4) and 27.53(i) of the Commission's rules to Upper C-band, as was done for the Lower C-band.

160. Consistent with the existing part 27 AWS rules, Lower C-band, and 3.45 GHz band requirements, none of which impose antenna height limits on antenna structures, the *NPRM* proposes not to restrict antenna heights for Upper C-band operations beyond any requirements necessary to ensure air navigation safety. And as with the Lower C-band, the *NPRM* proposes to apply a −76 dBm/m²/MHz power flux density (PFD) limit at a height of 1.5 meters above ground at the geographical border of Upper C-band licensees' service areas. We seek comment on the costs and benefits of these proposals, and on any potential alternatives.

161. The *NPRM* proposes to apply § 27.57(c) of the Commission's rules to terrestrial licensees in the Upper C-band; this rule requires all part 27 operations to comply with international agreements for operations near the Mexican and Canadian borders. Also consistent with our Lower C-band approach, we propose to adopt several additional technical rules that apply to all part 27 services, including §§ 27.51 (Equipment authorization), 27.52 (RF safety), 27.54 (Frequency stability), and part 1, subpart BB of the Commission's rules (Disturbance of AM Broadcast Station Antenna Patterns) for new terrestrial commercial wireless operations in the Upper C-band.

162. To safeguard incumbent FSS earth stations, the *NPRM* also proposes to adopt a PFD limit of −124 dBW/m²/MHz as measured at the registered incumbent earth station antenna; this PFD limit is consistent with the Lower C-band and would apply to all emissions within the earth station's authorized band of operation, from both base and mobile stations. In order to protect earth stations from receiver blocking, we propose to require a PFD limit of −16 dBW/m²/MHz, as measured at the registered incumbent earth station antenna, and applied across the transitioned frequency range. This blocking limit would apply to all emissions within the new terrestrial wireless licensee's authorized frequency range, and it is the same limit that applied to the Lower C-band transition. Finally, the *NPRM* proposes to allow full band/full arc use by FSS earth stations that continue to operate in the band during and after the transition process. We seek comment on these proposals, including the ongoing applicability of the assumptions that guided the Lower C-band transition, along with any appropriate alternatives.

163. In order to protect Telemetry, Tracking, and Command (TT&C) operations, the *NPRM* proposes to require new terrestrial licensees to ensure that the aggregated power from their operations meet an interference to noise ratio (I/N) of −6 dB as received by the TT&C earth station, and that they coordinate their co-channel operations within 70 km of TT&C earth stations that continue to operate in the Upper C-band. We also propose protections against adjacent channel interference, including: (1) aggregated power from adjacent 3.7 GHz Service operations must meet a −6 dB I/N ratio, and the limit would apply to all emissions removed from the TT&C's center frequency by more than 150% of the TT&C's necessary emission bandwidth; (2) we would not require prior

coordination between adjacent operations, but 3.7 GHz Service licensees and TT&C earth station operators would be expected to cooperate in good faith and make reasonable efforts to anticipate and resolve technical problems that may inhibit effective and efficient use of the spectrum; and (3) TT&C operators would be expected to make available pertinent technical information about their systems upon request by the 3.7 GHz Service licensees, and licensees of stations suffering or causing harmful interference would be expected to cooperate and resolve the problem by mutually satisfactory arrangements.

E. Discussion of Significant Alternatives Considered That Minimize the Significant Economic Impact on Small Entities

164. The RFA directs agencies to provide a description of any significant alternatives to the proposed rules that would accomplish the stated objectives of applicable statutes, and minimize any significant economic impact on small entities. The discussion is required to include alternatives such as: ''(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.''

165. In formulating its request for comments, the Commission considered alternatives addressing the economic impact of its proposals on small entities, should they be adopted. In the *NPRM,* the Commission broadly proposes to reconfigure the Upper C-band for more intensive, next-generation wireless use by generally deploying the procedures used in—and the lessons learned from—the successful similar transition of the Lower C-band. Throughout that proceeding, the Commission contemplated how its adopted rules would uniquely affect small entities and calibrated its determinations accordingly. The approach taken towards considering the effect of our rules towards small entities in that proceeding largely informs our process in this one. For example, we consider the potential economic hardship or compliance burdens to small entities with respect to the information collection, such as whether they would require certain accommodations or additional time to comply. We seek comment from small entities as to whether these entities face any special or unique concerns regarding this issue. Similarly, in developing its proposals, the Commission considers the effect of modifications that could be made to our rules regarding administrative processes that would reduce the economic impacts of proposed rule changes on small entities. By seeking comment specifically targeting effects on small entities, the Commission will obtain the data required to consider the approach that will be most cost-effective and minimize the economic impact on small entities while also fulfilling the Commission's statutory mandate.

166. Specifically, the *NPRM* proposes to adopt 15-year license terms for new licenses in the Upper C-band. If adopted, small entities should once again benefit from the opportunity for long-term operational certainty and a longer period to develop innovative services. The *NPRM* also contemplates and seeks comment on potential issues that small entities might face in meeting the proposed performance requirements for new Upper C-band licensees. To that end, the *NPRM* inquires whether our proposed point-to-multipoint coverage and service benchmarks might necessitate that we grant small entities certain accommodations or additional time to comply. Similarly, the *NPRM* considers the impact of, and seeks comment on, whether small entities should be offered additional time to fulfill proposed compliance procedures. Finally, the proposed competitive bidding procedures would implement familiar designated entity preferences in an auction of Upper C-band licenses. The *NPRM* proposes to adopt bidding credits for small and very small businesses, and to adopt a rural service provider credit.

167. The Commission finds an overriding public interest in encouraging investment in wireless networks, facilitating access to scarce spectrum resources, and promoting the rapid development of mobile services to Americans. All licensees, including small entities, play a crucial role in achieving these goals. Therefore, the *NPRM* seeks comment on alternative obligations, timing for implementation, and other measures that could accommodate the needs and resources of small entities. The Commission will carefully consider the effects of its proposals on small entities before adopting final rules in this proceeding.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

168. None. This proposed rule is not duplicative, nor does it overlap or conflict, with any other federal rules.

V. Ordering Clauses

169. *It Is Ordered,* pursuant to Sections 1, 2, 4(i), 301, 302(a), 303, 304, 307, 309, 316, and 403 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i), 301, 302(a), 303, 304, 307, 309, 316 and 403, and by Section 40002 of the OBBB Act, that this Notice of Proposed Rulemaking *Is Hereby Adopted.*

170. *It Is Further Ordered* that, pursuant to applicable procedures set forth in §§ 1.415 and 1.419 of the Commission's Rules, 47 CFR 1.415, 1.419, interested parties may file comments on the Notice of Proposed Rulemaking on or before 30 days after publication in the **Federal Register**, and reply comments on or before 60 days after publication in the **Federal Register**.

171. *It Is Further Ordered* that the Commission's Office of the Secretary *Shall Send* a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for the Small Business Administration (SBA) Office of Advocacy.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2025–22020 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 64

[CG Docket Nos. 17–59, 02–278, 25–307; WC Docket No. 17–97; FCC 25–76; FR ID 319452]

Advanced Methods To Target and Eliminate Robocalls

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) proposes steps to improve the availability and accuracy of caller identification information transmitted to consumers to enable them to better understand who is calling and decide whether to answer calls. Specifically, the Commission proposes to enhance the effectiveness of STIR/SHAKEN by

requiring terminating providers to transmit verified caller name or other caller identity information for presentation on a consumer's handset whenever they transmit an indication that a call has received an A-level attestation. It also seeks comment on requiring providers to use Rich Call Data (RCD) to transmit verified caller name on IP networks, whether to permit or require use of other solutions, and an alternative option to require that providers implement RCD in their IP networks for all calls. The Commission further proposes to require voice service providers to implement measures to ensure that consumers know which calls originate from outside of the United States and to prohibit spoofing of United States telephone numbers for calls that originate from outside of the United States. Finally, the Commission seeks comment on whether some of its calling-related rules can be simplified, streamlined, or eliminated, perhaps because they are outdated or have not been enforced for a substantial amount of time.

DATES: Comments are due on or before January 5, 2026 and reply comments are due on or before February 3, 2026.

ADDRESSES: Pursuant to § 1.49 of the Commission's rules, 47 CFR 1.49, parties to this proceeding must file any documents in this proceeding using the Commission's Electronic Comment Filing System (ECFS): You may submit comments, identified by CG Docket No. 17–59, WC Docket No. 17–97, and CG Docket No. 02–278, by any of the following methods:

- *Electronic Filers:* Comments may be filed electronically using the internet by accessing the Electronic Comment Filing System (ECFS): *https://www.fcc.gov/ecfs. See Electronic Filing of Documents in Rulemaking Proceedings,* 63 FR 24121 (1998).
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing.
- Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. All filings must be addressed to the Secretary, Federal Communications Commission.
- Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.
- *People with Disabilities:* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530.

FOR FURTHER INFORMATION CONTACT: For further information about the Notice of Proposed Rulemaking (*NPRM*), contact John B. Adams of the Consumer and Governmental Affairs Bureau at (202) 418–2854 or *JohnB.Adams@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Ninth Further Notice of Proposed Rulemaking, Seventh Further Notice of Proposed Rulemaking Further Notice of Proposed Rulemaking and Public Notice (*NPRM*), in CG Docket No. 17–59; WC Docket No. 17–97; CG Docket Nos. 02–278 and 25–307; FCC 25–76, adopted on October 28, 2025 and released on October 29, 2025. The full text of this document is available online at *https://docs.fcc.gov/public/attachments/FCC-25-76A1.pdf.*

Paperwork Reduction Act Analysis: The *NPRM* may contain proposed new and revised information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements described in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104–13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107–198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

Providing Accountability Through Transparency Act: Consistent with the Providing Accountability Through Transparency Act, Public Law 118–9, a summary of this document will be available on *https://www.fcc.gov/proposed-rulemakings.*

Ex Parte Rules: The proceeding the *NPRM* initiates shall be treated as a ''permit-but-disclose'' proceeding in accordance with the Commission's *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with § 1.1206(b) of the Commission's rules. In proceedings governed by § 1.49(f) of the Commission's rules or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must, when feasible, be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.,* .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Synopsis

I. Discussion

1. We propose steps to improve the availability and accuracy of caller identification information transmitted to consumers to enable them to better understand who is calling and decide whether to answer calls. Specifically, we propose to enhance the effectiveness of STIR/SHAKEN by requiring terminating providers to transmit verified caller name or other caller identity information for presentation on a consumer's handset whenever they transmit an indication that a call has received an A-level attestation. We also seek comment on requiring providers to use RCD to transmit verified caller name on IP networks, and on whether to permit or require use of other solutions. Additionally, we seek comment on an alternative option to require that

providers implement RCD in their IP networks for all calls. Finally, we propose to require voice service providers to implement measures to ensure that consumers know which calls originate from outside of the United States and to prohibit spoofing of United States telephone numbers for calls that originate from outside of the United States.

A. Need for Improved Caller Identity Information

2. We believe that our proposals will empower consumers by giving them the information they need when deciding whether to answer a call. STIR/SHAKEN has served the Commission's goals of making spoofing more difficult, improving providers' call blocking and spam labeling decisions, and increasing the overall level of trust consumers have that a particular call originated from the telephone number being presented. However, consumers often cannot be sure who is calling unless a number is stored in their contact list or otherwise recognized. STIR/SHAKEN information does not provide consumers with robust information about who is calling, and an A-level attestation indicator alone does not give consumers enough information to decide whether a call is worth answering. In the absence of accurate caller name, and possibly other caller identity information, consumers might mistakenly believe that a checkmark or other indication that a call received an A-level attestation is an assurance that a call is not a scam or otherwise unlawful.

3. We believe that providing consumers with a verified caller name or other caller identity information would empower a more informed decision about whether to answer the call. We further believe that when a consumer's handset presents this additional information, it will reduce their confusion about the meaning of a green checkmark or other indicator that a call has received an A-level attestation, which will further increase trust and better enable consumers to avoid spoofed, scam, and other unlawful calls. Finally, we believe that transmitting verified caller identity information to the terminating provider will give providers additional information to use in their analytics, potentially making the analytics more accurate and thus addressing concerns about calls being labeled inaccurately.

4. Consumer surveys strongly support the goal of our proposals and suggest that legitimate callers, especially business callers, can benefit as well. One consumer survey indicated that 90% of consumers are uncomfortable answering unidentified calls and that 78% of consumers have missed an important call in the last month because they did not answer an unidentified call. Another survey revealed that 92% of consumers assume unidentified calls are fraudulent and that 56% of consumers sometimes risk answering an unidentified call because they fear it is a call they cannot afford to miss. It also asserted that employees who make calls on behalf of businesses believe that ensuring that consumers know who is calling is the most effective way to improve answer rates. As many as 88% of enterprise calls are not answered, which can reduce efficiency, increase costs of doing business, and reduce customer service. Notably, a different survey indicates that consumers are more likely to answer calls as more trusted caller identity information is presented to them. According to that survey, 73% will answer a call if the name of the caller is presented, 76% will answer if the caller's name and logo are presented, and 78% will answer if the reason for the call also is presented.

B. Defining Caller Identity Information

5. We propose to define ''caller identity information'' as having the same meaning given the term ''caller identification information'' in our rules, but excluding the originating telephone number or portion thereof and billing number information.

6. Terms like ''Caller ID'' and ''Caller ID with Name'' historically have been used to refer to functionalities that enabled a terminating provider to present to consumers, respectively, the originating telephone number or the originating telephone number and the associated caller name from a CNAM database. The Truth in Caller ID Act and our implementing rules define ''caller identification information'' to include both the originating telephone number and ''other information regarding the origination of the call,'' which our rules define to include certain enumerated items and ''[o]ther information regarding the source or apparent source of a telephone call'' and refer to any service or device used to provide caller identification information to a consumer as a ''caller identification service.''

7. In the context of the TRACED Act and the STIR/SHAKEN framework, however, ''caller ID authentication'' often is used to refer more narrowly to the originating telephone number alone. To be clear and to avoid duplication of rules that already require authentication of originating phone numbers using the STIR/SHAKEN framework, we use the term ''caller identity information'' throughout this document to refer to the caller's name, location, and ''other information regarding the source or apparent source of a telephone call,'' which generally means information other than the originating telephone number and billing information, and have proposed to define that term similarly in our rules. We seek comment on this analysis.

C. Transmitting Caller Identity Information to Consumers

1. Requiring Transmission of Caller Identity Information to Consumers When A-Level Attestations Are Indicated

8. We propose to require terminating providers to transmit to consumer handsets verified caller identity information whenever they transmit to the handset an indication that a call received an A-level attestation. To be clear, we do not propose to require terminating providers to transmit to consumer's handsets whether a call has received an A-level attestation or to transmit any new caller identification information. Instead, we propose a requirement that would apply only when a terminating provider chooses to transmit to the handset an indication that a call received an A-level attestation and seek comment on this proposal.

9. We believe that presenting an A-level attestation indicator on a handset with only the originating number provides little benefit to consumers because they might not understand the meaning of the indicator, mistakenly taking it to indicate that the call is not a scam or otherwise is lawful. Are marketplace solutions, on their own, sufficient to drive widespread presentation of verified caller identification information?

10. We believe that verified caller identity information helps legitimate callers, especially business callers, as well as consumers. If consumers have trustworthy caller identity information, they can make better informed decisions about whether to answer a call, which is likely to lead to higher answer rates and engagement. Information from the industry appears to support this belief. TransUnion states that customers are up to 105% more likely to answer a branded call. Similarly, a TNS survey found that 76% of Americans would prefer to engage with businesses that use branded calling and that 81% of consumers would answer a branded call if they recently had engaged with that brand. Is our belief correct?

11. While we believe that an indication that a call received an A-level attestation provides little benefit to

consumers taken alone, we also believe that combining it with verified caller identity information would benefit consumers significantly. We seek comment on this belief. Does verified caller identity information, such as caller name or logos, provide significant benefit to consumers? Does providing an indication that a call received an A-level attestation at the same time increase this benefit?

12. Does indicating that a call received an A-level attestation without additional caller identity information create opportunities for fraud? Are there situations where it would significantly benefit consumers to receive an A-level attestation indicator without any other verified caller identity information? Would adopting our proposal cause providers to stop transmitting A-level attestation indicators to consumer handsets? If so, would that enhance or undermine the goals of STIR/SHAKEN? What actions, if any, should we take to address any such outcomes?

13. *Minimum Caller Identity Information.* Current call branding solutions generally include caller name and the option for branding, such as logos. We propose to adopt a minimum requirement for what caller identity information must be provided; specifically, a verified name, whether personal or business. We believe that this is the most reasonable minimum requirement because some callers, such as individual callers, will not have a brand logo or other information to provide for a call. We seek comment on this proposal. Is there other information that would be appropriate to require? If we do not set a minimum requirement, is there information that we should specify does not meet the required standard?

14. Are there situations in which we should not require terminating voice service providers to transmit caller name or other caller identity information to consumer handsets? For example, what requirements should apply to callers who have a legitimate need for privacy, such as domestic violence shelters? What about callers who simply wish to maintain privacy? For example, what about callers who place calls using *67 or a handset that has a privacy setting to hide caller identify information? Does the Truth in Caller ID Act or any other provision of law require us to ensure that callers may prevent transmission of identifying information to the called party? We also seek comment on existing industry practices regarding privacy. For example, the ATIS RCD standard states that the terminating voice service provider is not to transmit RCD to the called party's handset if the caller requested privacy.

15. *Handset Capabilities.* Consumers can use a variety of handsets to receive calls, including traditional wireline phones, wireline phones for IP networks, and mobile phones. Consumers also might use assistive devices, services, mobile applications, or technologies when receiving calls. We seek comment on the capabilities of the various types of handsets to present caller identity information to consumers.

16. Modern mobile phones can present images, such as logos, as well as text on the screen. In addition, we believe that most modern mobile phone operating systems currently support the presentation of verified caller identity information, including verified logos, on their screens. We seek comment on this belief. Does the ability to present verified caller identity information on the screen vary depending upon the manufacturer of the mobile phone or the operating system? If so, how can we address this issue and ensure that consumers receive this valuable information? Are there steps we can take to ensure consumers consistently understand the information presented regardless of the device and/or operating system they are using? Are there similar options for IP or traditional wireline service that would allow the full range of verified caller identity information to be presented? If not, are most IP or traditional wireline phones capable of, at a minimum, presenting verified caller name? Would the transition of traditional wireline service to IP-based networks enhance consumer access to verified caller identity information?

17. We seek comment on the impact of our proposal on people with disabilities who use assistive devices and technologies, such as braille readers, TTYs, and assistive technologies integrated into handsets. For example, do mobile phones vary depending upon the manufacturer or operating system in how they present caller identification information when the consumer uses assistive technologies built into the phone? How would our proposal affect users of third-party assistive devices, generally? When text or other graphic communication is transmitted via assistive devices (*e.g.,* TTY text-based communications) and is converted into digital audio packets for transmission over IP networks, will that affect the transmission of caller identification information associated with the call? If so, how and what steps should we take to mitigate any loss of caller information?

18. *Telecommunications Relay Services (TRS).* We seek comment on how our proposals affect the use of TRS. When a provider of TRS (of any type) connects a call from a TRS user to the called party, is the caller identification information, including the level of attestation, for the caller transmitted to the called party or is caller identification information, including the level of attestation, for the TRS center transmitted to the called party? Why? Does the result depend upon the capabilities of the TRS provider, the voice service providers in the call path, or something else? In the context of caller identification information and caller ID authentication, is connecting to the TRS provider treated as part of initiating the call or as a separate segment of the call path following call initiation? Do voice service providers who perform attestation assign different attestation levels depending upon whether the originating number or other caller identification information is for the caller or for the TRS center? If so, why? How does the likelihood that a called party will answer a call differ when the caller identification information, including the level of attestation, is for the TRS center versus for the caller? If caller identification information for the TRS center, rather than for the caller, is transmitted to the called party, what steps should we take to ensure that caller identification information for the caller is transmitted to the called party? Does connecting to a TRS center affect the terminating provider's ability to perform authentication functions? If so, how?

19. We also seek comment on the implications of these proposals for different types of relay services. For example, when a user of TTY-based TRS or Speech-to-Speech Relay Service (STS) calls 711 to connect to the relay service, is the caller identification information, including attestation level, for the relay center or for the caller? Why? Does the result depend on the capabilities of the relay center, the voice service providers in the call path, or something else? Does the attestation level assigned by a voice service provider differ depending on whether the caller identification information is for the relay center or for the caller? Why and how? Providers of Video Relay Service (VRS) and IP Relay assign their users telephone numbers. Before connecting a call placed by a VRS or IP Relay user, the TRS provider must first query the TRS Numbering database to determine whether the call is point-to-point or requires a communications assistant. Calls requiring a

communications assistant are first routed to the TRS center and then to the terminating provider, perhaps via intermediate providers. How does the involvement of the TRS center affect transmission of caller identification information, including attestation level, over the entire call path? For these different types of relay services, how does the likelihood that a called party will answer a call differ when the caller identification information, including level of attestation, is for the TRS center versus for the caller? Do the differences between caller identify information and attestation level, if any, when the caller identification information is for the caller or for the TRS center affect the likelihood that a called party will answer? How and how much? Some providers of IP Captioned Telephone Services (IP CTS) utilize call forwarding capabilities to provide captions and allow IP CTS users to share their mobile phone number, rather than the telephone number assigned for purposes of connecting to IP CTS. How do the characteristics and transmission paths of these calls affect the end-to-end transmission of caller identification information, including assignment and transmission of an attestation level? What steps should we take to ensure the end-to-end transmission of caller identity information for calls that involve these types of relay services?

20. Are there changes or refinements we should make to our proposals to ensure that users of assistive devices, services, and technologies, including TRS, receive all of the benefits associated with being better able to identify callers? If so, are those changes or refinements different depending on whether the user of assistive devices, services, or technologies is making or receiving a call?

2. Requiring Originating Providers To Verify That Transmitted Caller Identity Information Is Accurate

21. We propose to require originating providers that transmit caller identity information to employ reasonable measures to verify the accuracy of the information transmitted. We believe that caller identity information is valuable to consumers only if it is accurate. Inaccurate information has the potential to cause significant harm if it leads a consumer to trust a caller making unlawful calls, and can further erode trust in the telephone network. We seek comment on this proposal.

22. What measures should be viewed as ''reasonable''? Should our codified rules prescribe specific measures or specific standards or criteria for assessing reasonableness? As part of a verification requirement, should we mandate collection and verification of specific information? If so, what specific information should be collected, and how should it be verified? Should we allow providers flexibility in how they verify caller identity information or in what information must be verified? If so, are there minimum standards or guidelines we should adopt? How can we ensure that all providers are taking necessary steps to ensure the accuracy of caller identity information? Do we need to adopt specific requirements when the originating provider is a reseller or when the caller utilizes a branded calling solution provided by a third-party vendor? Are there other requirements we could adopt that do not involve the collection and verification of specific information but still would ensure that caller identity information is accurate? For example, should we permit voice service providers contractually to require customers to provide only accurate information and names, logos, etc. that they legally are entitled to use? Are there practical, operational, or business considerations that limit the ability of an originating provider to verify the accuracy of caller identity information? Should we define what constitutes ''accurate'' information? If so, how should we define it?

23. If we adopt particular requirements, should we address differences among types or classes of callers, such as government, non-profit, business, and individual callers, or differentiate among callers based on call volume? Would originating providers be able to accurately determine the type or class of caller in all instances? For business callers, what steps should an originating provider take to ensure that business name, company logo, or other information is accurate? What steps should we take to ensure business callers are authorized to use a business name, brand name, or logo? Is it necessary to take different approaches depending on the type or size of the business? What about franchisees or individual business locations of a large, perhaps regional or national, business? For individual callers, should we require verification of the caller name against government issued identification prior to transmission of the name for this purpose? Are there alternative approaches to verifying the caller name for individual callers? If we were to differentiate among callers based on call volume, what threshold should be used to differentiate, for example, between high-volume and low-volume callers?

24. Are there situations in which an individual caller might have a valid reason to transmit something other than a legal name, such as a nickname? How can we address these situations? How should we handle multi-line accounts, including family plans, where the caller name for each individual line might be different from the subscriber's name and where verification of each name might be more difficult? If names of individuals on a family plan can be presented on called parties handsets, should we establish safeguards regarding the transmission and presentation of the names of minors? For example, should there be a broad exception for all consumers under the age of 18? Would a generic label be more appropriate for non-business calls placed by an individual caller? If so, how would a caller select this option for their personal calls? How would our proposal affect a person calling a crisis hotline, such as 988 for suicide prevention or the National Domestic Violence Hotline?

25. Should other entities share responsibility for ensuring caller identity information is accurate? For example, if a terminating provider becomes aware that an originating provider is transmitting inaccurate information, should it cease delivery of the originating provider's traffic or take other steps? Are there other enforcement requirements we should consider to similarly ensure accurate caller identity information?

26. There appear to be some industry standards and best practices that could inform our deliberations. For example, the ATIS RCD standard contains provisions related to the vetting of RCD information, and CTIA has created best practices for its branded calling solution. We seek comment on these documents and any other related industry practices, including their sufficiency, propriety, and enforceability, and on whether they mitigate the need for us to adopt requirements.

27. Should we consider measures beyond requiring that originating providers take reasonable steps to ensure caller identity information is accurate? Citing other sources, Numeracle states that ''93.4% of robocall traffic from the most prolific robocall signers now carry A-level attestations'' and ''48 percent of illegal calls are A-attested.'' Are these numbers accurate and, if so, do they buttress the view that A-level attestations mislead consumers and that we should adopt more stringent requirements for verifying caller identity information? For example, should we consider establishing a ''trusted framework'' whereby the Commission or another

entity defines who can assert caller identity is verified and when? If we were to adopt such an approach, how can we ensure that any such entity and process are competitively neutral? We believe that revisiting our know-your-customer requirements will be an important part of this effort, and we plan to do so in a separate proceeding.

3. Securely Transmitting Caller Identity Information

28. We seek comment on any requirements we should adopt to ensure that caller identity information is securely transmitted from the originating provider to the terminating provider, including whether to require the use of RCD to do so. We believe that if caller identity information is changed or tampered with in transit, then the verification efforts of the originating provider will not ultimately benefit consumers or callers. We seek comment on this belief. Is secure transmission necessary to ensure that caller identity information is not altered by bad actors and can be trusted by consumers? Are there other ways to ensure that the data transmitted is not modified or tampered with? Are there other legal requirements or benefits to ensuring the caller identity information is securely transmitted throughout the entire call path?

29. *Rich Call Data.* We seek comment on whether to require providers to use RCD whenever they transmit caller identity information. With RCD, caller identity information is placed into a PASSporT Identity token with a digital signature, just as with the originating number under STIR/SHAKEN. When the provider digitally signs the encrypted PASSporT(s) carrying both SHAKEN and RCD information, it is asserting to the truth of the information carried in the PASSport(s), including the call attestation level, calling number, and any caller identity information. The terminating provider then decrypts and verifies the digital signature and electronically validates the information. RCD thus takes advantage of the end-to-end trust provided under the STIR/SHAKEN framework. RCD requires the inclusion of a caller name, but allows for additional information, such as a link to a logo and/or a website with information about the caller, and a form of virtual business card referred to as a ''jCard.''

30. We believe that RCD provides a means to securely transmit caller identity information. Is our belief correct? Are there features of caller identity information transmission that suggest we should depart from the RCD standards? If so, how might we address them? Are there any steps we can take to make the RCD standards more secure? Alternatively, is the security of RCD generally unnecessary in this context? If so, why, and how much security is actually necessary?

31. If we were to require use of RCD, should we require the use of only one or up to all three RCD standards? Why or why not? Should we require that providers implement the ATIS standard to ensure that providers comply with vetting requirements? Are there other aspects unique to the ATIS standard that would justify its adoption? Are there omissions that would counsel against its adoption or do those omissions give providers helpful implementation flexibility? We seek comment with respect to any unique features and additional omissions in the IETF standards as well and their relevance to whether we should mandate their adoption. We also seek comment on whether we should specify that the current version of any RCD standard we require must be used. If we do specify a standard, how should we balance the evolution of standards and provide implementation timelines for updated standards looking forward?

32. We also seek comment on whether the standards are sufficiently developed and available to require their implementation. We note that the two recently published IETF standards have been in draft form for several years, and the first version of the ATIS RCD standard was adopted in 2021. To what extent have providers and vendors implemented the earlier versions of these standards, and do the recently-finalized standards require additional time to implement based on any incremental changes? Since our understanding is that some providers already use RCD as part of their branded calling solutions, we believe that the RCD standards, including the revised standards, can be implemented in a reasonable amount of time. We seek comment on this belief. We also seek comment on whether any additional features or functions of the standards need to be developed to ensure that they achieve their purpose. If not, what work must be completed prior to implementation? How can we ensure that this work is completed in a timely manner?

33. We also seek comment on the benefits and drawbacks of RCD generally. Does RCD provide particular benefits that make it superior to other caller identity information solutions? Are there any particular weaknesses we should be aware of? For example, does it present particular challenges for some providers, such as smaller providers? If we do not require use of the RCD standards, should we adopt rules that set minimum requirements based on the RCD standards? If so, what minimum requirements should we set? Should any minimum requirements vary by provider type? How would the costs associated with this option impact its implementation?

34. *Alternative Caller Identity Solutions.* We seek comment on options other than RCD for transmitting caller identity information or basing our minimum requirements on the current versions of the RCD standards. Our understanding is that there are caller identity solutions currently in the market, usually referred to as call branding or branded calling, that allow for transmission of caller identity information but that do not use the RCD standards or only use them partially along with other standards or proprietary elements. We seek comment on these solutions. Do they ensure that caller identity information is secure and cannot be modified? If so, how? Would that remain true for alternatives if implemented at a larger scale? Do they have any particular strengths or weaknesses as compared to RCD? Would allowing providers to use other solutions enable more providers to transmit caller identity information to consumers and therefore benefit more consumers or provide inconsistent service?

35. If we allow providers to use solutions other than RCD or that do not rely on the RCD standards, how can we ensure that caller identity information is securely transmitted so that consumers can rely upon it? Are there specific existing alternative solutions that offer secure transmission that we should authorize or require providers to use? If so, which solutions offer appropriate security?

36. If we allow providers to use more than one solution to fulfill their obligations, we believe that they should be interoperable so that caller identity information is not lost. How can we ensure that approved solutions are interoperable? To what extent are current alternatives interoperable? Are there requirements we could adopt to ensure that caller identity information is always passed on to the point of termination regardless of which solution a provider uses? Should we require intermediate providers to transmit caller identity information for calls that transit their networks for any IP-based caller identity solutions providers may use? What should we do if an intermediate provider is not able to comply with such

a requirement because of technical limitations?

37. *Alternative Options.* We seek comment on other approaches we could take to enable consumers to make more informed choices when their phones ring. First, we explore the option of requiring providers to implement RCD in their IP networks for all calls. Second, we seek comment on requiring caller identity verification as a condition of an originating provider giving an A-level attestation. Finally, we seek comment on any other steps we could take to improve the availability and validity of caller identity information for consumers and restore trust in the network.

38. *Requiring Implementation of RCD.* Should we require all voice service providers to implement RCD in their IP networks for all calls? What benefits or harms would consumers and providers experience? How can the Commission balance them? Currently, Commission rules require voice service providers to implement STIR/SHAKEN in their IP networks, but there is no corresponding requirement to implement RCD. Would a requirement for all providers to implement RCD in their IP networks be appropriate at this time, and if not, when would such a requirement be appropriate?

39. Should we require providers to implement the existing RCD standards? Since there are three RCD standards, should we require implementation of just one, all three, or some combination of two of the standards? Why? How would requiring implementation of one or two of the RCD standards affect providers that choose also to implement the third? If we were to adopt requirements that differ from those contained in the RCD standards, such as for verification of caller identity information or regarding the ability of callers to maintain their privacy by preventing caller identity information from being transmitted with their calls, how would that affect the choice of which RCD standard or standards to require? Would our choice of any particular standard or standards create a significant or different burden on smaller providers?

40. What measure or measures should we adopt to determine whether a provider has implemented RCD? Would any potential measure be different for resellers, originating facilities-based providers, intermediate providers, or terminating providers? If so, why? For example, would an intermediate provider properly be considered to have implemented RCD if it transmits to subsequent providers in the call path the RCD information it receives from the provider immediately before it in the call path?

41. If we do adopt an implementation mandate, how quickly can providers implement RCD throughout their IP networks? Does this answer depend upon which RCD standard or standards we require providers to implement? Are there any types of providers, such as smaller or rural providers, for which RCD implementation would be especially burdensome? If so, should we adopt a mandate that is more limited in scope with the intention of expanding it to all providers in the future? Alternatively, should we adopt an exemption for certain categories of providers or establish a longer implementation timeframe for those providers? Is there any standards work left to be done to ensure that RCD is implementable across all IP networks? Does interoperability testing need to be completed? If so, how can we ensure that this work is completed as quickly and efficiently as possible while ensuring that key steps are not skipped? If standards work or testing still is needed, are there rules short of a mandate that we could adopt to expedite this work?

42 Considering that STIR/SHAKEN and RCD work only on IP networks, we seek comment on any steps we should take, consistent with requiring RCD, to address the non-IP gap as the Commission continues to drive towards an all-IP environment. Are there requirements we could adopt that would address the fact that RCD does not work on non-IP networks? For example, are there other existing solutions that work on non-IP networks that we could require? Are these solutions interoperable with RCD or can they be made interoperable? We previously proposed to require the implementation of non-IP caller ID authentication solutions. We received limited comment on the use of RCD and alternatives on non-IP networks and now seek additional, focused comment. If we do require any or all of these solutions, are there rules we could adopt consistent with requiring RCD that would build on those solutions for caller identity information beyond the originating number? Are there methods by which RCD could work with non-IP authentication frameworks, either as currently envisioned or with minor adjustments? If not, are there equivalent options that would work with non-IP authentication frameworks? If there are equivalent options, how can we ensure that they can be used where appropriate? Would allowing providers the flexibility to use options other than RCD enable or encourage more providers to transmit verified caller identity information? Do any non-RCD solutions prevent caller identity information from reaching the terminating provider when a call transits from IP to non-IP networks? If so, are there ways we could address that problem? What is the cost to implement non-RCD solutions on non-IP networks?

43. *Requiring Caller Identity Information Verification as a Condition of A-Level Attestation.* Because we propose in this document to require originating providers to employ reasonable measures to verify the accuracy of caller identity information before transmitting it, we also take the opportunity to ask whether, alternatively, the Commission should explore making this verification requirement a condition of A-level attestation. Under current STIR/SHAKEN standards, an authenticating provider may give an A-level attestation when it has a direct authenticated relationship with the customer and can identify the customer, and when it has established that its customer has a verified association with the telephone number used for the call. The authenticating provider's customer may be a caller or another provider. The STIR/SHAKEN standards do not require the provider to verify any caller identity information the caller provides.

44. We seek comment on whether requiring caller identity verification as a condition of A-level attestation could yield greater benefits than our proposal to require originating providers to simply verify the accuracy of caller identity information. If so, how? Would such an approach effectively deter A-level attestations for calls that are spoofed? Should we consider such a requirement in conjunction with requiring the transmission of verified caller identity information as we propose above? If so, are there any changes we should make to that proposal? Could such an approach create greater or different burdens for originating providers compared to our proposal to require originating providers to verify the accuracy of caller identity information prior to transmission? What modifications could help reduce these burdens and this possibility? Is such an approach aligned with the overall goal of STIR/SHAKEN, or are there reasons to separate the caller's identity from an indicator that the number is less likely to be spoofed? If the latter, what steps could we take to ensure consistency with the goals of STIR/SHAKEN? Are there other issues we should consider?

45. We also seek comment on how providers can verify caller identity information in scenarios where the

authenticating provider does not have a direct relationship with the end-user caller. For example, how should the Commission address the ''knowledge gap'' that arises when an authenticating provider's customer is a reseller rather than the calling party? Would requiring providers to delegate certificates enable providers who have the relationship with callers to send verified caller identity information to authenticating providers. Instead of or in addition to doing so, should we remove the exemption for providers who lack control of the network infrastructure necessary to implement STIR/SHAKEN so that the reseller that has the relationship with the caller has an obligation to authenticate calls using STIR/SHAKEN? How would eliminating this exemption work in practice, and would it provide a practical means for all providers to include verified caller identity information with their attestations? Are there other ways to allow providers to assign A-level attestations and include verified caller identity information in indirect customer scenarios while maintaining the integrity of the STIR/SHAKEN framework? Are the answers to these questions different in other scenarios where the authenticating provider does not have a direct relationship with the end-user caller, such as when a user obtains a toll-free number from a Responsible Organization or obtains voice service from a voice service provider that obtains numbering resources from another voice service provider rather than from the Numbering Administrator?

46. Additionally, we seek comment on the potential short- and long- term impacts of conditioning A-level attestations on verification of end-user caller identity. In the short term, could this effectively eliminate A-level attestations in many scenarios, thereby reducing the usefulness of STIR/SHAKEN for analytics and consumer trust? Over the longer term, what processes, standards, or technical solutions would be necessary for providers to develop reliable caller identity verification practices? Should we require their adoption, and what timelines would be reasonable for development and implementation? To date, we have not raised the possibility of deviating from the standards' requirements for providers to sign a call with an A-level attestation. We seek comment on whether imposing requirements that go beyond current STIR/SHAKEN standards would conflict with the standards or pose other challenges. As the Commission continues to evaluate the effectiveness of the technologies used for call authentication frameworks, how should we balance the goals of improving caller identity assurance with the existing functionality of the STIR/SHAKEN framework?

47. *Other Options.* Are there other approaches we could take to ensure that consumers receive accurate and actionable information when calls are delivered? If so, what might these approaches be? Are any providers already taking these steps? Should we adopt any of these proposals in conjunction with one of the options discussed previously, or do they supplant our other options? How difficult would adopting these other options be for callers and providers? What benefits would they provide? Would the approach be implementable across the network or would some providers be technically unable to do so?

D. Calls Originating From Outside of the United States

48. *Identifying Foreign-Originated Calls.* We propose to require providers to identify calls that originate from outside of the United States to transmit that information over the entire call path, and to transmit to consumer handsets an indicator that the call originated from outside of the United States whenever they know or have a reasonable basis to know that a call originated from outside of the United States. Specifically, we propose to require gateway providers to mark calls that originate from outside of the United States, intermediate providers to transmit that information to downstream providers, and the terminating voice service provider to transmit to consumers' handsets an indicator that a call originated outside of the United States when they know or have reason to know that a call originated from outside of the United States, such as when a call has been marked as having originated outside of the United States by an gateway provider. We seek comment on this proposal. We also seek comment on what steps gateway providers, non-gateway intermediate providers, and terminating voice service providers would need to take to implement this proposal, if adopted. Should we establish a definition of ''foreign-originated'' for these purposes and, if so, what should be that definition?

49. We believe that transmitting such information through the entire call path and the presentation of an associated indication on the called party's handset would give both providers and consumers information to protect against scam robocalls originating outside of the United States. We seek comment on that belief.

50. We seek comment on the ability of gateway providers to determine the country of origin for a call and for providers across the call path to include the country of origin in caller identity information when transmitting a call. For example, are gateway providers able to identify a call's country of origin? Why or why not? Can gateway providers include the country of origin when transmitting a call? How can we ensure the country of origin information is transmitted securely across the entire call path? For instance, should we require a gateway provider authenticating foreign originated calls using STIR/SHAKEN to encrypt information that a call originated overseas in the PASSporT? Should we require a specific means for achieving this? Is it possible for providers to insert this information in the OrigID, and, if so, should we require that providers use a specific OrigID to indicate a call is foreign originated? Can providers user a unique OrigID for each country? Would this use of an OrigID conflict with the STIR/SHAKEN standards or impose any implementation obstacles?

51. Would we also need to require intermediate providers to pass the OrigID intact downstream and for the terminating provider to accept it before transmitting an indication that the call was foreign originated to the called party? Should we require use of non-IP solutions to ensure transmission over non-IP networks? Do terminating providers have a means of transmitting the OrigID or another indicator that the call originated outside the United States for presentation on handsets? Does the ability of terminating voice service providers to transmit to consumer handsets an indicator that a call received an A-level attestation demonstrate that they could readily transmit an indicator that a call originated from outside of the United States? Do handsets typically have a means of presenting an indication that a call was foreign originated based on any such indicator? What difference would the handset's manufacturer or operating system make in being able to present the country of origin when the phone rings compared to being able to present an indicator that the call originated from outside of the United States? Should we, and is it technically feasible to, require gateway providers to label or modify the number sent for presentation on the called party's handset for foreign-originated domestic

calls carrying U.S. NANP numbers as some countries already do?

52. We seek comment on the impact, if any, on the ability of voice service providers to implement our proposals for calls that originate from outside of the United States but that legitimately spoof a North American Numbering Plan (NANP) number, such as when a domestic business has offshored call center operations and chooses to present a domestic NANP number as the originating number or for consumers to call back. Are there any different or unique factors we should consider for calls that originate outside of the United States but legitimately spoof a NANP number, especially a domestic NANP number?

53. Similarly, we seek comment on whether we should exempt from our proposals calls that originate on devices subscribed to United States mobile and/or VoIP service and that are roaming outside the United States. For example, United States VoIP consumers may seek to use nomadic capabilities of their service to place calls using their United States telephone number while traveling abroad. Do service providers have the means to distinguish United States mobile and/or VoIP service roaming calls from other calls that originate outside the United States?

54. We further propose to require voice service providers that use reasonable analytics to block calls to include whether a call originated from outside of the United States as a factor in their analytics. We seek comment on this proposal. We seek comment on what steps providers would need to take to include this information in their analytics and whether this requirement would further protect consumers against scam robocalls originating outside of the United States. Do those steps differ depending upon whether providers who use analytics know only that the call originated from outside of the United States versus the specific country from which a call originated? Can current or potential Artificial Intelligence capabilities play a role in these analytics or in verifying caller identity information?

55. Are there countries from which a greater volume of scam or otherwise potentially unlawful calls originate or countries that otherwise pose a greater risk to consumers? If so, which countries and why? What volume of scam or otherwise potentially unlawful calls originates from each country? How does that compare to the total volume of calls that originate from each country? Based on annual data, what is the total number of calls that originate from outside of the United States? Of those calls, what percentage are scam calls, spam calls, use an autodialer, and/or use an artificial or prerecorded voice? For each of these types or categories of calls, what methodology was used to identify and categorize the calls?

56. How should foreign-origin indicators appear on consumer devices without confusing consumers? What, if anything, are providers already doing to protect consumers from scams or otherwise potentially unlawful calls that originate from outside of the United States or from specific countries? What challenges do providers face when dealing with detecting, blocking, or labeling such calls? Are there other actions that the Commission could take to address these calls?

57. *Using Phone Number Requirements to Identify Foreign-Originated Calls.* We seek comment on whether we should establish numbering requirements that would help enable consumers to identify foreign-originated calls. For instance, should we designate a specific area code for foreign-originated calls? What challenges would arise from moving existing foreign users of United States NANP numbers to a newly-designated area code? Would designating an area code for foreign-originated calls provide a clear and useful signal to terminating end-users that the call originated from outside of the United States and not from the domestic marketplace? How should numbering resources in such area codes be assigned? Are any special considerations necessary for routing calls to and from such numbers? How should calls among such numbers and other United States NANP numbers be categorized for intercarrier compensation purposes (*e.g.,* should all such calls be treated as interstate interexchange calls)? Are there any technical or administrative barriers to doing so?

58. If we establish a designated area code for foreign-originated calls, we seek comment on whether we should require that gateway providers block any foreign-originated calls carrying United States NANP numbers for presentation on the called party's handset that are not from that area code. We believe that marketplace developments and the continued evolution of similar rules in other countries may provide real-world evidence of the effectiveness and administrability of such a requirement in the United States. For example, in 2024, the UK's Ofcom released revised guidance stating that calls from outside of the UK carrying a UK ''presentation'' number (*i.e.,* the number to be presented to the called party) will be blocked except where the call is made by a UK customer who has the right to use the number. Under OfCom's guidance, the gateway provider is responsible for compliance with the guidance. OfCom also notes that one way foreign-originating providers can demonstrate to UK gateway providers that a call is being made by a UK customer is by providing the gateway provider with evidence of direct or indirect number assignment. We seek comment on OfCom's approach and any similar approaches adopted in other countries to block foreign-originated calls that terminate within the domestic marketplace. Should exceptions to blocking be made for certain traffic, such as mobile roaming traffic, that carries different presentation numbers? Should we instead require gateway providers to use heightened due diligence or mitigation techniques on calls from area codes other than the one designated for foreign-originated calls?

59. *Identifying the Source of Unlawful Foreign-Originated Calls.* We seek comment on how to better identify the source of unlawful calls that originate from outside of the United States. In this context, the source of an unlawful call includes the country from which the call originated, the originating voice service provider, and the maker of the call.

60. To what extent can providers, including United States gateway providers and foreign intermediate providers, identify the originating caller or provider of a foreign-originated call? Does existing routing technology, which is often designed to reduce costs and avoid congestion, prevent providers from identifying the source of a call? Could traceback efforts be streamlined if calls originating from outside of the United States involved fewer voice service providers in the call path before the call reaches the United States? How can the number of voice service providers in the call path outside of the United States be reduced? What factors contribute to how many voice service providers are in the call path outside of the United States? What can we do to mitigate or eliminate those factors? Are there international agreements or memoranda of understanding that might provide mechanisms for reducing the number of voice service providers in the call path before a call reaches the United States or that we should otherwise be mindful of as we consider our proposals?

61. What other tools could we use to help identify the sources of foreign-originated calls? For instance, could we implement a chain of agreements requirement whereby gateway providers

accept traffic only from foreign providers that agree to cooperate with traceback requests and that, in turn, only accept calls from providers that agree to the same conditions? How many providers upstream of the gateway provider could such a requirement effectively reach? Similarly, how can we promote implementation of STIR/SHAKEN or other interoperable call authentication solutions in other countries and to achieve cross-border authentication? Could we require gateway providers to accept only calls with United States NANP number that have been authenticated? Would this enable United States providers to identify the source of calls? We also seek comment on potential collaboration with foreign governments to identify the sources of calls or more broadly mitigate unlawful foreign-originated calls.

62. Do the answers to the questions posed above differ depending on whether the goal is to identify the country of origin, the originating voice service provider, or the maker of the call? If so, how? How can the process of identifying the source of a call that originates from outside of the United States be automated or made a part of transmitting a call? Is there a way or a basis to treat calls differently depending on whether the origin of the call is known or on the specific origin of the call? For example, should a factor in call analytics be that a call originated from a country, voice service provider, or maker known to be a source of unlawful calls or should calls be blocked from entering the United States if the origin of the call is not known?

63. *Spoofing of United States Numbers for Foreign-Originated Calls.* We seek comment on whether we should continue to permit callers to spoof NANP United States telephone numbers for calls that originate from outside of the United States for calls that are made by or made on behalf of a person, usually a business, that is authorized to use the spoofed number. Callers sometimes spoof the originating number for a call for legitimate reasons. For example, a business might have its main contact number or a toll-free number sent for presentation on call recipients' handsets. Or a doctor placing a call to a patient from a personal phone might prefer to have the patient's handset present the number of the medical office. As long as the caller spoofs a number that it is authorized to use, this type of spoofing is permitted.

64. Should we prohibit spoofing of United States telephone numbers on calls that originate from outside of the United States? Does the practice mislead consumers about a call's origin? Does it make consumers more susceptible to unlawful calls involving spoofing, such as by increasing their trust in calls that originate from outside of the United States? How many calls that originate from outside of the United States spoof a United States telephone number? Of those, how many are unlawfully spoofed? Do calls that originate from outside of the United States and spoof a United States number carry a greater risk of being unlawful, such as being a scam, than calls that originate from within the United States and spoof a United States number? What is the magnitude of that risk?

65. Are there other factors that we should consider? If we were to prohibit spoofing of United States numbers for calls that originate from outside of the United States, what, if any, changes would be required to existing technical standards, such as STIR/SHAKEN or RCD? How would such a prohibition impact businesses that have offshored certain operations, including call centers? Would this prohibition encourage businesses to invest in the United States or return jobs to the United States? What effect, if any, would this prohibition have on calls that originate from other countries that are part of the NANP? And if we adopt our proposal to require voice service providers to transmit to handsets an indicator that a call originated from outside of the United States, would that indicator be sufficient to alert the called party when the call appears to originate from a United States number?

66. Should spoofing or other use of NANP United States numbers for calls originating from outside of the United States be addressed in memoranda of understanding or other collaborative efforts among the United States and other countries? If so, what should the content of such memoranda be? Should calls be treated differently depending on whether the country of origin has entered into a memorandum of understanding or other agreement with the United States? If so, how?

E. Legal Authority

67. We seek comment on our authority to adopt these proposals and on our authority regarding other actions on which we seek comment above, including under the Truth in Caller ID Act, the TRACED Act, and section 251(e) of the Communications Act. We also seek comment on any other bases of authority for our proposals and other actions on which we seek comment.

68. The Truth in Caller ID Act defines caller identification information as including both the originating telephone number and ''other information regarding the origination of the call.'' It also prohibits any person from ''caus[ing] any caller identification service to knowingly transmit misleading or inaccurate caller identification information with the intent to defraud, cause harm, or wrongfully obtain anything of value'' and directs the Commission to prescribe implementing regulations. We believe that requiring originating providers to verify caller identity information—a subset of caller identification information—will reduce opportunities for bad actors to manipulate caller identification information. We seek comment on this reasoning and on whether our proposed rules and other actions on which we seek comment are consistent with the Truth in Caller ID Act. If our proposals or other actions do not align with the Truth in Caller ID Act's scienter and intent elements, are there ways our proposals and other actions can be structured to come into alignment?

69. We believe that the TRACED Act provides additional authority for our proposals and other actions on which we seek comment. In it, Congress directed the Commission to require implementation of the STIR/SHAKEN framework in IP networks and granted us the authority to ''revise or replace'' call authentication frameworks after assessing the efficacy of such frameworks following notice and an opportunity to comment. Although the TRACED Act requires us to conduct formal triennial assessments and submit a report to Congress, we believe the statute provides authority to conduct ongoing assessments and take responsive action in the interim, so long as we provide notice and opportunity to comment. We can use comments in this proceeding as part of a future assessment to evaluate STIR/SHAKEN's effectiveness and need for revision. The TRACED Act also grants us authority over non-IP networks, including to require robocall mitigation programs. We also believe that we have authority under the TRACED Act to promulgate rules governing when providers may block calls based on call authentication information. We seek comment on our belief that these provisions provide authority for our proposals and other actions on which we seek comment. We also seek comment on our authority under section 4(d) of the TRACED Act, which provides that ''[n]othing in this section shall preclude the Commission from initiating a rule making pursuant to its existing statutory authority.'' We believe that this provision confirms that

the TRACED Act, despite its specificity, does not limit the Commission's ability to exercise its broader statutory authorities, including those discussed herein, to address the same matters as the TRACED Act, provided that our exercise of broader authorities cannot conflict with Congress' directives in the TRACED Act. We seek comment on this belief.

70. We also seek comment on whether our exclusive jurisdiction over the United States portion of the North American Numbering Plan pursuant to section 251(e) provides authority for our proposals and other actions on which we seek comment. The Commission previously has found that section 251(e) provides ample authority to take actions to ''prevent the fraudulent abuse of NANP resources'' and that unlawfully spoofed originating telephone numbers are an abuse of those resources. We believe that our proposals and other actions here similarly are aimed at preventing abuse of NANP resources. We also believe that it is within our authority more generally to prohibit actions resulting in the presentation of NANP numbers in a manner that misleads consumers or aids in making scam and other unlawful calls more believable. We further believe that our authority extends to requiring providers to take actions that prevent the authentication and presentation of NANP numbers in combination with caller identity information from being misleading. We note that the Commission long has invoked these statutory provisions to adopt rules regarding caller identification obligations. We seek comment on these beliefs and on whether section 227(e) provides authority to adopt rules aimed at averting misleading caller identification information even if the statutory scienter and intent requirements of the Truth in Caller ID Act are not met.

F. Costs and Benefits

71. This document proposes to require terminating providers to transmit to consumer handsets verified caller identity information whenever they transmit an indicator that a call has received an A-level attestation and similarly to transmit an indicator that a call originated from outside of the United States when they know or have a reasonable basis to know that a call originated from outside of the United States. In addition, this document proposes to require originating providers that transmit caller identity information to employ reasonable measures to verify that that the information is accurate and for gateway providers to mark calls that originate from outside of the United States. This document further proposes to require intermediate providers across the entire call path to transmit information that a call originated from outside of the United States. This document also seeks comment on requirements to ensure that caller identity information is securely transmitted over the entire call path, including whether to require providers to use RCD to securely transmit this information, and on prohibiting spoofing of United States telephone numbers on calls that originate from outside of the United States, including where the caller is authorized to use the spoofed number. Further, this document seeks comment on the impact of our proposals on people with disabilities who use assistive devices, services, and technologies, and on providers of TRS and other services.

72. We seek comment on the costs and benefits of these proposals. By giving consumers better and verified information about the identity of those who call them, we believe that our proposals would help consumers avoid scam, fraudulent, and otherwise unlawful calls. These proposals also are expected to help businesses reach more consumers over the phone for legitimate purposes. Because these proposed requirements apply only when a terminating provider chooses to transmit to consumer handsets an indicator that a call received an A-level attestation or when an originating provider chooses to transmit caller identity information, we expect the benefits to extend gradually to consumers and businesses as more providers choose to transmit verified caller identity information. We expect that providers will transmit verified caller identity information when the benefits of doing so outweigh the associated costs and seek comment on the costs to implement the proposals discussed above. We note that our proposals rely upon the already-implemented STIR/SHAKEN framework and upon the existing RCD standards, which builds upon the STIR/SHAKEN framework to enable secure transmission of additional data. Thus, the ingredients that underlie our proposals already exist. We recognize, however, that verifying information to ensure its accuracy and that ensuring interoperability might necessitate some additional costs. We seek comment on our views, including cost estimates from providers over the entire length of the call path and from providers of TRS and other assistive devices, services, and technologies. Will smaller providers face unique challenges implementing our proposals?

73. This document also seeks comment on the alternative approach of requiring implementation of RCD in IP networks. We seek comment on the costs and benefits of requiring implementation of RCD in IP networks. We note that the particular RCD standard or standards that providers would be required to implement have not yet been determined. Therefore, we seek comment on the costs and benefits of all possible standards for implementation. The document also seeks comment on requiring caller identity information verification as a condition of A-level attestation. We seek comment on the costs and benefits of this approach. We further seek comment on the costs and benefits, including the potential for job creation and investment in the United States, of prohibiting spoofing of domestic United States numbers for calls that originate from outside of the United States, including when the caller is authorized to use the spoofed number.

II. Eliminating Outdated Rules

74. We seek comment on whether some of our calling-related rules can be simplified, streamlined, or eliminated, perhaps because they are outdated or have not been enforced for a substantial amount of time.

A. Telephone Consumer Protection Act Rules and Do-Not-Call Implementation Act Rules

1. Older Rules That Might No Longer Be Necessary

75. *Call Abandonment Rules.* We seek comment on whether to eliminate our rules prohibiting callers from disconnecting an unanswered telemarketing call prior to at least 15 seconds or four rings, and from abandoning more than three percent of all telemarketing calls. The Commission adopted these rules in response to the Do-Not-Call Implementation Act (DNC Act), which, among other things, required the Commission to ''maximize consistency'' between its rules and a portion of the Federal Trade Commission's (FTC's) Telemarketing Sales Rule (TSR). The FTC's current TSR contains comparable provisions to these two Commission rules.

76. The Commission adopted the rules in 2003 to ensure consumers do not answer calls only to get silence, or to be hung up on, largely as a result of the predictive dialers callers used at the time. Today's predictive dialers appear to leverage advances in technology, including Artificial Intelligence, to drive

efficiencies. Their evolution, along with marketers' incentives to avoid negative consumer impressions via dead air and abandoned calls, may mean our rules are no longer necessary.

77. We seek comment on whether the calling practices these rules target are no longer a significant source of consumer frustration. Have changes since 2003 rendered the rules unnecessary? Would eliminating the rules relieve callers of the burden of tracking their calls to comply, and to be prepared in the event the Commission were to ask about them? Would consumers be harmed by elimination of these rules? Does the DNC Act require us to retain these rules and does the Commission's differing jurisdiction from the FTC favor retaining or deleting these rules? Are there any other factors affecting whether these rules may or should be deleted? For example, would application of the FTC's corresponding rules to only those callers over which the FTC has jurisdiction result in potential confusion among callers and consumers regarding the applicable standard for call abandonment?

78. *Artificial and Pre-Recorded Voice Caller Identification Rules.* We propose to amend and streamline the rule requiring a caller making artificial or pre-recorded voice calls to include a telephone number other than a 900 number or any other number for which charges exceed local or long distance transmission charges. This rule should be updated to reflect changes in the telecommunications marketplace that could result in a consumer making a return call and incurring charges that exceed typical ''local or long distance'' charges. For telemarketing and certain other calls to consumers' residential numbers, the number provided must be able to accept DNC requests during regular business hours. We propose to modernize this rule to require only that such callers identify themselves with their telephone number to enable called consumers to know who is calling. We seek comment on this proposal. Does this change better reflect the modern telecommunications marketplace where, for example, ''local or long distance charges'' are far less common? To the extent consumers use these numbers to contact callers, how would our proposal benefit or harm them? Some parties state that the current rule aids robocall enforcement by facilitating the identification of illegal calls. Would our proposed approach, or other alternatives, similarly advance those enforcement interests?

2. More Recent Rules That Might Harm Consumers

79. *Consent Revocation Rules.* We seek comment on ways we can modify the requirement that a caller must treat an opt-out request made in response to one type of call to be an opt-out request for all types of calls or to modify it to give consumers greater control over their right to stop unwanted calls. The Consumer and Governmental Affairs Bureau delayed until April 11, 2026 implementation of this rule ''to the extent that it requires callers to treat a request to revoke consent made by a called party in response to one type of message as applicable to all future robocalls and robotexts from that caller on unrelated matters.''

80. Does the rule unduly restrict consumers' ability to receive wanted calls? For example, does it unduly restrict consumers' ability to receive calls from healthcare providers that might have multiple locations or practice specialties or from pharmacies? What about banks or other financial institutions where consumers might have different types of accounts or other businesses that have multiple locations, operating units, or lines of business? How does this affect consumers who both are customers of a business and are employees, job applicants, or contractors of that same business? Does this requirement place an undue burden on callers to modify their communications systems or is an all-or-nothing requirement less burdensome to implement? Would requiring consumers to revoke consent separately for each business unit, location, practitioner, or other sub-division of a caller create an undue burden under this rule modification? How can we modify the rule so that consumers continue to receive calls they want and in so doing ensure that callers honor consent revocation for those they do not, including empowering consumers to specify the scope of their revocations?

81. We also propose to amend § 64.1200(a)(10). For example, commenters in the Delete Proceeding asked us to permit callers to designate the exclusive means by which consumers may revoke prior express consent rather than requiring callers to honor all revocation requests made using ''reasonable means.'' We seek comment on this proposal. At the same time, we seek comment on whether there are less restrictive ways for consumers to revoke consent that nevertheless avoid the potential ambiguity of the current reasonable-means standard.

82. Are there any methods of revoking consent that should be required, even if other methods are permitted? Are there any that should be prohibited? What standards, if any, should we establish to ensure that revocation methods clearly are disclosed to consumers? Is there a significant risk that callers will demand revocations to be made by unduly complex, difficult, or cumbersome methods that could prevent or deter consumers from revoking consent effectively? Is there a significant risk that consumers would be less likely to give prior express consent? Would amending the rule as suggested provide more certainty to callers and consumers by making the rule less vague? Would it improve efficiency for callers or consumers?

83. *Fraud Alert Call Rules.* We seek comment on whether to eliminate the rule limiting financial institutions to calling only the number provided by the consumer when making a fraud alert or similar call pursuant to a TCPA exception to the general consent requirement. The Commission did not explain why it imposed the limitation, but we believe it was likely to ensure that financial institutions would not call or alert the wrong consumers. We now believe that allowing an exception for fraud alert and similar calls only when a financial institution calls the number provided by the consumer might unduly restrict critical calls about the consumer's financial accounts. We believe that financial institutions have incentives to ensure they are calling only their customer. We seek comment on this view.

84. Are there significant concerns about misdirected calls or about financial information being improperly disclosed if we were to broaden the exception for fraud alert and similar calls to cover calls to numbers other than those provided by consumers? Does the ability of financial institutions to obtain prior express consent for such calls, and thus to make calls outside the exception, resolve these concerns? Are there applicable federal or state laws or best practices with which we should align our proposal to alleviate any such concerns? Would it improve the ability of financial institutions to reach consumers and reduce consumers' exposure to fraud? How does the risk of misdirected calls weigh against the benefits of allowing financial institutions to better reach consumers? Are there other factors we should consider?

3. Call Blocking Rules

85. *Call Blocking Rules.* We propose to eliminate the rules permitting voice

service providers to block calls that are on a do-not-originate list or that purport to be from a NANP number that is invalid, unallocated, or unused. Because the Commission has adopted rules that require voice service providers to do what these rules merely permit, we believe that these provisions will become outdated when the new rules become effective. We seek comment on this proposal.

Initial Regulatory Flexibility Analysis

86. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Federal Communications Commission (Commission) has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the policies and rules proposed in the Further Notice of Proposed Rulemaking (*FNPRM)* assessing the possible significant economic impact on a substantial number of small entities. The Commission requests written public comments on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments specified on the first page of the *FNPRM.* The Commission will send a copy of the *FNPRM* including this IRFA, to the Chief Counsel for the SBA Office of Advocacy. In addition, the *FNPRM* and IRFA (or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Proposed Rules

87. The Commission initiates this proceeding to enhance consumer protection against potentially unlawful and fraudulent robocalls. While the existing STIR/SHAKEN call authentication framework indicates whether a caller is authorized to use a particular number, it does not identify who is calling, meaning consumers often cannot determine the caller's identity unless the number is in their contact list or they otherwise recognize it. Additionally, consumers may not understand this limitation, mistakenly believing that A-level attestation provides assurance that a call is lawful rather than a scam or otherwise unlawful.

88. To address these issues, this document proposes the following: (1) When a voice service provider provides caller identification service and includes in the caller identification information for a call an indication that the call has received A-level attestation, the voice service provider must include a verified caller name in the caller identification information; (2) a voice service provider that transmits caller identity information for an originating telephone call must employ reasonable measures to verify that the caller identify information is accurate; and (3) voice service providers that are the entry point into the United States for calls that originate from outside of the United States and know or have a reasonable basis to know that a call originated from a country other than the United States must include in the caller identification information for that call an indication that the call originated from a country other than the United States. These measures are intended to restore consumer confidence in caller ID information and reduce the burden on consumers of screening unlawful or potentially unlawful calls.

89. We also propose to modernize anti-robocall protections by eliminating outdated requirements that have been superseded by technological advances and calling practices and to enhance regulatory certainty by dismissing older pending petitions and applications related to TCPA implementation.

B. Legal Basis

90. The proposed action is authorized pursuant to sections 1–4, 201(b), 202(a), 227, 227b, and 251(e)of the Communications Act of 1934, as amended, and 47 U.S.C. 151–154, 201, 202, 227, 227b, and 251(e).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

91. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act (SBA). A ''small business concern'' is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. The SBA establishes small business size standards that agencies are required to use when promulgating regulations relating to small businesses; agencies may establish alternative size standards for use in such programs, but must consult and obtain approval from SBA before doing so.

92. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe three broad groups of small entities that could be directly affected by our actions. In general, a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses. Next, ''small organizations'' are not-for-profit enterprises that are independently owned and operated and not dominant their field. While we do not have data regarding the number of non-profits that meet that criteria, over 99 percent of nonprofits have fewer than 500 employees. Finally, ''small governmental jurisdictions'' are defined as cities, counties, towns, townships, villages, school districts, or special districts with populations of less than fifty thousand. Based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 out of 90,835 local government jurisdictions have a population of less than 50,000.

93. The rules proposed in this document will apply to small entities in the industries identified in the chart below by their six-digit North American Industry Classification System (NAICS) codes and corresponding SBA size standard. Based on currently available U.S. Census data regarding the estimated number of small firms in each identified industry, we conclude that the proposed rules will impact a substantial number of small entities. Where available, we also provide additional information regarding the number of potentially affected entities in the above identified industries.

TABLE 1—CENSUS BUREAU DATA BY NAICS CODE TABLE

Regulated industry (NAICS classification)	NAICS code	SBA size standard	Total firms	Small firms	% Small firms in industry
Telephone Apparatus Manufacturing	334210	1,250 employees	189	177	93.65
Wired Telecommunications Carriers	517111	1,500 employees	3,054	2,964	97.05
Wireless Telecommunications Carriers (except Satellite)	517112	1,500 employees	2,893	2,837	98.06

TABLE 1—CENSUS BUREAU DATA BY NAICS CODE TABLE—Continued

Regulated industry (NAICS classification)	NAICS code	SBA size standard	Total firms	Small firms	% Small firms in industry
Telecommunications Resellers	517121	1,500 employees	1,386	1,375	99.21
Satellite Telecommunications	517410	$47 million	275	242	88.00
All Other Telecommunications	517810	$40 million	1,079	1,039	96.29

TABLE 2—TELECOMMUNICATIONS SERVICE PROVIDER DATA

2024 Universal service monitoring report telecommunications service provider data (data as of December 2023)	SBA size standard (1,500 employees)		
Affected entity	Total # FCC Form 499A filers	Small firms	% Small entities
Competitive Local Exchange Carriers (CLECs)	3,729	3,576	95.90
Incumbent Local Exchange Carriers (Incumbent LECs)	1,175	917	78.04
Interexchange Carriers (IXCs)	113	95	84.07
Local Exchange Carriers (LECs)	4,904	4,493	91.62
Toll Resellers	411	398	96.84
Wired Telecommunications Carriers	4,682	4,276	91.33
Wireless Telecommunications Carriers (except Satellite)	585	498	85.13
Wireless Telephony	326	247	75.77

D. Description of Economic Impact and Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

94. The RFA directs agencies to describe the economic impact of proposed rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record.

95. The *NPRM* seeks comment on proposals that may establish new information collection, reporting, recordkeeping, or compliance requirements for small entities. Specifically, it proposes to require terminating voice service providers that indicate a call has received A-level attestation to also provide verified caller identity information for such calls. This could require affected small entities to implement systems and processes to provide verified caller names or other caller identity information when they choose to provide A-level attestation indicators to consumers.

96. This document also proposes to require originating voice service providers that transmit caller identity information to take steps to verify that the information is accurate. This may require affected small entities to establish verification procedures, maintain records of verification activities, and implement systems to ensure caller identity information transmitted with calls is accurate before transmission.

97. This document also proposes that voice service providers that are the entry point into the United States for calls that originate from outside of the United States and know or have a reasonable basis to know that a call originated from a country other than the United States must include in the caller identification information for that call an indication that the call originated from a country other than the United States. To comply with this requirement, affected small entities may need to establish procedures indicating when a call originated from a country other than the United States.

98. The Commission also proposes to modernize anti-robocall protections by eliminating outdated requirements that have been superseded by technological advances and calling practices and to enhance regulatory certainty by dismissing older pending petitions and applications related to TCPA implementation. If adopted, this may reduce the recordkeeping and compliance burden on small entities.

99. The Commission invites comment on the costs and burdens of these proposals on small entity voice service providers, telemarketing bureaus, equipment manufacturers, and other affected small entities. The Commission expects that information received in comments, including cost and benefit analyses where requested, will help the Commission identify and evaluate relevant compliance matters for small entities that may result if the proposals and associated requirements discussed in the document are ultimately adopted.

E. Discussion of Significant Alternatives Considered That Minimize the Significant Economic Impact on Small Entities

100. The RFA directs agencies to provide a description of any significant alternatives to the proposed rules that would accomplish the stated objectives of applicable statutes, and minimize any significant economic impact on small entities. The discussion is required to include alternatives such as: ''(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.''

101. In the *NPRM,* the Commission seeks comment on several approaches that may minimize impacts on small entities. First, the Commission proposes that the caller identity information requirements would apply only when a terminating provider chooses to transmit for presentation on consumers' handsets an indication of A-level attestation, rather than mandating that all providers provide such indicators. This approach allows small entities flexibility in deciding whether to provide attestation indicators and thus

whether to be subject to the associated caller identity requirements.

102. Second, the Commission seeks comment on alternative technical solutions beyond Rich Call Data (RCD) for securely transmitting caller identity information. This approach would provide small entities with flexibility to choose cost-effective solutions that work with their existing network infrastructure rather than mandating a single technical standard that might be burdensome for smaller providers.

103. Third, the Commission seeks comment on whether certain categories of calls or providers should be exempted from caller identity verification requirements, which could reduce compliance burdens on small entities that primarily handle such calls.

104. Additionally, the Commission proposes to eliminate several outdated robocall requirements that may represent unnecessary burdens on small entities, including call abandonment rules that technology and calling practices have overtaken.

105. The Commission expects to more fully consider the economic impact and alternatives for small entities following review of comments filed in response to the *NPRM* and this IRFA. The Commission's evaluation of this information will shape the final alternatives it considers, the final conclusions it reaches, and any final actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

106. None.

List of Subjects in 47 CFR Part 64

Carrier equipment, Customer premises equipment, Communications common carriers, Reporting and recordkeeping requirements, Telecommunications, Telephone.

Federal Communications Commission.

Marlene Dortch,

Secretary.

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 64 as follows:

PART 64—MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

■ 1. The authority citation for part 64 continues to read as follows:

Authority: 47 U.S.C. 151, 152, 154, 201, 202, 217, 218, 220, 222, 225, 226, 227, 227b, 228, 251(a), 251(e), 254(k), 255, 262, 276, 403(b)(2)(B), (c), 616, 620, 716, 1401–1473, unless otherwise noted; Pub. L. 115–141, Div. P, sec. 503, 132 Stat. 348, 1091; Pub. L. 117–338, 136 Stat. 6156.

Subpart L—Restrictions on Telemarketing, Telephone Solicitation, and Facsimile Advertising

■ 2. Amend § 64.1200 by
■ a. Removing and reserving paragraphs (a)(6) and (7), (a)(9)(iii)(A), (a)(10);
■ b. Revising the first sentence of paragraph (b)(2);
■ c. Removing and reserving paragraphs (k)(1), (k)(2)(i) through (iii); and
■ d. Revising paragraph (k)(3)(ii).

The revisions read as follows:

§ 64.1200 Delivery restrictions.

* * * * *

(b) * * *

(2) During or after the message, state clearly the telephone number (other than that of the autodialer or prerecorded message player that placed the call) of such business, other entity, or individual; and * * *

* * * * *

(k) * * *

(3) * * *

(ii) Those analytics include consideration of caller identification authentication information and information that a call originated from outside of the United States, where such information is available;

* * * * *

Subpart P—Calling Party Telephone Number; Privacy

■ 3. Amend § 64.1600 by adding paragraphs (s) and (t) to read as follows:

§ 64.1600 Definitions.

* * * * *

(s) The term ''caller identity information'' has the same meaning given the term ''caller identification information'' in 47 CFR 64.1600(c) as it currently exists or may hereafter be amended, but excludes the information contained in 47 CFR 64.1600(g)(1)–(2) and (5).

* * * * *

■ 4. Add § 64.1607 to subpart P to read as follows:

§ 64.1607 Verification, Transmission, and Presentation of Caller Identity Information.

(a) When a voice service provider includes in caller identification information transmitted to a called party an indication that the call has received an A-level attestation pursuant to the Caller Identification Authentication requirements contained in subpart HH of this part, the voice service provider must include verified caller name in the caller identification information transmitted to the called party.

(b) A voice service provider that transmits caller identity information for an originating telephone call must employ reasonable measures to verify that the caller identity name is accurate.

(c) Gateway providers must include in the caller identification information for a call that originates outside the United States an indication that the call originated from outside of the United States.

(d) Non-gateway intermediate providers within a call path must pass unaltered to subsequent providers in the call path caller identification information identifying the call as having originated from outside of the United States.

(e) When a voice service provider is the terminating voice service provider for a call and knows or has a reasonable basis to know that a call originated from outside of the United States, such as when the caller identification information it receives for that call includes an indication that the call originated from outside of the United States, the voice service provider must include in the caller identification information transmitted to the called party for that call an indication that the call originated from outside of the United States.

[FR Doc. 2025–22063 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 64

[WC Docket Nos. 12–375, 23–62; FCC 25–75; FR ID 319623]

Incarcerated People's Communication Services; Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) seeks additional comment and data from stakeholders on adopting permanent audio and video IPCS rate caps and on whether and how the Commission should refine its IPCS data collections going forward to provide the data needed to ensure rate caps are just and reasonable and fairly compensate IPCS providers. It also seeks comment on how and when the Commission should structure a permanent rate

additive to account for the recovery of correctional facility costs incurred in making IPCS available, including an additive that potentially varies by facility type and size. Finally, it proposes to retain the prohibition on ancillary service charges previously adopted by the Commission and seeks further comment on this proposal. In the alternative, it seeks comment on a request to reinstate automated payment fees and third-party financial transaction fees as permissible ancillary service charges.

DATES: Comments are due on or before January 5, 2026; and reply comments are due on or before February 3, 2026.

ADDRESSES: Interested parties may file comments and reply comments on or before the dates indicated in this document in WC Docket Nos. 23–62 and 12–375 by any of the following methods:

- *Electronic Filers:* Comments may be filed electronically using the internet by accessing the Electronic Comment Filing System (ECFS): *https://www.fcc.gov/ecfs/filings/standard.*
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
- Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. *All filings must be addressed to the Secretary, Federal Communications Commission.*
- Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701. Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.
- *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov,* or call the Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice) or (202) 418–0432 (TTY).

FOR FURTHER INFORMATION CONTACT: Shabbir Hamid, Pricing Policy Division of the Wireline Competition Bureau, at (202) 418–2328 or via email at *Shabbir.Hamid@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Further Notice of Proposed Rulemaking (*FNPRM*), in WC Docket Nos. 12–375 and 23–62, FCC 25–75, adopted on October 28, 2025 and released on November 6, 2025. This summary is based on the public redacted version of the document, the full text of this document can be accessed electronically via the FCC's Electronic Document Management System (EDOCS) website at *www.fcc.gov/edocs,* or via the FCC's Electronic Comment Filing System (ECFS) website at *www.fcc.gov/ecfs,* or is available at the following internet address: *https://docs.fcc.gov/public/attachments/FCC-25-75A1.pdf.*

Synopsis

I. Further Notice of Proposed Rulemaking

1. In the Further Notice of Proposed Rulemaking (*FNPRM*), we seek additional comment and data from stakeholders on the following issues: adopting permanent audio and video IPCS rate caps; adopting a permanent rate additive for facility cost recovery, including one that varies by facility type and size; and maintaining the prohibition on ancillary service charges, among other matters. We place particular emphasis on seeking additional data from parties to the extent feasible to enable us to resolve these issues based on objective data and analysis, wherever possible.

A. Adoption of Permanent Rate Caps for Audio and Video IPCS

2. Today's Order adopts interim rate caps for audio and video IPCS, reflecting the evolving video IPCS marketplace and resulting anomalies in provider-reported video data, but also in recognition of the limitations of the available data on safety and security costs and of the cost data more generally. Meanwhile, commenters continue to acknowledge a need for permanent rate caps. We agree that permanent caps are necessary for IPCS and, accordingly, we seek further comment on how the Commission could best adopt permanent rate caps for audio and video IPCS which are just, reasonable, and fairly compensatory and the time frame for implementing any such rate caps.

3. *Permanent Audio IPCS Rate Caps.* The accompanying Order adopts audio IPCS rate caps on an interim basis in light of the need to resolve questions with the current data, and to better refine and analyze safety and security data, among other factors. We invite further comment about how to adopt permanent audio IPCS rate caps, and about the data we need to allow us to do so. The Commission will be receiving more refined data about market rates and demand after recent revisions to the IPCS Annual Reports are implemented, and from a future mandatory data collection. On January 8, 2025 the Commission revised the IPCS annual reporting and certification obligations to require submissions of information related to video IPCS. The first filings of the revised Annual Reports and certifications that will include information on video IPCS were due on November 3, 2025. What additional information is essential to collect before the Commission can act to set permanent audio IPCS rate caps? Are any further changes to our rate cap setting methodology necessary?

4. *Permanent Video IPCS Rate Caps.* The accompanying Order adopts video IPCS rate caps on an interim basis for several reasons, including the aforementioned market and data factors. Significant time has passed since the Commission last sought comment on the adoption of permanent rate caps for video rates as part of the *2024 IPCS Notice* and the Bureau has since granted waiver petitions sought by IPCS providers to accommodate certain unintended consequences of the Commission's rate structure rules governing video IPCS. We now invite commenters to further supplement the record concerning the status of the video IPCS market and the adoption of permanent video IPCS rates. What changes have commenters observed in the video IPCS marketplace since the adoption of the *2024 IPCS Notice*? How have video market costs, prices, demand, revenues, deployment, and services changed over time?

5. How else has the video IPCS marketplace evolved with the passage of time? We seek comment on the changes in availability of and demand for video IPCS, and for other, non-IPCS video products, including the deployment of platforms and devices capable of delivering these services. For example, how has demand for video IPCS changed since the 2023 Mandatory Data Collection (reflecting 2022 data)? We also seek comment on how costs for providing video IPCS and revenues for video IPCS have changed since the *2024 IPCS Notice.* Have per-minute costs declined as the market developed? What are the trends for video IPCS industry revenues and profitability, given

potentially declining per-minute costs and increasing demand? How do costs for providing video IPCS differ between industry leaders, or between large providers and smaller providers? Similarly, what investments are IPCS providers making in video platforms and devices today, and how do those expenditures differ from recent years, if at all? And how should such trends factor into the adoption of permanent rate caps for video IPCS? What data could be used to project the rate of future investments in video software and hardware? Video IPCS platforms and devices typically enable the provision of both regulated video IPCS and nonregulated video services. We seek comment on how video IPCS providers recover shared costs between regulated and nonregulated services. Do commenters expect the usage of regulated and nonregulated services to change over time, and, if so, how should such trends be taken into account in adopting permanent video IPCS rate caps?

6. Commenters generally agree that the video IPCS marketplace is still in its nascent stages and investments in video IPCS infrastructure continue to be relatively high given current demand. We seek comment on the continued evolution of the video IPCS marketplace, and on the data that would most accurately reflect its growth and development. One commenter suggests three criteria which may indicate a maturing market: ''comparing the variance of costs across video calling products with the variance of costs among audio calling products, comparing within-provider costs to those of market leaders, and analyzing forecast demand by service providers.'' Are these effective ways of gauging whether the video IPCS marketplace has matured with sufficient reliability to set permanent video rates? If so, why? If not, what are the other alternatives? What additional data will best support these analyses, and how can we obtain such data, if it has not already been collected?

7. When do commenters expect the video IPCS marketplace will reach a point where the Commission will be able to set reliable permanent rate caps? Conversely, if commenters believe the video IPCS data already allows us to adopt permanent rate caps, why? Certain commenters suggest permanent video IPCS rate caps should be adopted immediately. What advantages and disadvantages would there be from adopting permanent caps in the near future versus doing so at a later date? What are the costs and benefits of maintaining interim caps over a longer period to allow the marketplace to develop? How do the costs and benefits of delay versus immediacy translate to the adoption of permanent audio rate caps?

8. *Considerations Applicable to Both Audio and Video IPCS.* While our rate making methodology is largely a settled matter, we seek comment on a proposal to modify one aspect of the methodology. Specifically, we seek comment on Securus's proposal that the Commission use simple averages instead of minute-weighted averages to set its rate caps, noting that the *2021 ICS Order* used simple averages and claiming that ''using minute-weighted average costs overemphasizes large facility costs.'' We also seek comment on Securus's claim that using simple, facility-based averages to set rate caps would ''lead to a higher rate cap and more providers being able to recover their actual costs.''

9. We seek additional comment on whether and how we should refine the IPCS data collections going forward, particularly in light of the recognized anomalies with IPCS data. Are any adjustments to the structure of the collection necessary to distinguish between necessary equipment and services costs? What other data are necessary, if any, for the Commission to consider establishing permanent, per-minute audio and video IPCS rate caps? In particular, should we attempt to collect data that would allow us to measure the effects future inflation and productivity increases will have on the average cost per minute of providing audio and video IPCS and rate caps and, if so, what data should we collect? How can the Commission ensure all video IPCS providers fully respond to any additional data collection?

10. Commenters should identify the relevant safety and security data and information necessary to set permanent IPCS audio and video rate caps, and should specify how the Commission should seek to have such information reported. To what extent have audio and video IPCS safety and security services changed over time, and how should any such change impact the adoption of permanent audio or video IPCS rate caps? Are there any trends in safety and security expenses in the IPCS provider or private business sectors, and if so, how should they be accounted for when adopting permanent audio or video IPCS rate caps? For example, Zoom and Teramind offer safety and security add-ons (including listening to a call without the parties being aware and remote employee monitoring) as part of their business communications services.

11. We also seek comment on how providers recover shared costs for safety and security services between video and audio IPCS and between IPCS and non-IPCS services. What data would help the Commission to properly allocate such costs among these services? Should the categories used previously be adjusted and, if so, how? Should there be a larger, smaller, or the same number of categories as compared to the number in the 2023 Mandatory Data Collection, and how should each category be defined? Should the Commission exclude from rate caps any allowance for recovery of safety and security expenses attributable to law enforcement functions? The 2023 Mandatory Data Collection directed providers to allocate safety and security expenses among seven different categories and then to further allocate the expenses within each of these categories among (1) audio IPCS, (2) video IPCS, (3) ancillary services, and (4) other products and services. If we were to draw a line between safety and security expenses attributable to IPCS functions versus law enforcement functions, for example, could we simply retain the existing reporting structure and at the same time clarify that safety and security expenses are to be allocated to other products and services to the extent these are incurred as a consequence of providing law enforcement functions? Or would a better approach be to add law enforcement as a separate, fifth ''service'' to which safety and security expenses could be allocated? How might the Commission direct providers to allocate expenses shared between IPCS and law enforcement functions? Are there better approaches than our current category-based approach to standardize the reporting and collection of safety and security cost data that commenters recommend? What other information should we seek concerning safety and security services which would help us determine just, reasonable, and fairly compensatory rates? Are there any factors related to safety and security expenses that primarily affect either audio or video rates alone, and if so, what are they, and why?

12. Likewise, we seek comment on any interaction or interdependence between audio IPCS and video IPCS offerings, including relationships between service pricing or usage. Will the continued video IPCS market evolution also affect the market for audio rates and, if so, how? Do providers expect demand for audio IPCS to fall as demand or availability of video IPCS increases? Should video IPCS be

considered a substitute for audio IPCS? Additionally, when adopting permanent rate caps for either audio or video IPCS, how should the Commission factor in the recovery allotted to providers from a permanent rate additive for facility costs as proposed in this *FNPRM,* if any?

13. Parties note that correctional institutions are increasingly paying directly for IPCS and making service available to incarcerated people free of charge. They propose that the Commission address the applicability of its IPCS regulations to instances where a correctional institution is the party that pays for IPCS. Commenters note, for example, that in the ''agency-paid model,'' correctional institutions may use alternative units of sale, such as ADP, instead of per-minute rates to purchase IPCS. We seek comment on the applicability of our regulations to correctional institutions as, in effect, wholesale purchasers of IPCS. To what extent do the Martha Wright-Reed Act and the Communications Act provide legal authority to the Commission to regulate the rates and related conditions of IPCS when purchased by an intermediary for retail customers' use?

B. Adoption of Permanent Rate Additives for Facility Cost Recovery

14. We seek comment on how and when the Commission should structure a permanent rate additive or additives to account for correctional facility costs. In today's Order, we adopt a uniform interim rate additive of up to $0.02 per minute for audio and video IPCS for all facility types and size tiers. Several commenters support the use of an additive, arguing that it will provide a predictable framework for IPCS providers and correctional authorities to ensure the recovery of correctional facility costs in the provision of IPCS. Do commenters agree? Why or why not? We seek comment on the assertion by one commenter that additives will effectively reintroduce site commissions and on the extent adopting a permanent rate additive may actually minimize market distortions the record shows site commissions can generate. The interim rate caps we set today are provider-related rate components, the revenues from which are not intended for facility cost recovery, which is the purpose of the separate rate additives we seek further comment on today. Pay Tel, however, cites the fact that the record shows that at least one provider sought to offer correctional facilities payments from rate cap revenues. We seek further comment on Pay Tel's request for clarification ''that any site commissions in excess of the facility cost additive remain prohibited.'' What are the benefits and burdens of a rate additive for IPCS providers, correctional facilities, and IPCS consumers?

15. We also seek comment on how to structure a permanent rate additive. As an initial matter, we invite comment on whether a permanent additive should be a uniform cap across all rate tiers or whether it should vary by correctional facility type and/or size. What specific tasks, responsibilities and activities do correctional facilities undertake? What are the number of person hours and the hourly wage rates required to provide each activity and each activity's frequency of occurrence? Do these activities and their frequency and costs vary depending on the size or type of the facility, the volume of calls, the correctional authority's policies, or other factors and, if so, how should the Commission incorporate those variations into any permanent rate additive? We also seek comment on a recommendation by one commenter that ''IPCS providers that incorporate any facility additive [with] the rate and compensate facilities accordingly must document those costs before such a payment could be imposed on or charged to the paying customer.'' Additionally, should providers be required to demonstrate that any expenses being recovered through the rate additive be for used and useful expenses incurred in making IPCS available?

16. The interim per-minute rate additive we adopt today applies uniformly to all rate tiers, in principal part due to the lack of reliable correctional facility cost data currently in the record beyond the National Sheriffs' Association 2015 cost survey. The Commission previously has highlighted that ''[o]btaining reliable correctional facility cost data has been a perennial problem in these proceedings.'' As we explain above, the record lacks the requisite data that would allow the Commission to reasonably justify a variable additive based on facility type or size. Yet, the National Sheriffs' Association argues that a rate additive ''cannot be uniform because the costs to facilities are not uniform'' but provides no data or other information regarding costs beyond what was previously submitted in the record. As Securus notes, the ''[k]ey to establishing a reasonable rate additive is gaining up-to-date information on facility costs.'' We agree and invite further comment on how we can ensure we receive current, complete, and reliable data that accurately capture the differences in used and useful costs that facilities of different sizes and types incur. We request commenters address in detail the types of data that would be most useful in determining facility costs and the procedures we should follow in collecting the data.

17. To the extent commenters support a permanent rate additive that varies by facility type and size, we underscore the importance of receiving updated, relevant data in the record given that correctional facilities are not regulated entities subject to data retention requirements, as commenters have recognized. Securus suggests that while ''the Commission cannot compel correctional agencies to provide such information, the Commission could facilitate the voluntary submission of such information by creating a simple and straightforward template by which correctional agencies could submit information on the costs they incur.'' The Commission has not previously considered undertaking the design of a template given its inability to compel the submission of facility cost data by correctional institutions. However, the Commission seeks comment on whether it should consider doing so. Apart from creating a template, what categories of cost information should correctional institutions submit and how can the Commission best work with providers and correctional institutions to encourage the submission of reliable and consistent cost data? If we engage in a voluntary collection, how should we evaluate the data received to determine if it is a representative sample appropriate for use in this regulatory context? Are there other sources of data or methods of collection that we should consider?

18. To the extent commenters support a uniform additive, should we make the interim $0.02 per minute additive adopted in today's Order permanent? Why or why not? If $0.02 per minute would not be a reasonable permanent uniform additive, are there data that the Commission could rely on that would support adopting a different amount? For example, a limited survey conducted by Pay Tel's outside consultant, which consisted of only 30 correctional facilities, reported an average cost to facilities of $0.08 per minute for allowing the provision of IPCS. The Commission gave no weight to this survey in the *2024 IPCS Order* and we do not give any weight to it today in adopting the $0.02 per minute interim additive for the same reasons articulated in the *2024 IPCS Order.* However, Pay Tel's outside consultant argued that with this limited survey ''and previously-submitted data, the Commission has the information necessary to adopt a rate cap that includes an explicit additive for the

recovery of facility-incurred safety and security costs.'' Pay Tel neither identifies the ''previously-submitted data'' nor explains how its survey might fit with those data to arrive at a rate additive. We invite comment on these issues. Here, too, the receipt of reliable, current cost data is paramount and commenters are encouraged to provide data and analysis supporting any such proposal. If the Commission does not receive any such data, how should the Commission proceed?

C. Continued Prohibition of Ancillary Service Charges

19. Ancillary service charges have long been a source of detrimental practices in the IPCS market and imposing constraints on such fees has been an integral part of the Commission's attempts to ensure just and reasonable IPCS rates. The Commission has taken steps on several occasions to set limits on ancillary service charges and associated practices. Most recently, in the *2024 IPCS Order,* the Commission prohibited ancillary service charges and instead incorporated the costs providers reported incurring to make these services available in the rate caps it adopted. In its Petition for Reconsideration, HomeWAV seeks reinstatement of two previously permissible ancillary service charges—automated payment fees and third-party financial transaction fees.

20. We propose retaining, for the same reasons the Commission articulated in the *2024 IPCS Order,* the prohibition on ancillary service charges adopted by the Commission and seek comment on this proposal. As the Public Interest Parties explain, the Commission made a determination in the *2024 IPCS Order* ''that eliminating separate ancillary service charges and incorporating'' the costs of those services ''into the per-minute rate caps would best reflect the nature of such services as an intrinsic part of IPCS and balance the relevant interests at stake.'' Do commenters agree with this assessment? Why or why not? Would the benefits of retaining the prohibition on separate ancillary service charges outweigh the burdens? Why or why not?

21. However, to be thorough, we seek comment on HomeWAV's request that we reinstate automated payment fees and third-party financial transaction fees as permissible ancillary service charges. Automated payment fees include a wide variety of fees assessed by IPCS providers for most, if not all, financial transactions with consumers. Third-party financial transaction fees include credit card processing fees and fees for transfers from third-party commissary accounts. We seek comment on whether these two ancillary charges should be reinstated and on the appropriate regulatory treatment of ancillary service charges generally.

22. In comments to HomeWAV's Petition for Reconsideration, Securus questions if the Commission contemplated whether the number of transactions would increase due to the removal of minimum deposit amounts and account funding fees, and what impact the potential increase of transactions would have on overall costs that would need to be recovered. Pay Tel adds that prohibiting these two ancillary service charges ''will encourage behavior that increases . . . costs—and under the new rate structure, these costs will not be recoverable.'' HomeWAV further asserts that ''imposing all associated [automated payment fees and third-party financial transaction fee] costs solely on the provider'' could ''lead to operational disruptions and compromise the long-term sustainability of providers.''

23. We seek comment on whether providers are able to recover their costs of providing account funding services without being able to charge separate fees—under the rate caps set by the Commission in the *2024 IPCS Order,* the current interim rate caps we set here, or under any permanent rate caps we adopt—and what impact the prohibition on these fees may have on the sustainability of IPCS providers. In the *2024 IPCS Order,* the Commission found that providers incurred an average cost of $0.011 per minute to provide ancillary services, based on the 2023 Mandatory Data Collection. We now seek comment and additional data on the amount of additional costs providers incur in making these two ancillary services available in the absence of being able to assess separate charges for them. We also seek comment on the potential burden of such costs.

24. If either fee or both fees should be reinstated, at what amount should the related fee cap or caps be set, and why? The Commission previously established a $3.00 cap on automated payment fees and a $5.95 cap on third-party financial transaction fees. Should we reimpose the same caps on these two fees previously imposed or should we set different caps? At what level would a cap or caps allow providers to recover their costs? At what level would a cap or caps be just and reasonable for consumers? Subsequent to its petition, HomeWAV advocates in favor of $3.00 ''payment processing fees.'' We seek comment on this suggestion. Should the Commission use the cost data providers report in a subsequent data collection to calculate different, cost-based caps for one or more of the two fees if necessary to reflect any increased usage rates providers are experiencing? Would setting fee caps based on those data overstate costs, if fees are reinstated and demand for the services is reduced?

25. While HomeWAV requests reinstatement of automated payment fees and third-party transaction fees, other providers suggest different fees should also be reinstated. For example, NCIC proposes reinstating certain transaction fees, including a live agent fee and a single call fee, but also proposes the elimination of certain other transaction fees. We seek comment on whether any other fees should be reinstated, and we request that any proposals for reinstating other ancillary service charges address the issues raised here with regard to automated payment fees and third-party transaction fees. We seek comment specifically on alternative proposals made by NCIC. NCIC's alternative proposals include suggesting the establishment of a $3.00 funding fee for automated, web, and app payments, a $5.95 funding fee for payments making use of a live agent, a $0.25 funding fee for single calls or a ban on single call service, and deposit limits for minimums set at $5.00 and maximums set at $100.00. NCIC proposes to re-establish single-call fees, albeit at the rate of $0.25 per call and provides the option to ban single-call services outright. We also seek comment on the potential burden of such costs.

26. If the Commission were to reinstate one or more ancillary service charges, it will need sufficiently reliable cost and demand data on each of the types of service charges that is reinstated in order to determine the relevant costs for each such charge. What changes, if any, to the Commission's reporting requirements, including to a future mandatory data collection and to its ongoing IPCS Annual Reports, should we consider to more accurately capture up-to-date ancillary service costs and demand, including the costs incurred when consumers fund their IPCS accounts?

27. We also seek comment on how automated payment fees and third-party financial transaction fees could be reinstated without unduly burdening consumers. Commenters have previously voiced concerns that automated payment fees and third-party financial transaction fees were often exploited, and consumers were charged both fees for a single transaction, effectively allowing providers to double

bill or recover. How could the Commission redefine these charges to avoid such concerns? We also seek comment on how implementing two separate financial transaction charges can protect consumers from unfair charges as HomeWAV suggests. Similarly, we seek comment on other concerns raised related to ancillary service charges, including the risk of consumer fraud and money laundering and the risk that the combination of the prohibition of ancillary service charges with the prohibition of account minimums create conditions that encourage consumers to ''inundate providers with small deposits,'' which can ''drastically increase costs for providers.'' HomeWAV argues that the existence of fees to fund IPCS accounts serve as a deterrent to fraud and money laundering by ''associating an appropriate cost with the deposit of funds'' and that, if IPCS accounts are loaded using credit cards that are later determined to be stolen, then IPCS providers are responsible for ''chargebacks, bank fees, and licensing costs.''

28. We also seek comment as to whether there are any similarly effective alternatives to reinstating automated payment fees and third-party financial transaction fees. For example, Securus suggests that the Commission allow IPCS providers to establish a minimum deposit amount. We seek comment on this proposal. Is this a reasonable alternative that will change consumer incentives and reduce provider costs? What amount would be appropriate as a potential minimum deposit limit and why? Securus suggests $10, but others suggest lower minimums. How should the Commission calculate a minimum deposit amount if it chooses this alternative approach? For example, would a minimum deposit limit of $10 provide enough stability to provider costs to offset the burden of prohibiting these types of fees? Conversely, we also seek comment on the burden that a minimum deposit amount would impose on families of incarcerated people and IPCS users. Commenters are encouraged to quantify the costs and benefits to providers, IPCS users and their families, of any alternative approaches to fee reinstatement.

II. Procedural Matters

29. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA), requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that ''the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.''

30. The Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of rule and policy change proposals in the *2025 IPCS Notice* on small entities. The Commission invites the general public, in particular small businesses, to comment on the IRFA. Comments must be filed by the deadlines for comments on the *2025 IPCS Notice* indicated on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA.

31. *Paperwork Reduction Act (PRA).* This document does not contain proposed information collections subject to the Paperwork Reduction Act of 1995 (PRA), 44 U.S.C. 3501–3521. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, 44 U.S.C. 3506(c)(4).

32. *Providing Accountability Through Transparency Act.* Consistent with the Providing Accountability Through Transparency Act, Public Law 118–9, a summary of the *2025 IPCS NPRM* will be available on *https://www.fcc.gov/proposed-rulemakings.*

33. *OPEN Government Data Act.* The OPEN Government Data Act, requires agencies to make ''public data assets'' available under an open license and as ''open Government data assets,'' *i.e.,* in machine-readable, open format, unencumbered by use restrictions other than intellectual property rights, and based on an open standard that is maintained by a standards organization. This requirement is to be implemented ''in accordance with guidance by the Director'' of OMB. The term ''public data asset'' means ''a data asset, or part thereof, maintained by the Federal Government that has been, or may be, released to the public, including any data asset, or part thereof, subject to disclosure under the Freedom of Information Act (FOIA).'' A ''data asset'' is ''a collection of data elements or data sets that may be grouped together,'' and ''data'' is ''recorded information, regardless of form or the media on which the data is recorded.'' We delegate authority to the Wireline Competition Bureau, in consultation with the agency's Chief Data and Analytics Officer and after seeking public comment to the extent it deems appropriate, to determine whether any data assets maintained or created by the Commission pursuant to the rules adopted in the *2025 IPCS Order* are ''public data assets'' and if so, to determine when and to what extent such information should be published as ''open Government data assets.'' In doing so, WCB shall take into account the extent to which such data assets should not be made publicly available because they are not subject to disclosure under the Freedom of Information Act. *See, e.g.,* 5 U.S.C. 552(b)(4), (6)–(7) (exemptions concerning confidential commercial information, personal privacy, and information compiled for law enforcement purposes, respectively). We also seek comment in the *2025 IPCS Notice* on whether any of the information proposed to be collected in the Notice would constitute ''data assets'' for purposes of the OPEN Government Data Act and, if so, whether such information should be published as ''open Government data assets.''

34. *Comment Period and Filing Procedures.* Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. All filings must refer to WC Docket Nos. 23–62 and 12–375.

35. Comments and reply comments must include a short and concise summary of the substantive arguments raised in the pleading. Comments and reply comments must also comply with § 1.49 and all other applicable sections of the Commission's rules. We direct all interested parties to include the name of the filing party and the date of the filing on each page of their comments and reply comments. All parties are encouraged to use a table of contents, regardless of the length of their submission. We also strongly encourage parties to track the organization set forth in the *2025 IPCS Notice* in order to facilitate our internal review process.

36. *Ex Parte Rules.* The proceeding that the *2025 IPCS Notice* initiates shall be treated as a ''permit-but-disclose'' proceeding in accordance with the Commission's *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and

arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in the prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with § 1.1206(b). In proceedings governed by § 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.,* .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

37. *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer and Governmental Affairs Bureau at 202–418–0530.

38. *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be publicly available online via ECFS.

III. Initial Regulatory Flexibility Analysis

39. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the policies and rules proposed in the Further Notice of Proposed Rulemaking (*FNPRM*) assessing the possible significant economic impact on small entities. The Commission requests written public comments on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments specified on the first page of the *FNPRM.* The Commission will send a copy of the *FNPRM,* including this IRFA, to the Chief Counsel for the Small Business Administration Office of Advocacy (SBA). In addition, the *FNPRM* and IRFA (or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Proposed Rules

40. In the *FNPRM,* the Commission seeks additional comment on establishing permanent, just and reasonable, and fairly compensatory rate caps for audio and video incarcerated people's communications services (IPCS). The Commission requests comment on what information and changes to its rate setting methodology will be needed to allow the adoption of permanent rate caps for audio IPCS, among other matters. The Commission also requests comment regarding the status of the video IPCS market and how costs, prices, revenues, and services have changed over time. Additionally, the Commission requests information on the evolution of the video IPCS marketplace and on when it will be able to set reliable permanent video IPCS rate caps. Further, the Commission seeks comment on matters applicable to both audio and video IPCS, including how it should collect data, how safety and security services have changed over time, and the relationship of audio IPCS pricing and usage to video IPCS pricing and usage.

41. The Commission also seeks comment on whether it should adopt a permanent rate additive to account for correctional facility costs related to the provision of IPCS and on how to structure such a rate additive. The Commission also asks whether a permanent rate additive should be uniform across all rate tiers or whether it should vary by correctional facility type and/or size. Further, the Commission asks how it can obtain updated, relevant data on correctional facilities' costs given that facilities are not regulated entities subject to data retention and accounting requirements. The Commission seeks comment on whether it should make the interim $0.02 per-minute uniform rate additive permanent.

42. The Commission also seeks comment on how it should address site commission payments made by IPCS providers to the facilities they serve. Specifically, the Commission proposes to retain the prohibition on site commission payments and seeks comment on the extent to which its adoption of an industry-wide, per-minute rate additive, either uniform or non-uniform, would eliminate any need for site commission payments. The Commission asks whether facilities could use a rate additive to recover their used and useful costs of allowing access to IPCS in lieu of, or in addition to, site commission payments. Alternatively, the Commission seeks comment on whether, if the Commission were to permanently allow providers to pay site commissions, it should cap or otherwise limit to the amount or type of site commissions providers may pay. Additionally, the Commission seeks comment on the appropriate timeframe for compliance with any site commissions reforms that may be adopted in response to the *FNPRM.*

43. The Commission also seeks comment on its proposal to retain the prohibition on ancillary service charges adopted in the *2024 IPCS Order.* The Commission also seeks comment on whether the benefits of retaining the prohibition on separate ancillary service charges would outweigh the burdens. Further, the Commission seeks specific comment on two types of ancillary service charges—automated payment fees and third-party financial transaction fees—and asks whether they should be reinstated. Lastly, the Commission seeks comment on whether any alternatives to reinstating automated payment fees and third-party financial transactional fees exist.

B. Legal Basis

44. The proposed actions are authorized pursuant to sections 1, 2, 4(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 716 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, 617, and the Martha Wright-Reed Just and Reasonable Communications Act of 2022, Public Law 117–338, 136 Stat. 6156 (2022).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

45. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. A ''small business concern'' is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Act. The SBA establishes small business size standards that agencies are required to use when promulgating regulations relating to small businesses; agencies may establish alternative size standards for use in such programs, but must

consult and obtain approval from SBA before doing so.

46. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe three broad groups of small entities that could be directly affected by our actions. In general, a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses. Next, ''small organizations'' are not-for-profit enterprises that are independently owned and operated and not dominant their field. While we do not have data regarding the number of non-profits that meet that criteria, over 99 percent of nonprofits have fewer than 500 employees. Finally, ''small governmental jurisdictions'' are defined as cities, counties, towns, townships, villages, school districts, or special districts with populations of less than fifty thousand. Based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 out of 90,835 local government jurisdictions have a population of less than 50,000.

47. The rules proposed in the *FNPRM* will apply to small entities in the industries identified in the chart below by their six-digit North American Industry Classification System (NAICS) codes and corresponding SBA size standard. Based on currently available U.S. Census data regarding the estimated number of small firms in each identified industry, we conclude that the proposed rules will impact a substantial number of small entities. Where available, we also provide additional information regarding the number of potentially affected entities in the industries identified below.

TABLE 1—2022 U.S. CENSUS BUREAU DATA BY NAICS CODE

Regulated industry (footnotes specify potentially affected entities within a regulated industry where applicable)	NAICS code	SBA size standard	Total firms	Total small firms	% Small firms
All Other Telecommunications	517810	$40 million	1,673	1,007	60.19
Wired Telecommunications Carriers	517111	1,500 employees	3,403	3,027	88.95
Wireless Telecommunications Carriers (except Satellite)	517112	1,500 employees	1,184	1,081	91.30
Telecommunications Resellers	517121	1,500 employees	955	847	88.69

TABLE 2—TELECOMMUNICATIONS SERVICE PROVIDER DATA

2024 Universal service monitoring report telecommunications service provider data (data as of December 2023)	SBA size standard (1500 employees)		
Affected entity	Total number FCC Form 499A filers	Small firms	% Small entities
Competitive Local Exchange Carriers (CLECs)	3,729	3,576	95.90
Incumbent Local Exchange Carriers (Incumbent LECs)	1,175	917	78.04
Interexchange Carriers (IXCs)	113	95	84.07
Local Exchange Carriers (LECs)	4,904	4,493	91.62
Local Resellers	222	217	97.75
Other Toll Carriers	74	71	95.95
Payphone Service Providers	28	24	85.71
Toll Resellers	411	398	96.84
Telecommunications Resellers	633	615	97.16
Wired Telecommunications Carriers	4,682	4,276	91.33
Wireless Telecommunications Carriers (except Satellite)	585	498	85.13

D. Description of Economic Impact and Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

48. The RFA directs agencies to describe the economic impact of proposed rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record.

49. In the *FNPRM,* the Commission seeks comment on a series of matters whose resolution will affect all IPCS providers and correctional facilities, including those that may be small entities. These matters include whether the Commission should establish permanent audio and video IPCS rate caps for all types of facilities (including jails with average daily populations below 1,000) and whether the Commission should adopt a permanent IPCS rate additive to account for correctional facility costs and how to structure a permanent rate additive. In considering how to allocate IPCS providers' costs, the Commission seeks comment on how these costs should be divided between regulated and nonregulated costs. In addition, the Commission seeks to identify the relevant safety and security data necessary to set permanent IPCS rate caps. The Commission also seeks comment on whether it should continue to prohibit site commission payments and ancillary service charges given its other actions with regard to IPCS, and whether any such changes should result in additional annual reporting requirements.

50. The Commission anticipates that all IPCS providers, including those that are small entities, will be subject to any rules adopted in response to the *FNPRM* and that such rules will not affect small providers disproportionately. The Commission requests comment on the appropriate amount of time needed for ICPS providers to comply with the proposed rules, including time needed to negotiate with correctional facilities to implement any of the proposed changes. In addition, the Commission expects that all IPCS providers, including those that are small entities, will need to hire, or retain the services of, lawyers and other professionals to ensure they comply with the proposed rules. The Commission anticipates that the information it receives in comments

will help it identify and evaluate relevant compliance matters for small entities, including compliance costs and other burdens that may result from implementation of the proposals and inquiries in the *FNPRM.*

E. Discussion of Significant Alternatives Considered That Minimize the Significant Economic Impact on Small Entities

51. The RFA directs agencies to provide a description of any significant alternatives to the proposed rules that would accomplish the stated objectives of applicable statutes, and minimize any significant economic impact on small entities. The discussion is required to include alternatives such as: ''(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.''

52. In the *FNPRM,* the Commission seeks to continue its implementation of the Martha Wright-Reed Act, including its directive that the Commission ensure just, reasonable, and fairly compensatory rates and charges for incarcerated people's audio and video communications services. While doing so, the Commission seeks comment on a number of alternatives to determine the potential impact of the proposals in the *FNPRM* on small businesses and, in particular, any disproportionate impact or unique burdens that small businesses may face in complying with any rules the Commission may adopt. This includes whether and how to determine the evolution of the video IPCS marketplace, and how the data may be used to set permanent rate caps. Other alternatives considered in the *FNPRM* include whether and how to structure a permanent rate cap additive while continuing the prohibition on site commission payments, and the associated burdens that may result for IPCS providers, correctional facilities, and IPCS consumers. Alternatively, should site commissions be permitted, the Commission seeks comment on whether there should be a cap on such payments.

53. In evaluating the proposals in the *FNPRM,* the Commission will consider the information submitted regarding the costs small providers incur in the provision of audio and video IPCS, as well the costs and benefits of those proposals and any alternatives to those proposals suggested in the record. Considering the economic impact on any IPCS providers that are small entities through comments filed in response to this *FNPRM* and this IRFA could allow the Commission to refine its cost-benefit analysis and provide other input that would enable it to identify reasonable alternatives that may not be readily apparent, and offer alternatives not already considered that could minimize the economic impact on small entities.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

54. None.

IV. Ordering Clauses

55. Accordingly, *it is ordered*, pursuant to the authority contained in sections 1, 2, 4(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 716 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i)–(j), 201(b), 218, 220, 225, 255, 276, 403, and 617, and the Martha Wright-Reed Just and Reasonable Communications Act of 2022, Public Law 117–338, 136 Stat. 6156 (2022), that this joint Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking in WC Docket Nos. 23–62 and 12–375 *are adopted*.

56. *It is further ordered* that, pursuant to applicable procedures set forth in §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments on this Further Notice of Proposed Rulemaking on or before 30 days after publication of a summary of this Further Notice of Proposed Rulemaking in the **Federal Register** and reply comments on or before 60 days after publication of a summary of this Further Notice of Proposed Rulemaking in the **Federal Register**.

57. *It is further ordered* that the Commission's Office of the Secretary, *shall send* a copy of this Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis and the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2025–22130 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

Notices

Federal Register
Vol. 90, No. 232
Friday, December 5, 2025

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are requested regarding: whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by January 5, 2026. Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Natural Resources and Conservation Service

Title: Volunteer Program—Earth Team.

OMB Control Number: 0578–0024.

Summary of Collection: Volunteers have been a valuable human resource to the Natural Resources Conservation Service (NRCS) since 1985. Collection of this information is necessary to document service of volunteers as required by 7 U.S.C. 2272: Volunteers for Department of Agriculture Programs and Departmental Regulation DR 4230–001—Volunteer Programs. Agencies are authorized to recruit, train and accept, with regard to Civil Service classification laws, rules, or regulations, the services of individuals to serve without compensation. Volunteers may assist in any agency program/project and may perform any activities which agency employees are allowed to do. Volunteers must be 14 years of age. NRCS will collect information using NRCS forms NRCS–Per–002 and NRCS–PER–004.

Need and Use of the Information: NRCS will collect information on the type of skills and type of work the volunteers are interested in doing. The collected information will be used by supervisors of volunteers and the International Program Division to evaluate potential international volunteers and evaluate the effectiveness of the volunteer program. Without the information, NRCS would not know which individuals are interested in volunteering.

Description of Respondents: Individuals or households; Business or other for-profit; State, Local, or Tribal Government.

Number of Respondents: 8,220.

Frequency of Responses: Reporting: Semi-Annually.

Total Burden Hours: 1,011.

Rachelle Ragland-Greene,

Departmental Information Collection Clearance Officer.

[FR Doc. 2025–21993 Filed 12–4–25; 8:45 am]

BILLING CODE 3410–16–P

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are requested regarding: whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by January 5, 2026. Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Natural Resource Conservation Service

Title: Composting and Food Waste Reduction Cooperative Agreements.

OMB Control Number: 0578–0033.

Summary of Collection: The Agriculture Improvement Act of 2018 (2018 Farm Bill; Pub. L. 115–334) authorized the Farm Production and Conservation (FPAC) mission area and

the Natural Resources Conservation Service (NRCS) to carry out pilot projects under which local and municipal governments enter into cooperative agreements to develop and test strategies for planning and implementing municipal composting plans and food waste reduction plans.

Need and Use of the Information: NRCS is using the information to determine whether participants meet the eligibility requirements to be a recipient of grant funds. Lack of adequate information to make the determination could result in the improper administration and appropriation of Federal grant funds.

Description of Respondents: Farms.

Number of Respondents: 100.

Frequency of Responses: Reporting: Semi-annually.

Total Burden Hours: 281.

Rachelle Ragland-Greene,

Departmental Information Collection Clearance Officer.

[FR Doc. 2025–21972 Filed 12–4–25; 8:45 am]

BILLING CODE 3410–16–P

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are required regarding; whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by January 5, 2026 will be considered. Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Farm Service Agency

Title: Online Registration for FSA-Sponsored Events and Conferences.

OMB Control Number: 0560–0226.

Summary Of Collection: The collecting of information is necessary for people to register online to make payment and reservation to attend Farm Service Agency (FSA) hosted events and conferences. The respondents will need to submit the information online to pay and to make reservations prior to attending any conferences and events. Respondents that do not have access to the internet can register by mail or fax.

Need and Use of the Information: FSA will collect the name, organization, organization's address, country, phone number, State, payment options and special accommodations from respondents and how they learned of the conference. The information collection element also includes race, ethnicity, gender and veteran status. FSA will use the information to get payment, confirm and make hotel and other necessary arrangements for the respondents.

Description of Respondents: Individuals or households; Farms: Business or other for-profit; Federal government, Not-for-profit institutions; State, Local or Tribal Government

Number of Respondents: 550,000.

Frequency of Responses: Reporting: On occasion.

Total Burden Hours: 41,251.

Rachelle Ragland-Greene,

Departmental Collection Clearance Officer.

[FR Doc. 2025–21994 Filed 12–4–25; 8:45 am]

BILLING CODE 3410–05–P

DEPARTMENT OF AGRICULTURE

Farm Service Agency

[Docket ID: FSA–2025–0235]

Information Collection Request; Emergency Relief Program (ERP) Phase 1 and Phase 2

AGENCY: Farm Service Agency, USDA.

ACTION: Notice; request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, the Farm Service Agency (FSA) is requesting comments from all interested individuals and organizations on an extension with a revision of a currently approved information collection for the Emergency Relief Program (ERP) Phase 1 and Phase 2. The application periods for ERP Phase 1 and Phase 2 have ended; however, the collection is continuing because additional information may be needed to verify compliance with program eligibility requirements.

DATES: We will consider comments that we receive by February 3, 2026.

ADDRESSES: We invite you to submit comments on this notice. You may submit comments by this method: *Federal eRulemaking Portal:* Go to: *www.regulations.gov* and search for Docket ID FSA–2025–0235. Follow the online instructions for submitting comments.

You may also send comments to the Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503. Copies of the information collection may be requested by contacting Kathy Sayers.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activity, contact Kathy Sayers; (202) 720–6870; email: *Kathy.Sayers@usda.gov.* Individuals who require alternative means of communication for program information should contact the USDA Target Center at (202) 720–2600 (voice) or dial 711 for Telecommunications Relay Service (both voice and text telephone users can initiate this call from any telephone).

SUPPLEMENTARY INFORMATION:

Background

FSA is announcing plans to extend and revise a currently approved information collection that supports ERP Phase 1 and Phase 2. ERP was authorized by Division B, Title I, of the Extending Government Funding and Delivering Emergency Assistance Act (Pub. L. 117–43), and provided assistance for crop, tree, bush, and vine losses that resulted from wildfires, hurricanes, floods, derechos, excessive heat, winter storms, freeze (including a polar vortex), smoke exposure, excessive moisture, and qualifying drought occurring in calendar years 2020 and 2021 (87 FR 30164; 88 FR 1862). The application period has ended for ERP Phase 1 and Phase 2 and payments have been issued.

The Extending Government Funding and Delivering Emergency Assistance

Act requires all participants who received an ERP payment to purchase crop insurance or Noninsured Crop Disaster Assistance Program (NAP) coverage for the next 2 available years. To ensure that ERP participants met this statutory requirement, FSA is verifying compliance using crop insurance participation data on file with the Risk Management Agency (RMA) and NAP participation data on file with FSA. FSA is revising the estimated number of respondents and burden hours associated with this collection to reflect the number of participants who received an ERP payment and will be subject to the requirement to purchase crop insurance or NAP coverage, remove forms that are no longer being accepted, and add responses associated with eligibility compliance activities.

Description of Information Collection Request

Title: Emergency Relief Program (ERP) Phase 1 and Phase 2.

OMB Control Number: 0560–0309.

Type of Request: Extension with revision.

OMB Expiration Date: December 31, 2025.

Abstract: The Extending Government Funding and Delivering Emergency Assistance Act (Pub. L. 117–43) requires all producers who received an ERP Phase 1 or Phase 2 payment to purchase crop insurance or Noninsured Crop Disaster Assistance Program (NAP) coverage for the next 2 available years. To ensure that ERP participants met this statutory requirement, FSA is verifying compliance using crop insurance participation data on file with the Risk Management Agency (RMA) and NAP participation data on file with FSA when possible to minimize the burden on producers.

Producers who are determined to be compliant based on FSA or RMA data will be notified of the determination by mail, and no other action will be required. If FSA is not able determine a producer's compliance based on available data, FSA will notify the producer by mail that they must submit supporting documentation to verify their compliance in order to retain their ERP payment. These producers will also be notified of FSA's final determination of compliance or noncompliance.

FSA is revising the estimated respondents and burden hours for this collection to reflect the number of ERP participants and responses associated with these compliance activities. FSA is also removing the forms previously included under this collection and the corresponding respondent and burden hour estimates because the time period to submit the forms has ended. All participants who received an ERP payment have already filed the required forms.

For the following estimated total annual burden on respondents, the formula used to calculate the total burden hour is the estimated average time per response multiplied by the estimated total annual responses.

Estimate of Respondent Burden: Public reporting burden for this information collection is estimated to average 0.102155596 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collections of information.

Respondents: Producers.

Estimated Annual Number of Respondents: 218,930.

Estimated Number of Reponses Per Respondent: 1.12.

Estimated Total Annual Responses: 244,480.

Estimated Average Time per Response: 0.102155596 hours.

Estimated Total Annual Burden on Respondents: 24,975 hours.

We are requesting comments on all aspects of this information collection to help us:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden of the collection of information including the validity of the methodology and assumptions used;

(3) Evaluate the quality, utility, and clarity of the information technology; and

(4) Minimize the burden of the information collection on those who respond through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

All comments received in response to this notice, including names and addresses where provided, will be made a matter of public record. Comments will be summarized and included in the request for OMB approval of the information collection.

William Beam,

Administrator, Farm Service Agency.

[FR Doc. 2025–21992 Filed 12–4–25; 8:45 am]

BILLING CODE 3411–E2–P

DEPARTMENT OF AGRICULTURE

Forest Service

Newspapers Used for Publication of Legal Notices by the Rocky Mountain Region: Colorado, Kansas, Nebraska, and Parts of South Dakota and Wyoming

AGENCY: Forest Service, Agriculture (USDA).

ACTION: Notice of newspapers of record.

SUMMARY: This notice lists the newspapers that will be used by the ranger districts, national forests and grasslands, and regional office of the Rocky Mountain Region to publish legal notices. The intended effect of this action is to inform interested members of the public which newspapers the Forest Service will use to publish notices of proposed actions and notices of decision. This will provide the public with constructive notice of Forest Service proposals and decisions, provide information on the procedures to comment, object or appeal, and establish the date that the Forest Service will use to determine if comments or objections were timely.

DATES: Publication of legal notices in the listed newspapers will begin on the date of this publication and continue until further notice.

ADDRESSES: Scarlett Vallaire, Regional Administrative Review Coordinator, Rocky Mountain Region, 1617 Cole Blvd., Bldg. 17, Lakewood, CO 80401.

FOR FURTHER INFORMATION CONTACT: Scarlett Vallaire, Regional Administrative Review Coordinator, by telephone at 801–989–6605 or by email at *scarlett.vallaire@usda.gov.*

SUPPLEMENTARY INFORMATION: The administrative procedures at 36 CFR parts 218 and 219 require the Forest Service to publish notices in a newspaper of general circulation. The content of the notices is specified in 36 CFR parts 218 and 219. In general, the notices will identify: the decision or project, by title or subject matter; the name and title of the official making the decision; how to obtain additional information; and where and how to file comments or objections. The date the notice is published will be used to establish the official date for the beginning of the comment or objection period. The newspapers to be used are as follows:

Regional Forester, Rocky Mountain Region

Regional Forester decisions affecting National Forests in Colorado, Kansas, Nebraska and those portions of South

Dakota and Wyoming within the Rocky Mountain Region:

The Denver Post

Arapaho and Roosevelt National Forests and Pawnee National Grassland

Forest Supervisor decisions: *Coloradoan*
Canyon Lakes District Ranger decisions: *Coloradoan*
Pawnee District Ranger decisions: *Greeley Tribune*
Boulder District Ranger decisions: *Daily Camera*
Clear Creek District Ranger decisions: *Clear Creek Courant.* A ''courtesy'' copy will also be published in the *Mountain Ear*
Sulphur District Ranger decisions: *Sky-Hi News*

Bighorn National Forest

Forest Supervisor and District Ranger decisions: *Casper Star-Tribune*

Black Hills National Forest

Forest Supervisor decisions: *The Rapid City Journal*
Bearlodge District Ranger decisions: *Sundance Times*
Mystic District Ranger decisions: *The Rapid City Journal*
Hell Canyon District Ranger decisions: *The Rapid City Journal*
Northern Hills District Ranger decisions: *Black Hills Pioneer*

Grand Mesa, Uncompahgre, and Gunnison National Forests

Forest Supervisor decisions: *Grand Junction Daily Sentinel*
Grand Valley District Ranger decisions: *Grand Junction Daily Sentinel*
Paonia District Ranger decisions: *Delta County Independent*
Gunnison District Ranger decisions: *Gunnison Country Times*
Norwood District Ranger decisions: *Telluride Daily Planet*
Ouray District Ranger decisions: *Montrose Daily Press.* A ''courtesy'' copy will also be published in the *Ouray County Plaindealer*

Medicine Bow-Routt National Forests and Thunder Basin National Grassland

Forest Supervisor decisions: *Laramie Boomerang*
Laramie District Ranger decisions: *Laramie Boomerang*
Douglas District Ranger decisions: *Casper Star-Tribune*
Brush Creek-Hayden District Ranger decisions: *Rawlins Daily Times*
Hahns Peak-Bears Ears District Ranger decisions: *Steamboat Pilot & Today*
Yampa District Ranger decisions: *Steamboat Pilot & Today*
Parks District Ranger decisions: *Jackson County Star*

Nebraska National Forests and Grasslands

Forest Supervisor decisions: *The Rapid City Journal*
Bessey District Ranger decisions: *The North Platte Telegraph*
Pine Ridge District Ranger decisions: *The Rapid City Journal*
Fall River District Ranger decisions: *The Rapid City Journal*
Wall District Ranger decisions: *The Rapid City Journal*
Fort Pierre District Ranger decisions: *The Capital Journal*

Pike and San Isabel National Forests and Cimarron and Comanche National Grasslands

Forest Supervisor decisions: *Pueblo Chieftain*
San Carlos District Ranger decisions: *Pueblo Chieftain*
South Platte District Ranger decisions: *Douglas County News Press*
Leadville District Ranger decisions: *Herald Democrat*
Salida District Ranger decisions: *The Mountain Mail*
South Park District Ranger decisions: *Fairplay Flume*
Pikes Peak District Ranger decisions: *The Gazette*
Cimarron District Ranger decisions: *Elkhart Tri-State News*
Comanche District Ranger decisions: *La Junta Tribune Democrat.* A ''courtesy'' copy will also be published in the *Plainsman Herald*

Rio Grande National Forest

Forest Supervisor and District Ranger decisions: *Valley Courier*

San Juan National Forest

Forest Supervisor decisions: *Durango Herald*
Columbine District Ranger decisions: *Durango Herald*
Pagosa District Ranger decisions: *Pagosa Sun*
Dolores District Ranger decisions: *Cortez Journal*

Shoshone National Forest

Forest Supervisor and District Ranger decisions: *Casper Star-Tribune*

White River National Forest

Forest Supervisor decisions: *The Glenwood Springs Post Independent*
Aspen-Sopris District Ranger decisions: *Aspen Times*
Blanco District Ranger decisions: *Herald Times*
Dillon District Ranger decisions: *Summit Daily*
Eagle-Holy Cross District Ranger decisions: *Vail Daily*
Rifle District Ranger decisions: *Citizen Telegram*

Beattra Wilson,

Associate Deputy Chief State and Private Forestry, National Forest System.

[FR Doc. 2025–22068 Filed 12–4–25; 8:45 am]

BILLING CODE 3411–15–P

APPRAISAL SUBCOMMITTEE OF THE FEDERAL FINANCIAL INSTITUTIONS EXAMINATION COUNCIL

[Docket No. AS25–13]

Appraisal Subcommittee; Notice of Meeting

AGENCY: Appraisal Subcommittee of the Federal Financial Institutions Examination Council.

ACTION: Notice of Meeting.

Description: In accordance with section 1104(b) of Title XI of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, as amended, codified at 12 U.S.C. 3333(b), (Title XI) and its Rules of Operation, notice is hereby given that the Appraisal Subcommittee (ASC) will meet in open session for its regular meeting:

Location: This will be a virtual meeting via Zoom. Please visit the agency's homepage (*www.asc.gov*) and access the registration link provided in the News and Events section. You MUST register in advance to attend this Meeting.

Date: December 10, 2025.
Time: 10:30 a.m. ET.
Status: Open.

Agenda

The ASC may reorder the agenda to accommodate the needs of members or staff.

Call to Order, Determination of Quorum, Opening Remarks
Approval of the September 16, 2025 Quarterly Meeting Minutes Reports
Acting Chair
Acting Executive Director
Grants Director
Delegated State Compliance Reviews

How To Attend and Observe an ASC Meeting

The meeting will be open to the public via live webcast only. Visit the agency's homepage (*www.asc.gov*) and access the registration link provided in the News and Events section. The meeting space is intended to accommodate public attendees. However, if the space will not accommodate all requests, the ASC may

refuse attendance on that reasonable basis. The use of any video or audio tape recording device, photographing device, or any other electronic or mechanical device designed for similar purposes is prohibited at ASC Meetings.

Natalie Lutz,

Attorney-Advisor.

[FR Doc. 2025–21998 Filed 12–4–25; 8:45 am]

BILLING CODE 6700–91–P

COMMISSION ON CIVIL RIGHTS

Notice of Public Meeting of the District of Columbia Advisory Committee to the U.S. Commission on Civil Rights

AGENCY: U.S. Commission on Civil Rights.

ACTION: Notice of virtual meeting.

SUMMARY: Notice is hereby given, pursuant to the provisions of the rules and regulations of the U.S. Commission on Civil Rights (Commission) and the Federal Advisory Committee Act, that the District of Columbia Advisory Committee (Committee) to the U.S. Commission on Civil Rights will hold a business meeting via Zoom. The purpose of this meeting is to discuss and vote on the draft addendum on Access to Services for Students with Disabilities in D.C. Public Schools.

DATES: Friday, January 16, 2026, from 2:00–3:00 p.m. Eastern Time.

ADDRESSES: The meeting will be held via Zoom.

Registration Link (Audio/Visual): https://www.zoomgov.com/webinar/register/WN_4ODwpwYxTjWkURu8pdcguw.

Join by Phone (Audio Only): 1–833–435–1820 USA Toll Free; Webinar ID: 160 206 6949.

FOR FURTHER INFORMATION CONTACT: Mallory Trachtenberg, DFO, at *mtrachtenberg@usccr.gov* or 202–809–9618.

SUPPLEMENTARY INFORMATION: This Committee meeting is available to the public through the registration link above. Any interested members of the public may attend this meeting. An open comment period will be provided to allow members of the public to make oral comments as time allows. Pursuant to the Federal Advisory Committee Act, public minutes of the meeting will include a list of persons who are present at the meeting. If joining via phone, callers can expect to incur regular charges for calls they initiate over wireless lines, according to their wireless plan. The Commission will not refund any incurred charges. Callers will incur no charge for calls they initiate over land-line connections to the toll-free telephone number. Closed captioning is available by selecting ''CC'' in the meeting platform. To request additional accommodations, please email *mtrachtenberg@usccr.gov* at least 10 business days prior to the meeting.

Members of the public are entitled to submit written comments; the comments must be received in the regional office within 30 days following the scheduled meeting. Written comments may be emailed to Mallory Trachtenberg at *mtrachtenberg@usccr.gov.* Persons who desire additional information may contact the Regional Programs Coordination Unit at 202–809–9618.

Records generated from this meeting may be inspected and reproduced at the Regional Programs Coordination Unit Office, as they become available, both before and after the meeting. Records of the meeting will be available via the file sharing website, *https://bit.ly/44nExsL.* Persons interested in the work of this Committee are directed to the Commission's website, *http://www.usccr.gov,* or may contact the Regional Programs Coordination Unit at *mtrachtenberg@usccr.gov.*

Agenda

I. Welcome and Roll Call
II. Announcements and Updates
III. Committee Discussion: Draft Addendum
IV. Public Comment
V. Vote: Draft Addendum
VI. Next Steps
VII. Adjournment

Dated: December 3, 2025

David Mussatt,

Supervisory Chief, Regional Programs Unit.

[FR Doc. 2025–22064 Filed 12–4–25; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Census Bureau

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; National Survey of Children's Health

AGENCY: U.S. Census Bureau, Commerce.

ACTION: Notice of information collection, request for comment.

SUMMARY: The Department of Commerce, in accordance with the Paperwork Reduction Act (PRA) of 1995, invites the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. The purpose of this notice is to allow for 60 days of public comment on the proposed revision of the National Survey of Children's Health, prior to the submission of the information collection request (ICR) to OMB for approval.

DATES: To ensure consideration, comments regarding this proposed information collection must be received on or before February 3, 2026.

ADDRESSES: Interested persons are invited to submit written comments by email to *ADDP.NSCH.List@census.gov.* Please reference National Survey of Children's Health in the subject line of your comments. You may also submit comments, identified by Docket Number USBC–2025–0137, to the Federal e-Rulemaking Portal: *http://www.regulations.gov.* All comments received are part of the public record. No comments will be posted to *http://www.regulations.gov* for public viewing until after the comment period has closed. Comments will generally be posted without change. All Personally Identifiable Information (for example, name and address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information. You may submit attachments to electronic comments in Microsoft Word, Excel, or Adobe PDF file formats.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or specific questions related to collection activities should be directed to Christine Flanagan Borman, Survey Director, by way of phone (301–763–4315) or email (*christine.flanagan.borman@census.gov*).

SUPPLEMENTARY INFORMATION:

I. Abstract

Sponsored primarily by the U.S. Department of Health and Human Services' Health Resources Services Administration's Maternal and Child Health Bureau (HRSA MCHB), the National Survey of Children's Health (NSCH) is designed to produce data on the physical and emotional health of children under 18 years of age who live in the United States. For each year of the NSCH annual survey, there are a variety of partnering agencies that sponsor supplemental content on the NSCH. Partnering agencies that have

participated in prior cycles of the NSCH include the United States Department of Health and Human Services' Centers for Disease Control and Prevention (CDC), the United States Department of Agriculture (USDA), and the Environmental Protection Agency (EPA). Partnering agencies may decide to provide support between now and the submission of the full ICR. A full list of these partnering agencies will be included within the Supporting Statements. The upcoming cycle of the NSCH also plans to include state oversamples again. These oversamples are sponsored by the interested state and support more targeted assessment, program planning, and evaluation within their state.

The NSCH collects information on factors related to the well-being of children, including access to health care, in-home medical care, family interactions, parental health, school and after-school experiences, and neighborhood characteristics. The goal of the 2026 NSCH is to provide HRSA MCHB, the supplemental sponsoring agencies, states, and other data users with the necessary data to support the production of national estimates yearly and state- or region-based estimates with pooled samples on the health and well-being of children, their families, and their communities as well as estimates of the prevalence of and impact on children with special health care needs. The MCHB sponsored NSCH sample plus the separately sponsored state-based oversamples will be approximately 400,000 addresses for the 2026 NSCH.

NSCH is seeking clearance to make the following changes:

- *Increased sample size*—The MCHB sponsored NSCH sample plus the separately sponsored age-, state-, or region-based oversamples will be approximately 400,000 addresses for the 2026 NSCH, compared with 360,000 in 2025. The increased sample will allow individual states and agencies to produce statistically sound child health estimates in a fewer number of pooled years than if the sample were to remain the same annually, thereby resulting in more timely state- and region-based health estimates of children. For example, more states can anticipate having 1,500 interviews with two years of data, an important threshold for a number of state-level health indicators.
- *Revised questionnaire content*—Newly proposed and revised NSCH content from the sponsors at HRSA MCHB underwent a 9-person cognitive test [1] and/or expert review. This testing was conducted by one of the survey methodology areas within the Census Bureau. Based on the results, a list of modified content will be included in the full OMB ICR for the 2026 NSCH.
- *Oversamples* [2]—In order to inform various priorities that are otherwise not supported by the NSCH base sample, some stakeholders are interested in sponsoring an oversample of particular populations as part of the annual NSCH administration. Currently, there are nine states interested in contributing to an oversample as part of the 2026 NSCH. All nine states (California, Illinois, Kansas, Nebraska, New Mexico, Ohio, Pennsylvania, West Virginia, and Wisconsin) have been oversampled in one or more previous cycle(s) of the NSCH since 2020 and are continuing with the option as part of the 2026 NSCH.
- *Collect respondent information on mail-return screener instruments*—Respondent name, email address, and phone number will be collected on the paper screener questionnaire and a mail-returnable screener card. This information will be used to encourage households with children to complete the remaining elements of the interview through email and telephone reminders. The mail-returnable screener card will be deployed as a test to approximately 70,000 addresses.

Besides the proposed changes listed above, the 2026 NSCH will proceed with the current design outlined in the previous OMB ICR package, including the use of incentives. Response rates for the unconditional monetary incentive group continues to show a statistically significant difference over the control group that did not receive an unconditional monetary incentive. As part of the initial screener mailing, 90% will include $5 and 10% will not receive an incentive. The incentive assignment to each sampled address will still be random as was done in prior cycles and approved by OMB. In the final screener mailing, a subset of approximately 10,000 households with children that started the web instrument but did not finish will receive a final web push invite with a secondary unconditional incentive in an attempt to have the household log back into the web instrument and finish the survey. For those households that are eligible for an initial paper topical mailing, this package will also include an additional $5 incentive. Additional incentives and mailing strategies may be used to both reduce nonresponse bias and improve response rates, including email and telephone reminders, per request of the sponsor and as funding allows. We will continue to make modifications to data collection strategies based on modeled information about paper or internet response preference. Results from prior survey cycles will continue to be used to inform the decisions made regarding future cycles of the NSCH.

From prior cycles of the NSCH, using American Association for Public Opinion Research definitions of response, we can expect for the 2026 NSCH an overall screener completion rate to be about 40.1% and an overall topical completion rate to be about 26.3%.[3] This is different from the overall response rate, which we expect to be about 36.3%.[4]

II. Method of Collection

The 2026 NSCH plan for the web push data collection design includes approximately 70% of the production addresses receiving an initial invite with instructions on how to complete an English or Spanish-language screener questionnaire via the web. This group will receive two web survey invitation letters requesting their participation in the survey prior to receiving up to two additional paper screener questionnaires in the second and third follow-up mailings. Households that decide to complete the web-based survey will be taken through the screener questionnaire to determine if they are eligible for one of three topical instruments. Households that list at least one child who is 0 to 17 years old in the screener are directed into a topical questionnaire immediately after the last screener question. If a household in the web push treatment group decides to complete the paper screener, the household will receive an

[1] Paperwork Reduction Act Guidance *https://pra.digital.gov/do-i-need-clearance/*.

[2] State Oversampling in the National Survey of Children's Health: Feasibility, Cost, and Alternative Approaches *https://census.gov/content/dam/Census/programs-surveys/nsch/NSCH_State_Oversample_Summary_Document.pdf*.

[3] Screener Completion Rate is the proportion of screener-eligible households (*i.e.,* occupied residences) that completed a screener. It is equal to (S+X)/(S+X+R+e(UR+UO)), where S is the count of completed screeners with children, X is completed screeners without children, R is screener refusals, and e(UR+UO) is the estimated count of screener eligible households among nonresponding addresses. The Topical Completion Rate is the proportion of topical-eligible households (*i.e.,* occupied residences with children present) that completed a topical questionnaire. It is equal to I/HCt, where I is the count of completed topicals and HCt is the estimated count of households with children in the sample or S+R+(S+R)/(S+X+R)*e(UR+UO).

[4] Overall Response Rate is the probability a resolved address completes a screener questionnaire and then, when eligible, completes a topical questionnaire.

additional topical questionnaire incentive.

The 2026 NSCH plan for the mixed-mode data collection design includes up to 30% of the production addresses receiving a paper screener questionnaire in the initial mailing with instructions on how to complete an English or Spanish language screener questionnaire via the web as well. This group will receive both a web survey invitation letter along with a mailed paper screener questionnaire with either the initial invitation or the first follow-up and each additional nonresponse follow-up mailing. Households that decide to complete the web-based survey will follow the same screener and topical selection path as the web push. Households that choose to complete the paper screener questionnaire rather than completing the survey on the internet and that have eligible children will be mailed a paper topical questionnaire upon receipt of their completed paper screener at the Census Bureau's National Processing Center. If a household in the mixed-mode group chooses to complete the paper screener instead of completing the web-based screener via the internet, then the household will receive an additional topical questionnaire incentive.

III. Data

OMB Control Number: 0607–0990.

Form Number(s): NSCH–S1 (English Screener), NSCH–T1 (English Topical for 0- to 5-year-old children), NSCH–T2 (English Topical for 6- to 11-year-old children), NSCH–T3 (English Topical for 12- to 17-year-old children), NSCH–S–S1 (Spanish Screener), NSCH–S–T1 (Spanish Topical for 0- to 5-year-old children), NSCH–S–T2 (Spanish Topical for 6- to 11-year-old children), and NSCH–S–T3 (Spanish Topical for 12- to 17-year-old children).

Type of Review: Regular submission, Request for a Revision of a Currently Approved Collection.

Affected Public: Individuals and households.

Estimated Number of Respondents: 122,461.

Estimated Time per Response: 5 minutes per screener response and 35–36 minutes per topical response, which in total is approximately 40–41 minutes for households with eligible children.

Estimated Total Annual Burden Hours: 42,496.

Estimated Total Annual Cost to Public: $0 (This is not the cost of respondents' time, but the indirect costs respondents may incur for such things as purchases of specialized software or hardware needed to report, or expenditures for accounting or records maintenance services required specifically by the collection.)

Respondent's Obligation: Voluntary.

Legal Authority: Title 13 U.S.C. 8(b); Section 501(a)(2) of the Social Security Act (42 U.S.C. 701).

IV. Request for Comments

We are soliciting public comments to permit the Department/Bureau to: (a) Evaluate whether the proposed information collection is necessary for the proper functions of the Department, including whether the information will have practical utility; (b) Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used; (c) Evaluate ways to enhance the quality, utility, and clarity of the information to be collected; and (d) Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Comments that you submit in response to this notice are a matter of public record. We will include, or summarize, each comment in our request to OMB to approve this ICR. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Sheleen Dumas,

Departmental PRA Compliance Officer, Office of the Under Secretary for Economic Affairs, Commerce Department.

[FR Doc. 2025–22134 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–07–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–48–2025]

Foreign-Trade Zone 183; Application for Subzone; Applied Materials, Inc.; Austin and Pflugerville, Texas

An application has been submitted to the Foreign-Trade Zones (FTZ) Board by the Foreign Trade Zone of Central Texas, Inc., grantee of FTZ 183, requesting subzone status for the facilities of Applied Materials, Inc., located in Austin and Pflugerville, Texas. The application was submitted pursuant to the provisions of the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the FTZ Board (15 CFR part 400). It was formally docketed on December 3, 2025.

The proposed subzone would consist of the following sites: *Site 1* (244.69 acres) 9700 US 290 East, Austin; *Site 2* (18.857 acres) 3212 East Pecan Street, Pflugerville; *Site 3* (9.47 acres) 9701 Metric Boulevard, Austin; *Site 4* (13.43 acres) 710 and 810 W Howard Lane, Austin; and, *Site 5* (18.02 acres) 10000 Spectrum, Austin. A notification of proposed production activity has been submitted and will be published separately for public comment.

In accordance with the FTZ Board's regulations, Camille Evans of the FTZ Staff is designated examiner to review the application and make recommendations to the FTZ Board.

Public comment is invited from interested parties. Submissions shall be addressed to the FTZ Board's Executive Secretary and sent to: *ftz@trade.gov.* The closing period for their receipt is January 14, 2026. Rebuttal comments in response to material submitted during the foregoing period may be submitted through January 29, 2026.

A copy of the application will be available for public inspection in the ''Online FTZ Information Section'' section of the FTZ Board's website, which is accessible via *www.trade.gov/ftz.*

For further information, contact Camille Evans at *Camille.Evans@trade.gov.*

Dated: December 3, 2025.

Elizabeth Whiteman,

Executive Secretary.

[FR Doc. 2025–22101 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Groundfish Trawl Catcher Processor Economic Data Report (EDR)

The Department of Commerce will submit the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. We invite the general

public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on July 11, 2025 during a 60-day comment period. This notice allows for an additional 30 days for public comments.

Agency: National Oceanic and Atmospheric Administration, Commerce.

Title: Groundfish Trawl Catcher Processor Economic Data Report (EDR).

OMB Control Number: 0648–0564.

Form Number(s): None.

Type of Request: Regular submission, extension of a current information collection.

Number of Respondents: 22.

Average Hours per Response: 40 hours.

Total Annual Burden Hours: 880 hours.

Needs and Uses: The National Marine Fisheries Services (NMFS), Alaska Regional Office, is requesting extension of the currently approved information collection for the Annual Trawl Catcher/Processor Economic Data Report (the EDR).

The EDR collects economic data for the groundfish trawl fleet established by Amendment 80 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area. Amendment 80 primarily allocates several Bering Sea and Aleutian Islands non-pollock trawl groundfish fisheries among fishing sectors, and facilitates the formation of harvesting cooperatives among vessels in the non-American Fisheries Act (non-AFA) Trawl Catcher/Processor Cooperative Program. This program established a limited access privilege program for the non-AFA trawl catcher/processor sector.

Data collected through the EDR includes labor information, revenues received, capital and operational expenses, and other operational or financial data. NMFS and the Council use this to assess the economic effects of Amendment 80 on vessels or entities regulated by the non-AFA Trawl Catcher/Processor Cooperative Program, and impacts of major changes in the groundfish management regime, including allocation of prohibited species catch species and target species to harvesting cooperatives.

The EDR is submitted annually by each person who held an Amendment 80 Quota Share permit or was an owner or leaseholder of an Amendment 80 vessel, or was an owner or leaseholder of a vessel named on a License Limitation Program groundfish license with catcher/processor vessel and trawl gear designations and endorsed for the GOA during a calendar year. The EDR requirements are located at 50 CFR 679.94.

Affected Public: Business or other for-profit organizations.

Frequency: Annually.

Respondent's Obligation: Mandatory.

Legal Authority: The Magnuson-Stevens Fishery Conservation and Management Act 16 U.S.C 1801 *et seq.* The EDR is submitted annually by each person who held an Amendment 80 Quota Share permit or was an owner or leaseholder of an Amendment 80 vessel, or was an owner or leaseholder of a vessel named on a License Limitation Program groundfish license with catcher/processor vessel and trawl gear designations and endorsed for the GOA during a calendar year. The EDR requirements are located at 50 CFR 679.94.

This information collection request may be viewed at *www.reginfo.gov.* Follow the instructions to view the Department of Commerce collections currently under review by OMB.

Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function and entering either the title of the collection or the OMB Control Number 0648–0564.

Sheleen Dumas,

Departmental PRA Compliance Officer, Office of the Under Secretary for Economic Affairs, Commerce Department.

[FR Doc. 2025–21964 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XF350]

Magnuson-Stevens Fishery Conservation and Management Act Provisions; Atlantic Coastal Fisheries Cooperative Management Act Provisions; General Provisions for Domestic Fisheries; Application for Exempted Fishing Permits

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; request for comments.

SUMMARY: The Assistant Regional Administrator for Sustainable Fisheries, Greater Atlantic Region (GARFO), NMFS, has made a preliminary determination that an Exempted Fishing Permit (EFP) application contains all of the required information and warrants further consideration. The EFP would allow federally permitted fishing vessels to fish outside fishery regulations in support of exempted fishing activities proposed by the Massachusetts Division of Marine Fisheries (MA DMF). Regulations under the Magnuson-Stevens Fishery Conservation and Management Act require publication of this notification to provide interested parties the opportunity to comment on applications for proposed EFPs.

DATES: Comments must be received on or before December 22, 2025.

ADDRESSES: You may submit written comments by email: *nmfs.gar.efp@noaa.gov.* Include in the subject line ''MA DMF On-Demand EFP.'' All comments received are a part of the public record and may be posted for public viewing without change. All personal identifying information (*e.g.,* name, address), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter ''anonymous'' as the signature if you wish to remain anonymous).

FOR FURTHER INFORMATION CONTACT: Christine Ford, Fishery Management Specialist, *Christine.Ford@noaa.gov,* (978) 281–9185.

SUPPLEMENTARY INFORMATION: The MA DMF submitted a complete application for an EFP to conduct commercial fishing activities that the regulations would otherwise restrict, to conduct trials of on-demand fishing gear that use no surface buoys and to test the ability of gear marking systems to consistently locate gear. This EFP would exempt the participating vessels from the following Federal regulations:

TABLE 1—REQUESTED EXEMPTIONS

CFR citation	Regulation	Need for exemption
50 CFR 697.21(b)(2)	Gear marking requirements	For trial of trap/pot gear with no surface markings (fully ropeless) on trawls of more than three traps.

TABLE 2—PROJECT SUMMARY

Project title	Testing on-demand fishing technologies that help minimize the risk of large whale entanglements in lobster trap fishing gear in Massachusetts coastal waters.
Project start	02/01/2026.
Project end	05/15/2026.
Project objectives	Provide access and support for Massachusetts lobster trap fishers to fish during the closed season in the restricted areas. Mitigate the economic impact of seasonal fishing closures while continuing to reduce the risk of entanglement to endangered North Atlantic right whales. Collect data to help address technological and logistical issues associated with the implementation of on-demand gear fishing.
Project location	Massachusetts Restricted Area (MRA); South Islands Restricted Area (SIRA); Outer Cape Cod Lobster Management Area (OCCLMA).
Number of vessels	Up to 50.
Number of trips	Up to 700.
Trip duration (days)	1 day.
Total number of days	Up to 700.
Gear type(s)	Trap/pot.
Number of tows or sets	Up to 20/trip; up to 14,000 total.
Duration of tows or sets	Up to 7 days.

Project Narrative

This EFP would allow federally permitted vessels to test on-demand gear in seasonal Restricted Areas that do not allow the use of persistent vertical lines under the Atlantic Large Whale Take Reduction Plan (ALWTRP). This project would allow up to 50 lobster trap vessels to replace up to 20 of their existing trawls with modified trawls in the ALWTRP Restricted Areas. Modified gear would replace both traditional end lines with one or two on-demand units; trawls would have no persistent vertical lines (fully ropeless). Participants will use privately owned on-demand gear purchased with their own funds or purchased through reimbursements provided by an on-demand grant program operated by MA DMF. Participants will only be allowed to use on-demand systems that are currently approved for use in the restricted areas under the Northeast Fisheries Science Center (NEFSC) EFP, based on their gear team's reliability standards. MA DMF will record each participants' brand of approved on-demand gear, and consult with them to confirm they know how to use the gear and marking system, either via training from the manufacturer, from participation in another EFP, or through training by MA DMF.

The goals of this project are to provide Federal lobster permit holders in Massachusetts with access to seasonal Restricted Areas, to test the efficacy of methods that alert other fishers to the presence of gear on the bottom, and to provide policy makers with information about the operational benefits and constraints of fishing without vertical lines. The project objectives are to:

- Provide participants with additional fishing opportunities through access to seasonal Restricted Areas;
- Collect data on the deployment and retrieval of on-demand gear, usage of gear location marking systems, and any occurrences of gear conflicts or gear deployment failures;
- Provide support and training for participating fishers on the use of on-demand technologies;
- Trial gear location marking systems that promote interoperability for fishers and reduce the potential for gear conflict;
- Collect timing data on hauling efficiency of on-demand versus traditional fishing gear; and
- Provide feedback to on-demand manufacturers to increase performance under commercial fishery conditions.

This permit would only exempt vessels from the specified Federal regulations in Federal waters. It would not exempt the vessels from any requirements imposed by any state, the Endangered Species Act, the Marine Mammal Protection Act, or any other applicable laws. The applicant would be responsible for obtaining all required state authorizations. Other than gear markings, all trap/pot trawls would be consistent with the regulations of the management area where the vessel is fishing and would be fished in accordance with the participating vessels' standard operations (number and length of trips, soak times, trap limits, *etc.*).

Participants would be required to virtually mark the location of each end of their trawls using the gear-marking technology associated with the on-demand system they were fishing. All gear-marking would be integrated with the EarthRanger gear location cloud-based database so that all EarthRanger users would be able to see all set on-demand gear within 5 miles (8.05 km). MA DMF would also have access to all on-demand set locations through EarthRanger.

MA DMF would provide standardized data collection sheets to all participants. Data deemed confidential, including but not limited to on-demand specific deployment locations and catch information, may be collected but will not be made public.

MA DMF proposes the following best practices and risk reduction measures:

- All vessels would report all right whale sightings to NMFS via *ne.rw.survey@noaa.gov* or NOAA (866–755–6622) or the U.S. Coast Guard (Channel 16) and record sightings on data sheets;
- All vessels would retrieve on-demand vertical lines as quickly as possible to minimize time in the water column;
- All vessels would adhere to current approach regulations—a 500-yard (457.2-meter) buffer zone created by a surfacing right whale—and must depart immediately at a safe and slow speed, in accordance with current regulations;
- If any large whale species came within 500 yards (457.2 meters) of a participating vessel during hauling, fishing would immediately cease, by

either removal or resetting, and be reinitiated only after it was reasonable to assume the whale(s) had left the area;

- All vessels would provide mandatory, weekly gear loss reports; MA DMF would provide monthly gear conflict/loss reports to the Greater Atlantic Regional Fisheries Office (GARFO);
- All vessels would operate within a 10-knot (18.52 km) speed limit when transiting Restricted Areas or when whales are observed;
- EarthRanger web access, the ER Buoy app, or an equivalent application will be utilized for identifying any on-demand gear currently set within the work areas;
- Stowed hauling lines in on-demand units will contain a unique colored marking consisting of 12″ of yellow twine above each regional ALWTRP marking;
- A unique flag will be flown by each vessel within ALWTRP vertical line closure areas for enforcement recognition;
- All participants would carry a MA DMF scientist on a subset of trips to collect additional data and oversee trial performance;
- No floating groundline would be used on research trawls, including where otherwise legally allowed between the first trap and anchor or on-demand unit; and
- Law enforcement agencies will be notified of project participants and activities in advance of the project start date.

If approved, the applicant may request minor modifications and extensions to the EFP throughout the year. EFP modifications and extensions may be granted without further notice if they are deemed essential to facilitate completion of the proposed research and have minimal impacts that do not change the scope or impact of the initially approved EFP request. Any fishing activity conducted outside the scope of the exempted fishing activity would be prohibited.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 2, 2025.

Kelly Denit,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–21997 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XF327]

Pacific Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: The Pacific Fishery Management Council (Pacific Council) will hold an online meeting of its Ad Hoc Highly Migratory Species (HMS) Fisheries Innovation Workgroup (FIW) to discuss procedures to facilitate the development of new HMS gears and achieve the goals of the HMS Roadmap. This meeting is open to the public.

DATES: The online meeting will be held Tuesday, December 9, 2025, from 8:30 a.m. to 12:30 p.m., Pacific Standard Time or until business for the day has been completed.

ADDRESSES: The meeting will be held online. Specific meeting information, including directions on how to join the meeting and system requirements, will be provided in the meeting announcement on the Pacific Council's website (see *https://www.pcouncil.org*). You may send an email to Mr. Kris Kleinschmidt (*kris.kleinschmidt@pcouncil.org*) or contact him at 503–820–2412 for technical assistance.

Council address: Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 101, Portland, Oregon 97220–1384.

FOR FURTHER INFORMATION CONTACT: Kerry Griffin, Pacific Council; telephone: 503–820–2409.

SUPPLEMENTARY INFORMATION: The purpose of this meeting is to continue discussion of the HMS Roadmap, the HMS exempted fishing permit (EFP) process, and EFP performance goals and metrics. The FIW will also discuss any guidance provided at the November 2025 Council meeting and plan for next steps.

Although non-emergency issues not contained in the meeting agenda may be discussed, those issues may not be the subject of formal action during this meeting. Action will be restricted to those issues specifically listed in this document and any issues arising after publication of this document that require emergency action under section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the intent to take final action to address the emergency.

Special Accommodations

Requests for sign language interpretation or other auxiliary aids should be directed to Mr. Kris Kleinschmidt (*kris.kleinschmidt@pcouncil.org;* 503–820–2412) at least 10 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 1, 2025.

Rey Israel Marquez,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–21967 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XF356]

Permits; Foreign Fishing

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of application for transshipment permit; request for comments.

SUMMARY: NMFS publishes for public review and comment information regarding a permit application for transshipment of farmed salmon from aquaculture operations in Maine waters to processing plants in Canada by Canadian flagged vessels. The application for a transshipment permit is submitted under provisions of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). This action is necessary for NMFS to make a determination on whether to approve the permit application.

DATES: Written comments must be received by December 19, 2025.

ADDRESSES: Written comments on this action, identified by RTID 0648–XF356 should be sent to Jasmine Prat in the NMFS Office of International Affairs, Trade, and Commerce by email at *jasmine.prat@noaa.gov.*

FOR FURTHER INFORMATION CONTACT: Jasmine Prat by email at *jasmine.prat@noaa.gov,* or by phone at 301–956–5472.

SUPPLEMENTARY INFORMATION:

Background

Section 1824(d) of the Magnuson-Stevens Act (16 U.S.C. 1824(d)) authorizes the Secretary of Commerce (Secretary) to issue a transshipment

permit for a vessel other than a vessel of the United States to engage in fishing consisting solely of transporting fish or fish products at sea from a point within the United States Exclusive Economic Zone (EEZ) or, with the concurrence of a state, within the boundaries of that state, to a point outside the United States.

Section 1824(d)(3)(D) of the Magnuson-Stevens Act provides that an application to transship from U.S. waters to another country using non-U.S. vessels may not be approved until the Secretary determines that no owner or operator of a vessel of the United States which has adequate capacity to perform the transportation for which the application is submitted has indicated an interest in performing the transportation at fair and reasonable rates. NMFS is publishing this notice as part of its effort to make such a determination with respect to the application described below.

Summary of Application

NMFS received an application from True North Salmon Limited Partnership, Kelly Cove Salmon Limited, and 697002 NB, Inc., requesting authorization to transfer salmon from U.S. farm pens in Maine waters to five Canadian vessels for the purpose of transporting the salmon to Blacks Harbour, Canada for processing. The transshipment operations will occur within the boundaries of the State of Maine, and within 12 nautical miles from Maine's seaward boundary. NMFS issued permits for the same vessels for use in calendar year 2025. Those permits expire December 31, 2025.

Dated: December 3, 2025.

Alexa Cole,

Director, Office of International Affairs, Trade, and Commerce, National Marine Fisheries Service.

[FR Doc. 2025–22110 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XF337]

Fisheries of the Exclusive Economic Zone Off Alaska; Bering Sea and Aleutian Islands Management Area; Cost Recovery Fee Notice for the Western Alaska Community Development Quota and Trawl Limited Access Privilege Programs

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notification of standard prices and fee percentage.

SUMMARY: NMFS publishes standard prices and fee percentages for cost recovery for the Amendment 80 Program, the American Fisheries Act (AFA) Program, the Aleutian Islands Pollock (AIP) Program, and the Western Alaska Community Development Quota (CDQ) Program in the Bering Sea Aleutian Islands (BSAI) management area. The fee percentages for 2025 are 1.55 percent for the Amendment 80 Program, 0.36 percent for the AFA inshore cooperatives, 0 percent for the AIP program, and 1.19 percent for the CDQ Program. This notice is intended to provide the 2025 standard prices and fee percentages to calculate the required payment for cost recovery fees due by December 31, 2025.

DATES: The standard prices and fee percentages are valid on December 5, 2025.

FOR FURTHER INFORMATION CONTACT: Dana Whitely, Fee Coordinator, 907–586–7231.

SUPPLEMENTARY INFORMATION:

Background

Section 304(d) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) authorizes and requires that NMFS collect cost recovery fees for limited access privilege programs and the CDQ Program. Cost recovery fees include NMFS' actual costs directly related to its management, data collection, and enforcement of the programs. Section 304(d) of the Magnuson-Stevens Act mandates that cost recovery fees not exceed 3 percent of the annual ex-vessel value of fish harvested under any program subject to a cost recovery fee and that the fee be collected either at the time of landing, filing of a landing report, or sale of such fish during a fishing season or in the last quarter of the calendar year in which the fish is harvested.

NMFS manages the Amendment 80 Program, AFA Program, and AIP Program as limited access privilege programs. On January 5, 2016, NMFS published a final rule to implement cost recovery for these three limited access privilege programs and the CDQ program (81 FR 150). The designated representative (for the purposes of cost recovery) for each program is responsible for submitting the fee payment to NMFS on or before December 31 of the year in which the landings were made. The total dollar amount of the fee due is determined by multiplying the NMFS published fee percentage by the ex-vessel value of all landings under the program made during the fishing year. NMFS publishes this notice of the fee percentages for the Amendment 80, AFA, AIP, and CDQ programs in the **Federal Register**.

Standard Prices

The fee liability is based on the ex-vessel value of fish harvested in each program. For purposes of calculating cost recovery fees, NMFS uses a standard ex-vessel price (standard price) for each species. A standard price is determined using information on landings purchased (volume) and ex-vessel value paid (value). For most groundfish species, NMFS annually summarizes volume and value information for landings of all fishery species subject to cost recovery to estimate a standard price for each species. The standard prices are described in U.S. dollars per pound for landings made during the year. The standard prices for all species in the Amendment 80, AFA, AIP, and CDQ programs are provided in table 1. Each landing made under each program is multiplied by the appropriate standard price to arrive at an ex-vessel value for each landing. These values are summed together to arrive at the ex-vessel value of each program (fishery value).

TABLE 1—STANDARD EX-VESSEL PRICES BY SPECIES FOR THE 2025 FISHING YEAR

Species	Gear type	Reporting period	Standard ex-vessel price per pound ($)
Arrowtooth flounder	All	January to December	0.26
Atka mackerel	All	January to December	0.25

TABLE 1—STANDARD EX-VESSEL PRICES BY SPECIES FOR THE 2025 FISHING YEAR—Continued

Species	Gear type	Reporting period	Standard ex-vessel price per pound ($)
Flathead sole	All	January to December	0.19
Greenland turbot	All	January to December	0.73
CDQ halibut	Fixed gear	January to December	5.99
Pacific cod	Fixed gear	January to December	0.42
	Trawl gear	January to December	0.34
Pacific ocean perch	All	January to December	0.23
Pollock	All	January to December	0.15
Rock sole	All	January to March	0.20
	All	April to December	0.21
Sablefish	Fixed gear	January to December	1.65
	Trawl gear	January to December	0.78
Yellowfin sole	All	January to December	0.18

Fee Percentage

Annually, NMFS calculates the applicable fee percentage for each of the four programs according to the factors and methods described at 50 CFR 679 under §§ 679.33(c)(2) for CDQ, 679.66(c)(2) for AFA, 679.67(c)(2) for AIP, and 679.95(c)(2) for Amendment 80. NMFS determines the fee percentage that applies to landings made during the year by dividing the total costs directly related to the management, data collection, and enforcement of each program (direct program costs) during the year by the fishery value. NMFS captures direct program costs through an established accounting system that allows staff to track labor, travel, contracts, and procurement costs. For 2025, the direct program costs for each program were tracked from October 1, 2024 to September 30, 2025 (the end of the fiscal year). The Amendment 80 Program was a primary focus for software development in 2025, resulting in increased contract costs. However, these increases were offset by reductions in other billable costs and a 16% increase in fishery and value when compared to 2024. This results in a decreased fee percentage; from the 2024 fee percentage of 1.86 to the 2025 fee percentage of 1.55. AFA fishery value declined by 17% when compared to 2024. When combined with a 20% increase in direct costs, this results in an increase from the 2024 fee percentage of 0.24 to the 2025 fee percentage of 0.36. The CDQ fishery value declined by 4.7% when compared to 2024, however direct program costs declined by 18%, resulting in a decrease from the 2024 fee percentage of 1.38 to the 2025 fee percentage of 1.19. The 2025 percentage for the AIP Program is zero because there was no AIP fishery in 2025, thus no associated harvest.

NMFS will provide an annual report that summarizes direct program costs for each of the programs in early 2026. NMFS calculates the values for each fishery as described earlier under the Standard Prices section of this notice.

Amendment 80 Program Standard Prices and Fee Percentage

The Amendment 80 Program allocates total allowable catches (TACs) of groundfish species, other than Bering Sea pollock, to identified trawl catcher/processors fishing in the BSAI. The Amendment 80 Program allocates a portion of the BSAI TACs of six species: Atka mackerel, Pacific cod, flathead sole, rock sole, yellowfin sole, and Aleutian Islands Pacific ocean perch. In recent years, participants in the Amendment 80 sector have established a cooperative to harvest these allocations. Each Amendment 80 cooperative is responsible for payment of the cost recovery fee for fish landed under the Amendment 80 Program. Cost recovery requirements for the Amendment 80 Program are at § 679.95.

For Amendment 80 species, other than rock sole, NMFS annually summarizes volume and value information for landings of all fishery species subject to cost recovery in order to estimate a standard price for each fishery species. Regulations specify that for rock sole, NMFS shall calculate a separate standard price for two periods, January 1 through March 31 and April 1 through October 31, which has historically accounted for a substantial difference in estimated rock sole prices during the first quarter of the year relative to the remainder of the year. The volume and value information are obtained from the First Wholesale Volume and Value Report submitted by catcher/processors that harvested Amendment 80 or CDQ species, and the Pacific Cod Ex-Vessel Volume and Value Report submitted by shoreside processors and motherships that processed landings of BSAI or CDQ Pacific cod.

Using the fee percentage formula described generally above, the estimated percentage of direct program costs to fishery value for the 2025 calendar year is 1.55 percent for the Amendment 80 Program. For 2025, NMFS applies the fee percentage to each Amendment 80 species landing that was debited from an Amendment 80 cooperative quota allocation between January 1 and December 31 to calculate the Amendment 80 fee liability for each Amendment 80 cooperative. The 2025 fee payments must be submitted to NMFS on or before December 31, 2025. Payment must be made in accordance with the payment methods set forth in § 679.95(a)(3)(iv).

AFA Standard Price and Fee Percentages

The AFA Program allocates the Bering Sea directed pollock fishery TAC to three sectors: catcher/processor, mothership, and inshore. Each sector has established cooperatives to harvest the sector's exclusive allocation. In 2025, each cooperative for the inshore sector is responsible for paying the fee for Bering Sea pollock landed under the AFA Program. Cost recovery requirements for the AFA sectors are found at § 679.66.

NMFS calculates the standard price for pollock using the most recent annual value information reported to the Alaska Department of Fish and Game for the Commercial Operator's Annual Report and compiled in the Alaska Commercial Fisheries Entry Commission Gross Earnings data. Due to the time required to compile the data, there is a 1-year delay between the gross earnings data year and the fishing year to which it is applied. For example, NMFS used 2024 gross earnings data to calculate the standard price for 2025 pollock landings.

Under the fee percentage formula described above, the estimated percentage of direct program costs to fishery value for the 2025 calendar year is 0.36 percent for the AFA inshore sector. To calculate the 2025 fee liabilities, NMFS applies the respective fee percentages to the landings of Bering Sea pollock debited from each cooperative's fishery allocation that occurred between January 1 and December 31. The 2025 fee payments must be submitted to NMFS on or before December 31, 2025. Payment must be made in accordance with the payment methods set forth in § 679.66(a)(4)(iv).

AIP Program Standard Price and Fee Percentage

The AIP Program allocates the Aleutian Islands directed pollock fishery TAC to the Aleut Corporation, consistent with the Consolidated Appropriations Act of 2004 (Pub. L. 108–199) and implementing regulations. Annually, prior to the start of the pollock season, the Aleut Corporation provides NMFS with the identity of its designated representative for harvesting the Aleutian Islands directed pollock fishery TAC. The same individual is responsible for the submission of all cost recovery fees for pollock landed under the AIP Program. Cost recovery requirements for the AIP Program are at § 679.67.

NMFS calculates the standard price for pollock using the most recent annual value information reported to the Alaska Department of Fish and Game for the Commercial Operator's Annual Report and compiled in the Alaska Commercial Fisheries Entry Commission Gross Earnings data for Aleutian Islands pollock. As explained above, due to the time required to compile the data, there is a 1-year delay between the gross earnings data year and the fishing year to which it is applied.

For the 2025 fishing year, the Aleut Corporation did not select any participants to harvest or process the Aleutian Islands directed pollock fishery TAC, and most of that TAC was reallocated to the Bering Sea directed pollock fishery TAC. Since there was no fishery for the AIP Program in 2025, the fee percentage is zero.

CDQ Standard Price and Fee Percentage

The CDQ Program was implemented in 1992 to provide access to BSAI fishery resources to villages located in Western Alaska. Section 305(i) of the Magnuson-Stevens Act identifies 65 villages eligible to participate in the CDQ Program and the six CDQ groups to represent these villages. CDQ groups receive exclusive harvesting privileges of the TACs for a broad range of crab species, groundfish species, and halibut. NMFS implemented a CDQ cost recovery program for the BSAI crab fisheries in 2005 (70 FR 10174, March 2, 2005) and published the cost recovery fee percentage for the 2024/2025 crab fishing year on July 28, 2025 (90 FR 35508). This notice provides the cost recovery fee percentage for the CDQ Program with respect to groundfish and halibut. Each CDQ group is subject to cost recovery fee requirements and the designated representative of each CDQ group is responsible for submitting payment for their CDQ group. Cost recovery requirements for the CDQ Program are at § 679.33.

For most CDQ groundfish species, NMFS annually summarizes volume and value information for landings of all fishery species subject to cost recovery in order to estimate a standard price for each fishery species. The volume and value information are obtained from the First Wholesale Volume and Value Report and the Pacific Cod Ex-Vessel Volume and Value Report. For CDQ halibut and fixed-gear sablefish, NMFS calculates the standard prices using information from the Individual Fishing Quota (IFQ) Ex-Vessel Volume and Value Report, which collects information on both IFQ and CDQ volume and value.

Using the fee percentage formula described above, the estimated percentage of direct program costs to fishery value for the 2025 calendar year is 1.19 percent for the CDQ Program. For 2025, NMFS applies the calculated CDQ fee percentage to all CDQ groundfish and halibut landings made between January 1 and December 31 to calculate the CDQ fee liability for each CDQ group. The 2025 fee payments must be submitted to NMFS on or before December 31, 2025. Payment must be made in accordance with the payment methods set forth in § 679.33(a)(3)(iv).

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 2, 2025.

Kelly Denit,

Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–21965 Filed 12–2–25; 4:15 pm]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XF347]

Mid-Atlantic Fishery Management Council (MAFMC); Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: The MAFMC's Mackerel, Squid, and Butterfish Monitoring Committee will hold a public meeting.

DATES: The meeting will be held on Friday, December 12, 2025, from 9:30 a.m.–11 a.m. For agenda details, see **SUPPLEMENTARY INFORMATION**.

ADDRESSES: The meeting will be held via webinar. Connection information will be posted to the Council's calendar prior to the meeting at *https://www.mafmc.org.*

Council address: Mid-Atlantic Fishery Management Council, 800 N. State Street, Suite 201, Dover, DE 19901; telephone: (302) 674–2331; *https://www.mafmc.org.*

FOR FURTHER INFORMATION CONTACT: Christopher M. Moore, Ph.D., Executive Director, Mid-Atlantic Fishery Management Council, telephone: (302) 526–5255.

SUPPLEMENTARY INFORMATION: The MAFMC's Mackerel, Squid, and Butterfish Monitoring Committee will meet via webinar Friday, December 12, 2025, from 9:30 a.m. until 11 a.m. The purpose of this meeting is for the Monitoring Committee to provide advice regarding the framework adjustment action on Atlantic mackerel that would set 2026–2027 specifications/management measures and may adjust the stock's rebuilding approach. This meeting was originally intended for November 2025 but had to be rescheduled.

The meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Shelley Spedden, (302) 526–5251 at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 3, 2025.

Rey Israel Marquez,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2025–22112 Filed 12–4–25; 8:45 am]

BILLING CODE 3510–22–P

COMMODITY FUTURES TRADING COMMISSION

Agency Information Collection Activities: Notice of Intent To Renew Collection 3038–0023, Registration Under the Commodity Exchange Act

AGENCY: Commodity Futures Trading Commission.

ACTION: Notice.

SUMMARY: The Commodity Futures Trading Commission (''Commission'' or ''CFTC'') is announcing an opportunity for public comment on the proposed renewal of a collection of certain information by the agency. Under the Paperwork Reduction Act of 1995 (''PRA''), Federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, and to allow 60 days for public comment. This notice solicits comments on the extension of information collection requirements relating to registration under the Commodity Exchange Act, OMB Control No. 3038–0023 (Registration under the Commodity Exchange Act).

DATES: Comments must be submitted on or before February 3, 2026.

ADDRESSES: You may submit comments, identified by ''Registration under the Commodity Exchange Act,'' Collection Number 3038–0023, by any of the following methods:

- The Agency's website, at *https://comments.cftc.gov/.* Follow the instructions for submitting comments through the website.
- *Mail:* Christopher Kirkpatrick, Secretary of the Commission, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street NW, Washington, DC 20581.
- *Hand Delivery/Courier:* Same as Mail above.

Please submit your comments using only one method. All comments must be submitted in English, or if not, accompanied by an English translation. Comments will be posted as received to *https://www.cftc.gov.*

FOR FURTHER INFORMATION CONTACT: Christopher W. Cummings, Market Participants Division, Commodity Futures Trading Commission, (202) 418–5445 or *ccummings@cftc.gov,* and refer to OMB Control No. 3038–0023.

SUPPLEMENTARY INFORMATION: Under the PRA, 44 U.S.C. 3501 *et seq.,* Federal agencies must obtain approval from the Office of Management and Budget (''OMB'') for each collection of information they conduct or sponsor. ''Collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA, 44 U.S.C. 3506(c)(2)(A), requires Federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, the Commission is publishing notice of the proposed collection of information listed below. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Title: Registration under the Commodity Exchange Act (OMB Control No. 3038–0023). This is a request for an extension of a currently approved information collection.

Abstract: The information collected under OMB Control No. 3038–0023 is gathered through the use of forms for registration of firms and individuals who are required by the Commodity Exchange Act (''CEA'') to register with the Commission. The CEA requires commodity interest market intermediaries and participants to register, including: Futures commission merchants and introducing brokers (7 U.S.C. 6d); Commodity pool operators and commodity trading advisors (7 U.S.C. 6m(1)); Retail foreign exchange dealers (7 U.S.C. 2(c)); Associated persons (7 U.S.C. 6k); Floor traders or floor brokers (7 U.S.C. 6e); and Swap dealers and major swap participants (7 U.S.C. 6s(a)). The CFTC uses various forms for registration (and withdrawal therefrom) (the ''Registration Forms''). OMB Control No. 3038–0023 applies to the Registration Forms for registration of persons other than swap dealers and major swap participants.[1]

With respect to the proposed collection of information, the Commission invites comments on:

- Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information will have a practical use;
- The accuracy of the Commission's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Ways to enhance the quality, usefulness, and clarity of the information to be collected; and
- Ways to minimize the burden of collection of information on those who are to respond, including through the use of appropriate electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

You should submit only information that you wish to make available publicly. If you wish the Commission to consider information that you believe is exempt from disclosure under the Freedom of Information Act, a petition for confidential treatment of the exempt information may be submitted according to the procedures established in § 145.9 of the Commission's regulations.[2]

The Commission reserves the right, but shall have no obligation, to review, pre-screen, filter, redact, refuse or remove any or all of your submission from *https://www.cftc.gov* that it may deem to be inappropriate for publication, such as obscene language. All submissions that have been redacted or removed that contain comments on the merits of the information collection request will be retained in the public comment file and will be considered as required under the Administrative Procedure Act and other applicable laws, and may be accessible under the Freedom of Information Act.

Burden Statement: The Commission is revising its estimate of the burden for this collection to reflect current estimates of the number of respondents, number of responses, burden hours per response, and total annual burden on respondents, as described below.

Respondents/Affected Entities: Users of Commission registration forms that are futures commission merchants, retail foreign exchange dealers, introducing brokers, commodity trading advisors, commodity pool operators, floor trader firms, leverage transaction merchants, associated person, and principals of registrants.

Estimated number of respondents: 55,561.

Estimated number of responses: 8,972.

Estimated burden hours per response: 0.64 hours.

Estimated total annual burden on respondents: 5,726 hours.

Frequency of responses: On occasion.

There are no capital costs or operating and maintenance costs associated with this collection.

[1] Forms for registration of swap dealers and major swap participants are the subject of a separate collection (OMB Control Number 3038–0072).

[2] 17 CFR 145.9.

(Authority: 44 U.S.C. 3501 *et seq.*)

Dated: December 3, 2025.

Robert Sidman,

Deputy Secretary of the Commission.

[FR Doc. 2025–22108 Filed 12–4–25; 8:45 am]

BILLING CODE 6351–01–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2025–SCC–0845]

Agency Information Collection Activities; Comment Request; DC School Choice Incentive Program

AGENCY: Office of Elementary and Secondary Education (OESE), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act (PRA) of 1995, the Department is proposing a reinstatement without change of a previously approved information collection request (ICR).

DATES: Interested persons are invited to submit comments on or before February 3, 2026.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use *http://www.regulations.gov* by searching the Docket ID number ED–2025–SCC–0774. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. If the regulations.gov site is not available to the public for any reason, the Department will temporarily accept comments at *ICDocketMgr@ed.gov*. Please include the docket ID number and the title of the information collection request when requesting documents or submitting comments. Please note that comments submitted after the comment period will not be accepted. Written requests for information or comments submitted by postal mail or delivery should be addressed to the School and Community Improvement Programs, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 4B129, Washington, DC 20202–1200.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Beth Yeh, 202–987–1588.

SUPPLEMENTARY INFORMATION: The Department, in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. The Department is soliciting comments on the proposed information collection request (ICR) that is described below. The Department is especially interested in public comment addressing the following issues: (1) is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: DC School Choice Incentive Program.

OMB Control Number: 1810–0774.

Type of Review: A reinstatement without change of a previously approved ICR.

Respondents/Affected Public: Individuals and Households.

Total Estimated Number of Annual Responses: 43,200.

Total Estimated Number of Annual Burden Hours: 7,344.

Abstract: This is a request for a reinstatement with change of the current information collection of the FSA Feedback System, OMB Control 1845–0141. On March 10, 2015, the White House issued a Student Aid Bill of Rights. Among the objectives identified was the creation of a centralized complaint system that is now resident and supported via the Federal Student Aid Feedback System. The purpose of the system is to meet the objective: ''Create a Responsive Student Feedback System: The Secretary of Education will create a new website by July 1, 2016, to give students and borrowers a simple and straightforward way to file complaints and provide feedback about federal student loan lenders, servicers, collections agencies, and institutions of higher education. Students and borrowers will be able to ensure that their complaints will be directed to the right party for timely resolution, and the Department of Education will be able to more quickly respond to issues and strengthen its efforts to protect the integrity of the student financial aid programs.''

Ross Santy,

Chief Data Officer, Office of Planning, Evaluation and Policy Development.

[FR Doc. 2025–22109 Filed 12–4–25; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

Request for Information (RFI) on Partnerships for Transformational Artificial Intelligence Models

AGENCY: Office of Science, Department of Energy.

ACTION: Request for information.

SUMMARY: The U.S. Department of Energy (DOE) invites public comment on its Request for Information (RFI) regarding Partnerships for Transformational Artificial Intelligence Models. The purpose of this RFI is to solicit feedback from industry, think tanks, investors, research organizations, and other stakeholders on how DOE should best structure and enable partnerships to curate DOE scientific data across the National Laboratory complex for use in artificial intelligence (AI) models. This RFI also seeks input on using this data to develop self-improving AI models for science and engineering to advance scientific discovery, energy, and national security.

DATES: Responses to the RFI must be received by Wednesday, January 14, 2026.

ADDRESSES: Interested parties are to submit comments electronically to *AICommunityInput@science.doe.gov.* Include ''Transformational Artificial Intelligence Models'' in the subject line of the email. Only electronic responses will be accepted. The complete RFI document is located at *https://sam.gov/workspace/contract/opp/18575cee90e74b11bbe963d7750408d8/view.*

FOR FURTHER INFORMATION CONTACT: Questions may be addressed to Hal Finkel, Office of Science, U.S. Department of Energy, 1000 Independence Avenue SW, Washington, DC 20585–0121, (301) 903–1304, or by email at *AICommunityInput@science.doe.gov.* Further instructions can be found in the RFI document posted at *https://sam.gov/workspace/contract/opp/18575cee90e74b11bbe963d7750408d8/view.*

SUPPLEMENTARY INFORMATION: In accordance with Section 50404 of

Public Law 119–21, the Department of Energy (DOE) intends to establish a public-private consortium to curate DOE scientific data across the National Laboratory complex for use in artificial intelligence (AI) models and to develop self-improving AI models for science and engineering using this data. These models must be provided to the scientific community through a system of United States government, academic, and private-sector programs and infrastructure which includes the use of cloud technologies. This historic mobilization of DOE, the National Laboratories, and private partners will serve as a force multiplier in executing America's AI Action Plan to achieve global dominance in AI, and to advance scientific discovery, energy, and national security. The RFI asks questions about how to best structure partnerships for curating scientific data for use in AI models and for developing self-improving AI models for science and engineering using DOE's data. The RFI also asks how DOE should best provide AI models to the scientific community through programs and infrastructure making use of cloud technologies. DOE intends to post non-confidential responses received. The RFI is available at *https://sam.gov/workspace/contract/opp/18575cee90e74b11bbe963d7750408d8/view.*

Confidential Business Information: Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: one copy of the document marked ''confidential'' including all the information believed to be confidential, and one copy of the document marked ''non-confidential'' with the information believed to be confidential deleted. Submit these documents via email. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Signing Authority: This document of the Department of Energy was signed on November 21, 2025, by Harriet Kung, Acting Director for the Office of Science, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on December 3, 2025.

Jennifer Hartzell,

Alternate Federal Register Liaison Officer, U.S. Department of Energy.

[FR Doc. 2025–22127 Filed 12–4–25; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 15311–001]

Neptune Pumped Storage 2, LLC; Notice of Surrender of Preliminary Permit

Take notice that Rye Development, LLC, on behalf of Neptune Pumped Storage 2, LLC (Neptune Pumped Storage), permittee for the proposed Soldier Camp Pumped Storage Project No. 15311, has requested that its preliminary permit be terminated. The permit was issued on February 15, 2024, and would have expired on January 31, 2028.[1] The project would have been located on Lobster Creek in Curry County, Oregon.

The preliminary permit for Project No. 15311 will remain in effect until the close of business, thirty days from the date of this notice. But, if the Commission is closed on this day, then the permit remains in effect until the close of business on the next day in which the Commission is open.[2]

New applications for this site may not be submitted until after the permit surrender is effective.

(Authority: 18 CFR 2.1)

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22121 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings

Take notice that the Commission has received the following Natural Gas Pipeline Rate and Refund Report filings:

Filings Instituting Proceedings

Docket Numbers: PR26–18–000.
Applicants: The East Ohio Gas Company.
Description: § 284.123(g) Rate Filing: Operating Statement of the East Ohio Gas Company 11/1/2025 to be effective 11/1/2025.
Filed Date: 12/1/25.
Accession Number: 20251201–5622.
Comment Date: 5 p.m. ET 12/22/25.
§ 284.123(g) Protest: 5 p.m. ET 1/30/26.

Docket Numbers: PR26–19–000.
Applicants: Black Hills/Kansas Gas Utility Company, LLC.
Description: § 284.123 Rate Filing: BHKG Rate Change Filing to be effective 1/1/2026.
Filed Date: 12/2/25.
Accession Number: 20251202–5091.
Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: RP26–254–000.
Applicants: Mountain Valley Pipeline, LLC.
Description: § 4(d) Rate Filing: Negotiated Rate Capacity Release Agreements—12/1/2025 to be effective 12/1/2025.
Filed Date: 12/1/25.
Accession Number: 20251201–5548.
Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–260–000.
Applicants: MarkWest Pioneer, L.L.C.
Description: § 4(d) Rate Filing: Quarterly Fuel Adjustment Filing to be effective 1/1/2026.
Filed Date: 12/1/25.
Accession Number: 20251201–5545.
Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–261–000.
Applicants: Spire MoGas Pipeline LLC.
Description: § 4(d) Rate Filing: Spire MoGas NRA and NonConform Agreements Filing to be effective 1/1/2026.
Filed Date: 12/1/25.
Accession Number: 20251201–5549.
Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–262–000.
Applicants: NEXUS Gas Transmission, LLC.
Description: § 4(d) Rate Filing: Negotiated Rates—Various eff 12–1–25 to be effective 12/1/2025.
Filed Date: 12/1/25.
Accession Number: 20251201–5552.
Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–263–000.
Applicants: Algonquin Gas Transmission, LLC.
Description: § 4(d) Rate Filing: Negotiated Rates—Various Releases eff 12–1–2025 to be effective 12/1/2025.
Filed Date: 12/1/25.
Accession Number: 20251201–5554.

[1] Neptune Pumped Storage 2, LLC, 186 FERC ¶ 61,111 (2024).

[2] 18 CFR 385.2007(a)(2) (2025).

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–264–000.

Applicants: Spire STL Pipeline LLC.

Description: Tariff Amendment: MoGas STL Tariff Cancellation Filing to be effective 1/1/2026.

Filed Date: 12/1/25.

Accession Number: 20251201–5557.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–265–000.

Applicants: Eastern Shore Natural Gas Company.

Description: § 4(d) Rate Filing: Capital Cost Surcharge Eff. January 1. 2026 to be effective 1/1/2026.

Filed Date: 12/1/25.

Accession Number: 20251201–5618.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–266–000.

Applicants: Natural Gas Pipeline Company of America LLC.

Description: § 4(d) Rate Filing: Negotiated Rate Agreements—Dairyland Power Cooperative to be effective 12/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5629.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–267–000.

Applicants: Rendezvous Pipeline Company, LLC.

Description: Compliance filing: Compliance Informational Filing to be effective N/A.

Filed Date: 12/1/25.

Accession Number: 20251201–5631.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–268–000.

Applicants: Transcontinental Gas Pipe Line Company, LLC.

Description: § 4(d) Rate Filing: WSS Base Gas—Chesapeake Maryland Name Change to be effective 11/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5666.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–269–000.

Applicants: Maritimes & Northeast Pipeline, L.L.C.

Description: § 4(d) Rate Filing: Negotiated Rates—Northern to NRG Bus Mktg—eff 12–1–25 to be effective 12/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5667.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–270–000.

Applicants: Transcontinental Gas Pipe Line Company, LLC.

Description: § 4(d) Rate Filing: 2025 Interim Fuel Tracker Filing to be effective 1/1/2026.

Filed Date: 12/1/25.

Accession Number: 20251201–5670.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–271–000.

Applicants: Texas Eastern Transmission, LP.

Description: § 4(d) Rate Filing: Negotiated Rates—Various Releases eff 12–1–25 to be effective 12/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5687.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–272–000.

Applicants: Millennium Pipeline Company, LLC.

Description: Compliance filing: BEST Lateral Rate Implementation Compliance—CP25–147 to be effective 1/1/2026.

Filed Date: 12/1/25.

Accession Number: 20251201–5703.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–273–000.

Applicants: Gulf South Pipeline Company, LLC.

Description: § 4(d) Rate Filing: Cap Rel Neg Rate Agmt (Osaka 46428 to Sequent 60087) to be effective 12/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5711.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–274–000.

Applicants: Millennium Pipeline Company, LLC.

Description: § 4(d) Rate Filing: NRG Business Negotiated & Non-Conforming Agmt—BEST Lateral Project to be effective 1/1/2026.

Filed Date: 12/1/25.

Accession Number: 20251201–5717.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–275–000.

Applicants: Texas Gas Transmission, LLC.

Description: § 4(d) Rate Filing: Neg Rate Agmt Filing (DTE 34937) to be effective 12/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5725.

Comment Date: 5 p.m. ET 12/15/25.

Docket Numbers: RP26–276–000.

Applicants: Rover Pipeline LLC.

Description: § 4(d) Rate Filing: Summary of Negotiated Rate Capacity Release Agreements 12–2–2025 to be effective 12/1/2025.

Filed Date: 12/2/25.

Accession Number: 20251202–5094.

Comment Date: 5 p.m. ET 12/15/25.05DE3.

Any person desiring to intervene, to protest, or to answer a complaint in any of the above proceedings must file in accordance with Rules 211, 214, or 206 of the Commission's Regulations (18 CFR 385.211, 385.214, or 385.206) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding. The filings are accessible in the Commission's eLibrary system (*https://elibrary.ferc.gov/idmws/search/fercgensearch.asp*) by querying the docket number.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http:/www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502–6595 or *OPP@ferc.gov.*

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22117 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2411–030]

Eagle Creek Schoolfield, LLC, City of Danville, Virginia; Notice of Availability of Environmental Assessment

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's (Commission) regulations, 18 CFR part 380, the Office of Energy Projects has reviewed the application for a new license to continue to operate and maintain the Schoolfield Hydroelectric Project No. 2411 (project). The project is located on the Dan River in the City of Danville and Pittsylvania County, Virginia. Commission staff has prepared an Environmental Assessment (EA) for the project.[1]

The EA contains the staff's analysis of the potential environmental impacts of the project and concludes that licensing the project, with appropriate environmental protective measures, would not constitute a major federal action that would significantly affect the quality of the human environment.

The Commission provides all interested persons with an opportunity to view and/or print the EA via the internet through the Commission's Home Page (*http://www.ferc.gov/*), using the ''eLibrary'' link. Enter the docket

[1] For tracking purposes under the National Environmental Policy Act, the unique identification number for documents relating to this environmental review is EAXX–019–20–000–1733139578.

number, excluding the last three digits in the docket number field, to access the document. For assistance, contact FERC Online Support at *FERCOnlineSupport@ferc.gov,* or toll-free at (866) 208–3676, or for TTY, (202) 502–8659.

You may also register online at *https://ferconline.ferc.gov/FERCOnline.aspx* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

Any comments should be filed on or before 5:00 p.m. Eastern Time on January 2, 2026.

The Commission strongly encourages electronic filing. Please file comments using the Commission's eFiling system at *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 10,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* For assistance, please contact FERC Online Support. In lieu of electronic filing, you may submit a paper copy. Submissions sent via the U.S. Postal Service must be addressed to: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852. The first page of any filing should include docket number P–2411–030.

For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, contact the Office of Public Participation at (202)502–6595 or *OPP@ferc.gov.*

For further information, contact Claire Rozdilski at (202) 502–8259 or by email at *claire.rozdilski@ferc.gov.*

(Authority: 18 CFR 2.1)

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22119 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 8005–007]

Columbia Mills Hydroelectric, LP, Columbia Mills Hydroelectric, LLC; Notice of Transfer of Exemption

By letter filed December 9, 2022, Columbia Mills Hydro, LLC, pursuant to 18 CFR 4.94(g), informed the Commission that it is the new owner of the exemption from licensing for the Moomaws Dam Hydroelectric Project No. 8005, originally issued June 21, 1984. The project is located on the Maury River in the City of Buena Vista, Virginia. The transfer of an exemption does not require Commission approval.

Columbia Mills Hydroelectric, LLC is located at 841 Shelley Road, Raleigh, NC 27609.

(Authority: 18 CFR 2.1)

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22120 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following exempt wholesale generator filings:

Docket Numbers: EG26–85–000.

Applicants: Waco Solar II, LLC.

Description: Waco Solar II, LLC submits Notice of Self-Certification of Exempt Wholesale Generator Status.

Filed Date: 11/25/25.

Accession Number: 20251125–5382.

Comment Date: 5 p.m. ET 12/16/25.

Docket Numbers: EG26–86–000.

Applicants: Inertia Solar Project, LLC.

Description: Inertia Solar Project, LLC submits Notice of Self-Certification of Exempt Wholesale Generator Status.

Filed Date: 11/25/25.

Accession Number: 20251125–5383.

Comment Date: 5 p.m. ET 12/16/25.

Take notice that the Commission received the following Complaints and Compliance filings in EL Dockets:

Docket Numbers: EL26–29–000; QF01–84–003.

Applicants: Morgan Energy Center, LLC, Morgan Energy Center, LLC.

Description: Petition for Temporary Waiver of Operating and Efficiency Standards for Qualifying Cogeneration Facility of Morgan Energy Center, LLC.

Filed Date: 11/24/25.

Accession Number: 20251124–5445.

Comment Date: 5 p.m. ET 12/24/25.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER21–2368–005.

Applicants: Chalk Point Power, LLC.

Description: Compliance filing: Compliance Filing to Offer of Settlement.

Filed Date: 12/2/25.

Accession Number: 20251202–5143.

Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER22–2569–005.

Applicants: Dickerson Power, LLC.

Description: Compliance filing: Compliance Filing to Offer of Settlement.

Filed Date: 12/2/25.

Accession Number: 20251202–5145.

Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER26–630–000.

Applicants: Duke Energy Progress, LLC.

Description: § 205(d) Rate Filing: DEP–NCEMPA Revised NITSA SA No. 268 to be effective 12/1/2025.

Filed Date: 12/1/25.

Accession Number: 20251201–5706.

Comment Date: 5 p.m. ET 12/22/25.

Docket Numbers: ER26–631–000.

Applicants: Pacific Gas and Electric Company.

Description: Informational Filing of 2026 Formula Rate Annual Update of Pacific Gas and Electric Company.

Filed Date: 12/1/25.

Accession Number: 20251201–5790.

Comment Date: 5 p.m. ET 12/22/25.

Docket Numbers: ER26–633–000.

Applicants: Petersburg Energy Center, LLC, Indianapolis Power & Light Company.

Description: Request for Authorization of Affiliate Transaction of Indianapolis Power & Light, et al.

Filed Date: 11/26/25.

Accession Number: 20251126–5489.

Comment Date: 5 p.m. ET 12/17/25.

Docket Numbers: ER26–634–000.

Applicants: Morongo Transmission LLC.

Description: § 205(d) Rate Filing: Annual TRBAA Filing 2026 to be effective 1/1/2026.

Filed Date: 12/2/25.

Accession Number: 20251202–5086.

Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER26–635–000.

Applicants: Arizona Public Service Company.

Description: Notice of Cancellation of Firm Point-to-Point Transmission Service Agreement of Arizona Public Service Company.

Filed Date: 12/2/25.

Accession Number: 20251202–5121.
Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER26–636–000.
Applicants: Tri-State Generation and Transmission Association, Inc.
Description: § 205(d) Rate Filing: Amendment to Rate Schedule No. 408 to be effective 12/3/2025.
Filed Date: 12/2/25.
Accession Number: 20251202–5147.
Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER26–637–000.
Applicants: Pineview Solar, LLC.
Description: Initial Rate Filing: Application for Market-Based Rate to be effective 1/14/2026.
Filed Date: 12/2/25.
Accession Number: 20251202–5151.
Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER26–638–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: Amendment to GIA & CSA, SA Nos. 7538 & 7539; Project Identifier No. AG1–324 to be effective 2/1/2026.
Filed Date: 12/2/25.
Accession Number: 20251202–5161.
Comment Date: 5 p.m. ET 12/23/25.

Docket Numbers: ER26–639–000.
Applicants: Ravenswood Operations, LLC, New York Independent System Operator, Inc.
Description: § 205(d) Rate Filing: New York Independent System Operator, Inc. submits tariff filing per 35.13(a)(2)(iii: Ravenswood 205: Fuel Oil Conversion Cost Reimbursement to be effective 12/3/2025.
Filed Date: 12/2/25.
Accession Number: 20251202–5162.
Comment Date: 5 p.m. ET 12/23/25.

The filings are accessible in the Commission's eLibrary system (*https://elibrary.ferc.gov/idmws/search/fercgensearch.asp*) by querying the docket number.

Any person desiring to intervene, to protest, or to answer a complaint in any of the above proceedings must file in accordance with Rules 211, 214, or 206 of the Commission's Regulations (18 CFR 385.211, 385.214, or 385.206) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, contact the Office of Public Participation at (202) 502–6595 or *OPP@ferc.gov.*

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22116 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP26–31–000]

Rio Grande LNG, LLC, Rio Grande LNG Train 4, LLC, Rio Grande LNG Train 5, LLC; Notice of Application and Establishing Intervention Deadline

Take notice that on November 21, 2025, Rio Grande LNG, LLC, Rio Grande LNG Train 4, LLC and Rio Grande LNG Train 5, LLC (RGLNG Entities), 1000 Louisiana Street, Suite 3300, Houston, Texas 77002 filed an application under section 3(a) of the Natural Gas Act (NGA) and Part 153 of the Commission's regulations requesting authorization for the Production Increase Project (Project). The Project consists of an amendment to the authorizations granted by the Commission in Docket Nos. CP16–454–000 and CP24–70–000 which authorized the construction and operation of a liquefied natural gas (LNG) export terminal on the north embankment of the Brownsville Ship Channel in Cameron County, Texas. Specifically, RGLNG Entities propose to increase the Rio Grande LNG Terminal's liquefaction production capacity from 5.4 million tons per annum (MTPA) per train to approximately 6.03 MTPA per train, resulting in a total production capacity for the Rio Grande LNG Terminal of 30.15 MTPA. The Project would not involve construction of any new facilities, nor any modification of authorized facilities, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

In addition to publishing the full text of this document in the **Federal Register**, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the internet through the Commission's Home Page (*http://www.ferc.gov*). From the Commission's Home Page on the internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

User assistance is available for eLibrary and the Commission's website during normal business hours from FERC Online Support at (202) 502–6652 (toll free at 1–866–208–3676) or email at *ferconlinesupport@ferc.gov,* or the Public Reference Room at (202) 502–8371, TTY (202) 502–8659. Email the Public Reference Room at *public.referenceroom@ferc.gov.*

Any questions regarding the proposed project should be directed to Lisa Tonery, Orrick, Herrington & Sutcliffe LLP, 51 West 52nd Street, New York, NY 10019, by phone at (212) 506–3710, or by email at *ltonery@orrick.com.*

Pursuant to section 157.9 of the Commission's Rules of Practice and Procedure,[1] within 90 days of this Notice the Commission staff will either: complete its environmental review and place it into the Commission's public record (eLibrary) for this proceeding; or issue a Notice of Schedule for Environmental Review. If a Notice of Schedule for Environmental Review is issued, it will indicate, among other milestones, the anticipated date for the Commission staff's issuance of the final environmental impact statement (FEIS) or environmental assessment (EA) for this proposal. The filing of an EA in the Commission's public record for this proceeding or the issuance of a Notice of Schedule for Environmental Review will serve to notify federal and state agencies of the timing for the completion of all necessary reviews, and the subsequent need to complete all federal authorizations within 90 days of the date of issuance of the Commission staff's FEIS or EA.

Public Participation

There are three ways to become involved in the Commission's review of this project: you can file comments on the project, you can protest the filing, and you can file a motion to intervene in the proceeding. There is no fee or cost for filing comments or intervening. The deadline for filing a motion to intervene is 5:00 p.m. Eastern Time on December 23, 2025. How to file protests, motions to intervene, and comments is explained below.

For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, contact the Office of Public Participation (OPP) at (202) 502–6595 or *OPP@ferc.gov.*

[1] 18 CFR 157.9.

Comments

Any person wishing to comment on the project may do so. Comments may include statements of support or objections, to the project as a whole or specific aspects of the project. The more specific your comments, the more useful they will be.

Protests

Pursuant to sections 157.10(a)(4)[2] and 385.211[3] of the Commission's regulations under the NGA, any person[4] may file a protest to the application. Protests must comply with the requirements specified in section 385.2001[5] of the Commission's regulations. A protest may also serve as a motion to intervene so long as the protestor states it also seeks to be an intervenor.

To ensure that your comments or protests are timely and properly recorded, please submit your comments on or before 5:00 p.m. Eastern Time on December 23, 2025.

There are three methods you can use to submit your comments or protests to the Commission. In all instances, please reference the Project docket number CP26–31–000 in your submission.

(1) You may file your comments electronically by using the eComment feature, which is located on the Commission's website at *www.ferc.gov* under the link to Documents and Filings. Using eComment is an easy method for interested persons to submit brief, text-only comments on a project;

(2) You may file your comments or protests electronically by using the eFiling feature, which is located on the Commission's website (*www.ferc.gov*) under the link to Documents and Filings. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on ''eRegister.'' You will be asked to select the type of filing you are making; first select ''General'' and then select ''Comment on a Filing''; or

(3) You can file a paper copy of your comments or protests by mailing them to the following address below. Your written comments must reference the Project docket number (CP26–31–000).

To file via USPS: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426.

To file via any other courier: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852.

The Commission encourages electronic filing of comments (options 1 and 2 above) and has eFiling staff available to assist you at (202) 502–8258 or *FercOnlineSupport@ferc.gov.*

Persons who comment on the environmental review of this project will be placed on the Commission's environmental mailing list, and will receive notification when the environmental documents (EA or EIS) are issued for this project and will be notified of meetings associated with the Commission's environmental review process.

The Commission considers all comments received about the project in determining the appropriate action to be taken. However, the filing of a comment alone will not serve to make the filer a party to the proceeding. To become a party, you must intervene in the proceeding. For instructions on how to intervene, see below.

Interventions

Any person, which includes individuals, organizations, businesses, municipalities, and other entities,[6] has the option to file a motion to intervene in this proceeding. Only intervenors have the right to request rehearing of Commission orders issued in this proceeding and to subsequently challenge the Commission's orders in the U.S. Circuit Courts of Appeal.

To intervene, you must submit a motion to intervene to the Commission in accordance with Rule 214 of the Commission's Rules of Practice and Procedure[7] and the regulations under the NGA[8] by the intervention deadline for the project, which is 5:00 p.m. Eastern Time on December 23, 2025. As described further in Rule 214, your motion to intervene must state, to the extent known, your position regarding the proceeding, as well as your interest in the proceeding. For an individual, this could include your status as a landowner, ratepayer, resident of an impacted community, or recreationist. You do not need to have property directly impacted by the project in order to intervene. For more information about motions to intervene, refer to the FERC website at *https://www.ferc.gov/resources/guides/how-to/intervene.asp.*

There are two ways to submit your motion to intervene. In both instances, please reference the Project docket number CP26–31–000 in your submission.

(1) You may file your motion to intervene by using the Commission's eFiling feature, which is located on the Commission's website (*www.ferc.gov)* under the link to Documents and Filings. New eFiling users must first create an account by clicking on ''eRegister.'' You will be asked to select the type of filing you are making; first select ''General'' and then select ''Intervention.'' The eFiling feature includes a document-less intervention option; for more information, visit *https://www.ferc.gov/docs-filing/efiling/document-less-intervention.pdf.;* or

(2) You can file a paper copy of your motion to intervene, along with three copies, by mailing the documents to the address below. Your motion to intervene must reference the Project docket number CP26–31–000.

To file via USPS: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426.

To file via any other courier: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852.

The Commission encourages electronic filing of motions to intervene (option 1 above) and has eFiling staff available to assist you at (202) 502–8258 or *FercOnlineSupport@ferc.gov.*

Protests and motions to intervene must be served on the applicant either by mail at Lisa M. Tonery, Orrick, Herrington & Sutcliffe LLP, 51 West 52nd Street, New York, NY 10019, by phone at (212) 506–3710, or by email (with a link to the document) at *ltonery@orrick.com.* Any subsequent submissions by an intervenor must be served on the applicant and all other parties to the proceeding. Contact information for parties can be downloaded from the service list at the eService link on FERC Online. Service can be via email with a link to the document.

All timely, unopposed[9] motions to intervene are automatically granted by operation of Rule 214(c)(1).[10] Motions to intervene that are filed after the intervention deadline are untimely, and may be denied. Any late-filed motion to intervene must show good cause for being late and must explain why the time limitation should be waived and provide justification by reference to

[2] 18 CFR 157.10(a)(4).

[3] 18 CFR 385.211.

[4] Persons include individuals, organizations, businesses, municipalities, and other entities. 18 CFR 385.102(d).

[5] 18 CFR 385.2001.

[6] 18 CFR 385.102(d).

[7] 18 CFR 385.214.

[8] 18 CFR 157.10.

[9] The applicant has 15 days from the submittal of a motion to intervene to file a written objection to the intervention.

[10] 18 CFR 385.214(c)(1).

factors set forth in Rule 214(d) of the Commission's Rules and Regulations.[11] A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies (paper or electronic) of all documents filed by the applicant and by all other parties.

Tracking the Proceeding

Throughout the proceeding, additional information about the project will be available from OPP at (202) 502–6595 or on the FERC website at *www.ferc.gov* using the ''eLibrary'' link as described above. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. For more information and to register, go to *www.ferc.gov/docs-filing/esubscription.asp.*

Intervention Deadline: 5:00 p.m. Eastern Time on December 23, 2026.

(Authority: 18 CFR 2.1)

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22118 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. RM98–1–000]

Records Governing Off-the-Record Communications

This constitutes notice, in accordance with 18 CFR 385.2201(b), of the receipt of prohibited and exempt off-the-record communications.

Order No. 607 (64 FR 51222, September 22, 1999) requires Commission decisional employees, who make or receive a prohibited or exempt off-the-record communication relevant to the merits of a contested proceeding, to deliver to the Secretary of the Commission, a copy of the communication, if written, or a summary of the substance of any oral communication.

Prohibited communications are included in a public, non-decisional file associated with, but not a part of, the decisional record of the proceeding. Unless the Commission determines that the prohibited communication and any responses thereto should become a part of the decisional record, the prohibited off-the-record communication will not be considered by the Commission in reaching its decision. Parties to a proceeding may seek the opportunity to respond to any facts or contentions made in a prohibited off-the-record communication and may request that the Commission place the prohibited communication and responses thereto in the decisional record. The Commission will grant such a request only when it determines that fairness so requires. Any person identified below as having made a prohibited off-the-record communication shall serve the document on all parties listed on the official service list for the applicable proceeding in accordance with Rule 2010, 18 CFR 385.2010.

Exempt off-the-record communications are included in the decisional record of the proceeding, unless the communication was with a cooperating agency as described by 40 CFR 1501.6, made under 18 CFR 385.2201(e) (1) (v).

The following is a list of off-the-record communications recently received by the Secretary of the Commission. Each filing may be viewed on the Commission's website at *http://www.ferc.gov* using the eLibrary link. Enter the docket number, excluding the last three digits, in the docket number field to access the document. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at (866) 208–3676, or for TTY, contact (202) 502–8659.

Docket Nos.	File date	Presenter or requester
Prohibited:		
1. EL25–44–000	11–14–2025	Electricity Transmission Competition Coalition.
2. CP25–60–000	11–21–2025	Robert Rutkowski.
Exempt:		
1. CP17–101–000, CP20–49–000	12–1–2025	Township of Lawrence, NJ.[1]
2. P–77–000	12–2–2025	U.S. Representative Doug LaMalfa.
3. EL25–49–000, EL25–20–000	11–24–2025	FERC Staff.[2]

[1] Certified copy of Resolution No. 354–25 for the County of Mercer, State of New Jersey, Opposing the Northeast Supply Enhancement Project.

[2] Comments dated 11/13/25 from U.S. Senators Edward J. Markey, Chris Van Hollen, Elizabeth Warren, Peter Welch, Raphael Warnock, Richard Blumenthal, and Adam B. Schiff.

Dated: December 2, 2025.

Carlos D. Clay,

Deputy Secretary.

[FR Doc. 2025–22122 Filed 12–4–25; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL OP–OFA–200]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information 202–993–3272 or *https://www.epa.gov/nepa.*

Weekly receipt of Environmental Impact Statements (EIS) Filed November 21, 2025 10 a.m. EST Through December 1, 2025 10 a.m. EST Pursuant to CEQ Guidance on 42 U.S.C. 4332.

Notice: Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/search.*

EIS No. 20250163, Final, BLM, CA, Mojave Exploration Drilling Project,

[11] 18 CFR 385.214(b)(3) and (d).

Review Period Ends: 01/05/2026, Contact: Brandon Anderson 760–833–7100.

EIS No. 20250164, Final, USAF, FL, SpaceX Starship-Super Heavy Cape Canaveral Space Force Station, Contact: Hilary Rummel 321–494–7732.

EIS No. 20250165, Draft, CHSRA, CA, California High-Speed Rail Project—Los Angeles to Anaheim Project Section, Comment Period Ends: 02/03/2026, Contact: Stefan Galvez-Abadia 916–324–1541.

EIS No. 20250166, Draft Supplement, USACE, LA, Morganza to the Gulf, Louisiana, Hurricane and Storm Damage Risk Reduction Project, Comment Period Ends: 01/23/2026, Contact: Jason Emery 504–862–2364.

EIS No. 20250167, Draft Supplement, NHTSA, REG, Draft Supplemental Environmental Impact Statement Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule III for Model Years 2022 to 2031 Passenger Cars and Light Trucks, Contact: Joseph Bayer 888–327–4236.

EIS No. 20250168, Final Supplement, NMFS, VA, ADOPTION—Atlantic Fleet Training and Testing, Contact: Alyssa Clevenstine 301–427–8401.

The National Marine Fisheries Service (NMFS) has adopted the United States Navy's Final Supplement EIS No. 20250113 filed 08/06/2025 with the Environmental Protection Agency. The NMFS was a cooperating agency on this project. Therefore, republication of the document is not necessary.

Dated: December 1, 2025.

Nancy Abrams,

Deputy Director, Federal Activities Division.

[FR Doc. 2025–22056 Filed 12–4–25; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

[DA 25–946; FR ID 320622]

Media Bureau Revises Filing Schedule for Class A, LPTV, and TV Translator Major Change Applications and for New LPTV and TV Translator Station Applications

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: In this document, the Federal Communications Commission's Media Bureau (Bureau) announces that due to prospective applicants' inability to access the Commission's Licensing and Management System (LMS) during the recent partial lapse in government funding and therefore prepare and file applications as previously scheduled, it is revising the dates for the Class A, LPTV, and TV translator major modification and LPTV/TV translator new station filing opportunities previously announced in its (*public notice*), DA 25–792, released September 3, 2025 (September 2025 PN).

DATES: December 11, 2025, 6:00 p.m. ET, December 18, 2025, 6:00 p.m. ET, January 29, 2026, 6:00 p.m. ET, March 12, 2026, 6:00 p.m. ET, March 19, 2026, 12:01 a.m. ET

ADDRESSES: None.

FOR FURTHER INFORMATION CONTACT: Mark Colombo (technical questions), *Mark.Colombo@fcc.gov,* (202) 418–7611, or Shaun Maher (legal questions), *Shaun.Maher@fcc.gov,* (202) 418–2324, of the Video Division, Media Bureau.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Media Bureau's document, (*public notice*), DA 25–946, released on November 17, 2025. The full text of this document is available for download at *https://docs.fcc.gov/public/attachments/DA-25-946A1.pdf.* To request materials in accessible formats (braille, large print, computer diskettes, or audio recordings), please send an email to *FCC504@fcc.gov* or call the Consumer & Government Affairs Bureau at (202) 418–0530 (VOICE), (202) 418–0432 (TTY).

Synopsis

On September 3, 2025, the Bureau issued its September 2025 PN announcing a phased approach permitting Class A television, LPTV, and TV translator stations to resume filing major modification applications and allowing for the filing of new LPTV and TV translator station applications. In light of prospective applicants' inability to access the Commission's LMS during the recent partial lapse in government funding—and therefore prepare and file applications as previously scheduled—the Bureau is revising the dates for the filing opportunities previously announced in the September 2025 PN. Except for the revised dates announced below, all processes and procedures previously announced by the Bureau in the September 2025 PN pertaining to these filing opportunities remain the same. The freeze on all major change applications implemented by the Bureau on September 3, 2025 in the September 2025 PN, remains in effect until it is lifted pursuant to the revised schedule.

Revised Freeze/Filing Opportunity Dates:

On December 11, 2025 at 6:00 p.m. ET a temporary application filing freeze will be implemented on all minor change applications (including displacement applications) for Class A, LPTV, and TV translator stations. Minor change applications filed once the freeze is imposed will be dismissed and need to be re-filed after the freeze is lifted.

On December 18, 2025 at 12:01 a.m. ET the major modification filing freeze will be lifted to permit Class A, LPTV, and TV translator stations to file major change applications, on a first-come, first-served basis. Facility relocations are limited to no more than 121.0 kilometers (km). Major change applications submitted during this filing opportunity must meet the 121.0 km distance limit and otherwise comply with the Commission's part 73 and 74 rules. All other applications will be dismissed. The filing freeze on all minor change applications (including displacement applications) for Class A, LPTV, and TV translator stations will also be lifted.

On January 29, 2026 at 6:00 p.m. ET a temporary application filing freeze will be implemented for all major change applications for Class A, LPTV, and TV translator stations. Major change applications filed once the freeze is imposed will be dismissed and need to be re-filed after the freeze is lifted.

On March 12, 2026 at 6:00 p.m. ET a temporary application filing freeze will be implemented for all minor change applications (including displacement applications) for Class A, LPTV, and TV translator stations. Minor change applications filed once the freeze is imposed will be dismissed and need to be re-filed after the freeze is lifted.

On March 19, 2026 at 12:01 a.m. ET the major modification filing freeze will be lifted, without limit or restriction, to permit the filing of Class A, LPTV and TV translator major change applications and acceptance of applications for new LPTV and TV translators stations, on a first-come, first-served basis . The freeze on all minor change applications (including displacement applications) for Class A, LPTV, and TV translator stations will also be lifted.

This action is taken by the Acting Chief, Media Bureau, pursuant to authority delegated by §§ 0.61 and 0.283 of the Commission's rules. 47 CFR 0.61 and 0.283.

Federal Communications Commission.

Thomas Horan,

Chief of Staff, Media Bureau.

[FR Doc. 2025–22017 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060–0222; FR ID 320678]

Information Collection Being Reviewed by the Federal Communications Commission Delegated Authority

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: As part of its continuing effort to reduce paperwork burdens, and as required by the Paperwork Reduction Act (PRA) of 1995, the Federal Communications Commission (FCC or Commission) invites the general public and other Federal agencies to take this opportunity to comment on the following information collections. Comments are requested concerning: whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; ways to minimize the burden of the collection of information on the respondents, including the use of automated collection burden on small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid OMB control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid OMB control number.

DATES: Written PRA comments should be submitted on or before February 3, 2026. If you anticipate that you will be submitting comments but find it difficult to do so within the period of time allowed by this notice, you should advise the contact listed below as soon as possible.

ADDRESSES: Direct all PRA comments to Cathy Williams, FCC, via email *PRA@fcc.gov* and to *Cathy.Williams@fcc.gov.*

FOR FURTHER INFORMATION CONTACT: For additional information about the information collection, contact Cathy Williams at (202) 418–2918.

SUPPLEMENTARY INFORMATION:

OMB Control No.: 3060–0222.

Title: Section 97.213, Telecommand of an Amateur Station.

Form No.: N/A.

Type of Review: Extension of a currently approved collection.

Respondents: Business or other for profit entities.

Number of Respondents and Responses: 40,000 respondents and 40,000 responses.

Estimated Time per Response: 5 minutes (.084 hours).

Frequency of Response: Third party disclosure requirement.

Obligation to Respond: Required to obtain or retain benefits. The statutory authority for this collection is approved under 47 U.S.C. 303, 151–155, 301–609.

Total Annual Burden: 3,360 hours.

Annual Cost Burden: No cost.

Needs and Uses: The third party disclosure requirement contained in 47 CFR 97.213 consists of posting a photocopy of the amateur station license, a label with the name, address, and telephone number of the station licensee, and the name of at least one authorized control operator in a conspicuous place at the station location. This requirement is necessary so that quick resolution of any harmful interference problems can be identified and to ensure that the station is operating in accordance with the Communications Act of 1934, as amended. This information is used by FCC personnel during inspections and investigations to determine who is responsible for the proper operation of the remotely controlled station. In the absence of this third party disclosure requirement, field inspections and investigations related to harmful interference could be severely hampered and needlessly prolonged due to inability to determine the responsible licensee.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2025–22018 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (Act) (12 U.S.C. 1817(j)) and 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the applications are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The public portions of the applications listed below, as well as other related filings required by the Board, if any, are available for immediate inspection at the Federal Reserve Bank(s) indicated below and at the offices of the Board of Governors. This information may also be obtained on an expedited basis, upon request, by contacting the appropriate Federal Reserve Bank and from the Board's Freedom of Information Office at *https://www.federalreserve.gov/foia/request.htm.* Interested persons may express their views in writing on the standards enumerated in paragraph 7 of the Act.

Comments received are subject to public disclosure. In general, comments received will be made available without change and will not be modified to remove personal or business information including confidential, contact, or other identifying information. Comments should not include any information such as confidential information that would not be appropriate for public disclosure.

Comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors, Benjami W. McDonough, Deputy Secretary of the Board, 20th Street and Constitution Avenue NW, Washington, DC 20551–0001, not later than December 22, 2025.

A. Federal Reserve Bank of Chicago (Colette A. Fried, Assistant Vice President) 230 South LaSalle Street, Chicago, Illinois 60690–1414. Comments can also be sent electronically to *Comments.applications@chi.frb.org:*

1. *Fuller Family Holdings LLLP, the Alison J. Fuller 2025 GST Trust, Lynn H. Fuller, as trustee, the Lynn H. Fuller Family GST Trust, Thomas J. Fuller, as trustee, and both trusts as limited partners of Fuller Family Holdings LLLP, and Thomas Fuller Family Holdings LLLP, all of Dubuque, Iowa;* to join the Fuller Family Group, a group acting in concert, to acquire voting shares of Capra Financial, Inc., and thereby indirectly acquire voting shares of Capra Bank, both of Dubuque, Iowa.

Board of Governors of the Federal Reserve System.

Michele Taylor Fennell,

Associate Secretary of the Board.

[FR Doc. 2025–22102 Filed 12–4–25; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL TRADE COMMISSION

Sunshine Act Meeting Notice

AGENCY: Federal Trade Commission.

ACTION: Announcement of meeting.

SUMMARY: Please take notice that the Federal Trade Commission (''Commission'') has scheduled a

meeting, which will be closed to the public, for the consideration of a law enforcement matter.

DATES: This closed Commission meeting will occur on Tuesday, December 9, 2025, starting at 10:00 a.m. eastern time.

ADDRESSES: Federal Trade Commission Building, 600 Pennsylvania Avenue NW, Washington, DC 20580.

FOR FURTHER INFORMATION CONTACT: April J. Tabor, Secretary of the Commission (phone: 202–326–3310), Federal Trade Commission, 600 Pennsylvania Avenue NW, Washington, DC 20580.

SUPPLEMENTARY INFORMATION: The Commission will be meeting in closed session to consider a non-adjudicative law enforcement matter. It has not scheduled any adjudicative items for discussion at this meeting.

Record of Commission's Vote

On December 2, 2025, Commissioners Ferguson and Meador were recorded as voting in the affirmative to close this meeting for a non-adjudicative matter. By these votes, the Commission approved withholding from this meeting notice such information as is exempt from disclosure under 5 U.S.C. 552b(c).

Commission's Explanation of Closing

The Commission has determined that the meeting will be closed to the public pursuant to 5 U.S.C. 552b(c)(3), (4), (7)(A), and (10), and 552b(d)(4) and that the public interest does not require the meeting to be open to the public.

General Counsel Certification

The General Counsel has certified that the meeting may properly be closed for the above agenda matter, citing the following relevant exemptive provisions: 5 U.S.C. 552b(c)(3), (4), (7)(A), and (10).

Expected Attendees

Commission employees and consultants and the stenographer or court reporter preparing any necessary verbatim transcript may attend the closed meeting to the extent permitted under Rule 4.15(c)(1) of the Commission's Rules of Practice.

By direction of the Commission.

Joel Christie,

Acting Secretary.

[FR Doc. 2025–22129 Filed 12–3–25; 4:15 pm]

BILLING CODE 6750–01–P

FEDERAL TRADE COMMISSION

Agency Information Collection Activities; Proposed Collection; Comment Request; Extension

AGENCY: Federal Trade Commission.

ACTION: Notice.

SUMMARY: The Federal Trade Commission (''FTC'' or ''Commission'') is seeking public comment on its proposal to extend for an additional three years the current Paperwork Reduction Act (''PRA'') clearance for information collection requirements in its ''Used Motor Vehicle Trade Regulation Rule'' (''Used Car Rule'' or ''Rule''), which applies to used vehicle dealers. That clearance expires on February 28, 2026.

DATES: Comments must be filed by February 3, 2026.

ADDRESSES: Interested parties may file a comment online or on paper, by following the instructions in the Request for Comment part of the **SUPPLEMENTARY INFORMATION** section below. Write ''Used Car Rule, PRA Comment, FTC File No. [P137606]'' on your comment, and file your comment online at *https://www.regulations.gov* by following the instructions on the web-based form. If you prefer to file your comment on paper, mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW, Suite CC–5610 (Annex J), Washington, DC 20580.

FOR FURTHER INFORMATION CONTACT: Elizabeth Scott, (312) 960–5609, Attorney, Midwest Region, Federal Trade Commission, 230 South Dearborn Street, Suite 3030, Chicago, IL 60604.

SUPPLEMENTARY INFORMATION:

Title of Collection: The Used Car Rule, 16 CFR part 455.

OMB Control Number: 3084–0108.

Type of Review: Extension without change of currently approved collection.

Affected Public: Private Sector: Businesses and other for-profit entities.

Estimated Annual Burden Hours: 3,164,100.

Estimated Annual Labor Costs: $69,167,226.

Non-Labor Costs: $19,300,000.

Abstract

Under the PRA, 44 U.S.C. 3501–3521, Federal agencies must obtain OMB approval for each collection of information they conduct or sponsor. ''Collection of information'' includes agency requests or requirements to submit reports, keep records, or provide information to a third party. 44 U.S.C. 3502(3); 5 CFR 1320.3(c). As required by section 3506(c)(2)(A) of the PRA, the FTC is providing this opportunity for public comment before requesting that OMB extend the existing paperwork clearance for the Used Car Rule, 16 CFR part 455 (OMB Control Number 3084–0108).

The Used Car Rule promotes informed purchasing decisions by requiring that used car dealers display a form called a ''Buyers Guide'' on each used car offered for sale that, among other things, discloses information about warranty coverage, and other information to assist purchasers. The Rule has no recordkeeping or reporting requirements. The FTC seeks clearance for the Rule's disclosure requirements and the estimated PRA burden for those requirements.

Burden Statement

Estimated total annual hours burden: 3,164,100.

As explained in more detail below, this total is based on estimates of the number of new car and used car dealers that sell used cars (47,057 [1]), the number of used cars sold by dealers annually (approximately 38,600,000 [2]) and the time needed to fulfill the information collection tasks required by the Rule.[3]

The Rule requires that used car dealers display a one-page, double-sided Buyers Guide on each used car that they offer for sale. The component tasks associated with the Rule's required display of Buyers Guides include: (1) ordering and stocking Buyers Guides; (2) entering data on Buyers Guides; (3) displaying the Buyers Guides on vehicles; (4) revising Buyers Guides as necessary; and (5) complying with the Rule's requirements for sales conducted in Spanish.

1. *Ordering and Stocking Buyers Guides:* Dealers should need no more

[1] *See* 2023 U.S. Census Bureau Data, showing 25,147 establishments for ''used car dealers,'' NAICS code 44112 and 21,910 ''new car dealers,'' NAICS code 44111, *available at https://data.census.gov/profile/44112_-_Used_Car_Dealers?codeset=naics~44112&g=010XX00US* and *https://data.census.gov/profile/44111_-_New_car_dealers?codeset=naics~44111&g=010XX00US.*

[2] *See* ConsumerAffairs, ''Used car statistics 2025: How many used cars are sold yearly?'' *see* the table entitled ''Number of preowned light vehicle sales in the U.S. over time'' for the year 2022 at *https://www.consumeraffairs.com/automotive/used-car-statistics.html#used-cars-sold-yearly* (last visited September 30, 2025).

[3] Some dealers opt to contract with outside contractors to perform the various tasks associated with complying with the Rule. Staff assumes that outside contractors would require about the same amount of time and incur similar costs as dealers to perform these tasks. Accordingly, the hour and cost burden totals shown, while referring to ''dealers,'' incorporate the time and cost borne by outside companies in performing the tasks associated with the Rule.

than an average of two hours per year to obtain Buyers Guides, which are readily available from many commercial printers or can be produced by an office word-processing or desk-top publishing system.[4] Based on an estimated population of 47,057 dealers, the annual hours burden for producing or obtaining and stocking Buyers Guides is 94,114 hours (47,057 dealers × 2 hours).

2. *Entering Data on Buyers Guides:* The amount of time required to enter applicable data on Buyers Guides may vary substantially, depending on whether a dealer has automated the process. For used cars sold ''as is,'' copying vehicle-specific data from dealer inventories to Buyers Guides and checking the ''No Warranty'' box may take two to three minutes per vehicle if done by hand, and only seconds for those dealers who have automated the process or use pre-printed forms. Staff estimates that dealers will require an average of two minutes per Buyers Guide to complete this task. Similarly, for used cars sold under warranty, the time required to check the ''Warranty'' box and to add warranty information, such as the additional information required in the Percentage of Labor/Parts and the Systems Covered/Duration sections of the Buyers Guide, will depend on whether the dealer uses a manual or automated process or Buyers Guides that are pre-printed with the dealer's standard warranty terms. Staff estimates that these tasks will take an average of one additional minute, *i.e.,* cumulatively, an average total time of three minutes for each used car sold under warranty.

Staff estimates that dealers sell approximately fifty percent of used cars ''as is'' and the other half under warranty. Therefore, staff estimates that the overall time required to enter data on Buyers Guides consists of 643,333 hours for used cars sold without a warranty (38,600,000 vehicles × 50% × 2 minutes per vehicle) and 965,000 hours for used cars sold under warranty (38,600,000 vehicles × 50% × 3 minutes per vehicle) for a cumulative estimated total of 1,608,333 hours.

3. *Displaying Buyers Guides on Vehicles:* Although the time required to display the Buyers Guides on each used car may vary, FTC staff estimates that dealers will spend an average of 1.75 minutes per vehicle to match the correct Buyers Guide to the vehicle and to display it on the vehicle. The estimated burden associated with this task is approximately 1,125,833 hours (38,600,000 vehicles × 1.75 minutes per vehicle).

4. *Revising Buyers Guides as Necessary:* If negotiations between the buyer and seller over warranty coverage produce a sale on terms other than those originally entered on the Buyers Guide, the dealer must revise the Buyers Guide to reflect the actual terms of sale. According to the original rulemaking record, bargaining over warranty coverage rarely occurs. Staff notes that consumers often do not need to negotiate over warranty coverage because they can find vehicles that are offered with the desired warranty coverage online or in other ways before ever contacting a dealer. Accordingly, staff assumes that dealers will revise the Buyers Guide in no more than two percent of sales, with an average time of two minutes per revision. Therefore, staff estimates that dealers annually will spend approximately 25,733 hours revising Buyers Guides (38,600,000 vehicles × 2% × 2 minutes per vehicle).

5. *Spanish Language Sales:* The Rule requires dealers to make contract disclosures in Spanish if the dealer conducts a sale in Spanish.[5] The Rule permits displaying both an English and a Spanish language Buyers Guide to comply with this requirement.[6] Many dealers with large numbers of Spanish-speaking customers likely will post both English and Spanish Buyers Guides to avoid potential compliance violations.

Calculations from United States Census Bureau surveys indicate that approximately 13.4 percent of the United States population speaks Spanish at home, and 8.4 percent of the population speak English less than very well.[7] Staff therefore estimate that dealers will conduct approximately 8.4 percent of used car sales in Spanish. Accordingly, dealers will incur the additional burden of completing and displaying a second Buyers Guide in approximately 3,242,400 sales assuming that dealers choose to comply with the Rule by posting both English and Spanish Buyers Guides. Moreover, as noted above, FTC staff estimates that approximately 50% of used cars are sold as-is without a warranty, while the remainder are sold with a warranty. As a result, staff estimates that the annual hours burden associated with entering data on Buyers Guides for sales in Spanish of cars without a warranty is 54,040 hours (1,621,200 sales × 2 minutes). The estimated annual hours burden associated with completing Spanish language Buyers Guides for vehicles with a warranty is 81,060 hours (1,621,200 sales × 3 minutes). In addition, staff estimates that the additional burden caused by the Rule's requirement that dealers display Spanish language Buyers Guides when conducting sales in Spanish is 94,570 hours (3,242,400 sales × 1.75 minutes).

6. *Optional Disclosures of Non-Dealer Warranties:* The Rule does not require dealers to disclose information about non-dealer warranties, but provides dealers with the options to disclose such warranties on Buyers Guides. FTC staff has estimated that dealers will make the optional disclosures on 25% of used cars offered for sale. Staff believes that checking the optional boxes to disclose a non-dealer warranty should require dealers no more than 30 seconds per vehicle. Accordingly, based on 38,600,000 used cars sold, staff estimates that making the optional disclosures entails a burden of 80,417 hours (25% × 38,600,000 vehicles sold × 1/120 hour per vehicle).

Estimated Annual Cost Burden

1. *Labor costs:* Labor costs are derived by applying appropriate hourly cost figures to the burden hours described above. Staff has determined that all of the tasks associated with ordering forms, entering data on Buyers Guides, posting Buyers Guides on vehicles, and revising them as needed, including the corresponding tasks associated with Spanish Buyers Guides and providing optional disclosures about non-dealer warranties, are typically done by clerical or low-level administrative personnel. Using a clerical cost rate of $21.86 per hour[8] and an estimated annual burden of 3,164,100 hours for disclosure requirements, the total labor cost burden is $69,167,226 ($21.86 per hour × 3,164,100 hours).

2. *Capital or other non-labor costs:* Although the cost of Buyers Guides may vary, staff estimates that the average cost of each Buyers Guide is fifty cents based on industry input. Therefore, the estimated cost of Buyers Guides for the estimated 38,600,000 used cars sold by dealers is approximately $19,300,000 (38,600,000 vehicles sold × 50 cents). In making this estimate, staff assumes that all dealers will purchase pre-printed forms instead of producing them internally, although dealers may produce them at lower expense using

[4] Buyers Guides are also available online from the FTC's website, *www.ftc.gov,* at *https://business.ftc.gov/selected-industries/automobiles.*

[5] 16 CFR 455.5.

[6] *Id.*

[7] U.S. Census Bureau, *https://www.census.gov/acs/www/about/why-we-ask-each-question/language/* (last visited September 30, 2025).

[8] The hourly rate is based on the Bureau of Labor Statistics estimate of the mean hourly wage for office clerks, general. *Occupational Employment and Wage Statistics, May 2024, Office Clerks, General,* available at: *https://www.bls.gov/news.release/ocwage.t01.htm.*

their own office automation technology. Capital and start-up costs associated with the Rule are minimal.

Request for Comment

Pursuant to section 3506(c)(2)(A) of the PRA, the FTC invites comments on: (1) whether the disclosure, recordkeeping, and reporting requirements are necessary, including whether the resulting information will be practically useful; (2) the accuracy of our burden estimates, including whether the methodology and assumptions used are valid; (3) how to improve the quality, utility, and clarity of the disclosure requirements; and (4) how to minimize the burden of providing the required information to consumers.

You can file a comment online or on paper. For the FTC to consider your comment, we must receive it on or before February 3, 2026. Write ''Used Car Rule, PRA Comment, FTC File No. [P137606]'' on your comment. Your comment, including your name and your state—will be placed on the public record of this proceeding, including the *https://www.regulations.gov* website.

If you prefer to file your comment on paper, write ''Used Car Rule, PRA Comment, FTC File No. [P137606]'' on your comment and on the envelope, and mail it to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW, Suite CC–5610 (Annex J), Washington, DC 20580.

Because your comment will be placed on the publicly accessible website at *www.regulations.gov,* you are solely responsible for making sure that your comment does not include any sensitive or confidential information. In particular, your comment should not include any sensitive personal information, such as your or anyone else's Social Security number; date of birth; driver's license number or other state identification number, or foreign country equivalent; passport number; financial account number; or credit or debit card number. You are also solely responsible for making sure that your comment does not include any sensitive health information, such as medical records or other individually identifiable health information. In addition, your comment should not include any ''trade secret or any commercial or financial information which . . . is privileged or confidential''—as provided by Section 6(f) of the FTC Act, 15 U.S.C. 46(f), and FTC Rule 4.10(a)(2), 16 CFR 4.10(a)(2)—including in particular competitively sensitive information such as costs, sales statistics, inventories, formulas, patterns, devices, manufacturing processes, or customer names.

Comments containing material for which confidential treatment is requested must be filed in paper form, must be clearly labeled ''Confidential,'' and must comply with FTC Rule 4.9(c). In particular, the written request for confidential treatment that accompanies the comment must include the factual and legal basis for the request, and must identify the specific portions of the comment to be withheld from the public record. *See* FTC Rule 4.9(c). Your comment will be kept confidential only if the General Counsel grants your request in accordance with the law and the public interest. Once your comment has been posted publicly at *www.regulations.gov,* we cannot redact or remove your comment unless you submit a confidentiality request that meets the requirements for such treatment under FTC Rule 4.9(c), and the General Counsel grants that request.

The FTC Act and other laws that the Commission administers permit the collection of public comments to consider and use in this proceeding as appropriate. The Commission will consider all timely and responsive public comments that it receives on or before February 3, 2026. For information on the Commission's privacy policy, including routine uses permitted by the Privacy Act, see *https://www.ftc.gov/site-information/privacy-policy.*

Josephine Liu,

Assistant General Counsel for Legal Counsel.

[FR Doc. 2025–22114 Filed 12–4–25; 8:45 am]

BILLING CODE 6750–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60Day–26–0002; Docket No. CDC–2025–0882]

Proposed Data Collection Submitted for Public Comment and Recommendations

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice with comment period.

SUMMARY: The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden and maximize the utility of government information, invites the general public and other federal agencies the opportunity to comment on a proposed and/or continuing information collection, as required by the Paperwork Reduction Act of 1995. This notice invites comment on a proposed information collection project titled the 2025 National Blood Collection and Utilization Survey (NBCUS). The NBCUS gathers information from blood collection centers and acute healthcare facilities about blood collections and transfusions in the United States.

DATES: CDC must receive written comments on or before February 3, 2026.

ADDRESSES: You may submit comments, identified by Docket No. CDC–2025–0882 by either of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329.

Instructions: All submissions received must include the agency name and Docket Number. CDC will post, without change, all relevant comments to *www.regulations.gov.*

Please note: Submit all comments through the Federal eRulemaking portal (*www.regulations.gov*) or by U.S. mail to the address listed above.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the information collection plan and instruments, contact Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329; Telephone: 404–639–7570; Email: *omb@cdc.gov.*

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. In addition, the PRA also requires federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each new proposed collection, each proposed extension of existing collection of information, and each reinstatement of previously approved information collection before submitting the collection to the OMB for approval. To comply with this requirement, we are publishing this notice of a proposed data collection as described below.

The OMB is particularly interested in comments that will help:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
3. Enhance the quality, utility, and clarity of the information to be collected;
4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submissions of responses; and
5. Assess information collection costs.

Proposed Project

2025 National Blood Collection and Utilization Survey—New—National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

The 2025 National Blood Collection and Utilization Survey will request information from community-based blood collection centers, hospital-based blood collection centers, and transfusing hospitals. Respondents will be asked to provide information on blood and blood component collections and transfusions in the United States during 2025.

The NBCUS is an HHS/OASH funded project conducted biennially. Since 2013, in close collaboration with OASH, the NBCUS has been performed by the Centers for Disease Control and Prevention (CDC), which has the requisite technical and scientific resources to conduct the survey. The information collected has previously been used to support public health emergencies and inform public policy as well as inform the blood community about the current national blood supply and demand.

Respondents will include transfusing hospitals, hospital blood banks, and community-based blood banks. The response rates for the 2023 NBCUS were 96.2% (51/53) for community-based blood collection facilities, 90.3% (65/72) for hospital-based blood collection facilities, and 85.7% (2195/2561) for transfusing hospitals. Based on the previous iterations of the NBCUS, we expect an overall response rate of almost 85% across all types of facilities. Proposed changes include adjustments to answer options to make them more straightforward, removal of policy questions that were required of blood centers by the end of 2023, defining a blood shortage, and addition of a few new questions. New questions included information about bacterial transfusion-transmitted infections found in blood, length of time any blood shortage lasted, cold storage platelets, pathogen reduced cryoprecipitated units.

CDC will take over NBCUS data collection activities from HHS/OASH and requests OMB approval for an estimated 4,612 annual burden hours. There is no cost to respondents other than their time to participate.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondents	Form name	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total burden (in hours)
Transfusing Hospitals	2025 National Blood Collection and Utilization Survey.	2,478	1	105/60	4,337
Hospital Blood Banks	2025 National Blood Collection and Utilization Survey.	104	1	105/60	182
Community-Based Blood Centers.	2025 National Blood Collection and Utilization Survey.	53	1	105/60	93
Total					4,612

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22006 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day–26–0469]

Agency Forms Undergoing Paperwork Reduction Act Review

In accordance with the Paperwork Reduction Act of 1995, the Centers for Disease Control and Prevention (CDC) has submitted the information collection request titled ''National Program of Cancer Registries Cancer Surveillance System'' to the Office of Management and Budget (OMB) for review and approval. CDC previously published a ''Proposed Data Collection Submitted for Public Comment and Recommendations'' notice on January 8, 2025 to obtain comments from the public and affected agencies. CDC received one comment related to the previous notice. This notice serves to allow an additional 30 days for public and affected agency comments.

CDC will accept all comments for this proposed information collection project. The Office of Management and Budget is particularly interested in comments that:

(a) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(b) Evaluate the accuracy of the agencies' estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(c) Enhance the quality, utility, and clarity of the information to be collected;

(d) Minimize the burden of the collection of information on those who are to respond, including, through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses; and

(e) Assess information collection costs.

To request additional information on the proposed project or to obtain a copy of the information collection plan and instruments, call (404) 639–7570. Comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain*. Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function. Direct written comments and/or suggestions regarding the items contained in this notice to the Attention: CDC Desk Officer, Office of Management and Budget, 725 17th Street NW, Washington, DC 20503 or by fax to (202) 395–5806. Provide written comments within 30 days of notice publication.

Proposed Project

National Program of Cancer Registries Cancer Surveillance System (NPCR CSS) (OMB Control No. 0920–0469, Exp. 1/31/2026)—Revision—National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

In 2022, the most recent year for which complete incidence information is available, more than 1.8 million were diagnosed with cancer. In 2023, approximately 610,000 people died of cancer. It is estimated that 17 million Americans are currently alive with a history of cancer. In the U.S., state/territory-based central cancer registries are the only method for systematically collecting and reporting population-based information about cancer incidence and outcomes such as survival. These data are used to measure the changing incidence and burden of each cancer; identify populations at increased or increasing risk; target preventive measures; and measure the success or failure of cancer control efforts in the U.S.

In 1992, Congress passed the Cancer Registries Amendment Act which established the National Program of Cancer Registries (NPCR). The NPCR provides support for state/territory-based cancer registries that collect, manage, and analyze data about cancer cases. The state/territory-based cancer registries report information to CDC through the National Program of Cancer Registries Cancer Surveillance System (NPCR CSS), (OMB Control No. 0920–0469).

The NPCR CSS allows CDC to collect, aggregate, evaluate, and disseminate cancer incidence data at the national level. The NPCR CSS is the primary source of information for the U.S. Cancer Statistics, which CDC has released annually since 2002. The latest U.S. Cancer Statistics data release in 2025 provided cancer statistics for 100% of the U.S. population from cancer registries in the United States. Prior to the publication of U.S. Cancer Statistics, cancer incidence data at the national level were available for only 14% of the population of the United States. The NPCR CSS also allows CDC to monitor cancer trends over time and describe geographic variation in cancer incidence throughout the country. NPCR also provides population-level data, such as incidence data by race, ethnicity, and other demographic and tumor characteristics and reporting data on rare cancers. These activities and analyses further support CDC's planning and evaluation efforts for state and national cancer control and prevention. In addition, datasets are available for secondary analysis.

Respondents are NPCR-supported central cancer registries (CCR) in 46 U.S. states, three territories, and the District of Columbia. Fifty CCRs submit data elements specified for the Standard NPCR CSS Report. Each CCR is asked to transmit two data files to CDC per year. The first NPCR CSS Standard file, submitted in January, is a preliminary report consisting of one year of data for the most recent year of available data. CDC evaluates the preliminary data for completeness and quality and provides a report back to the CCR. The second NPCR CSS Standard file, submitted in November, contains cumulative cancer incidence data from the first diagnosis year for which the cancer registry collected data with the assistance of NPCR funds (*e.g.,* 1995) through 12 months past the close of the most recent diagnosis year (*e.g.,* 2024). The cumulative file is used for analysis and reporting.

In this Revision, Data definitions will be updated to reflect changes in national standards for cancer diagnosis and coding. No changes to the total estimated annualized burden hours or number of respondents are anticipated. The burden for each file transmission is estimated at two hours per response. Because cancer incidence data are already collected and aggregated at the state level, the additional burden of reporting the information to CDC is small. All information is transmitted to CDC electronically. Participation is required as a condition of the cooperative agreement with CDC.

CDC requests OMB approval for a total of 200 estimated annualized burden hours for the Standard NPCR CSS Report. Approval is requested for three years and there are no costs to respondents other than their time.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondents	Form name	Number of respondents	Number of responses per respondent	Average burden per response (in hours)
Central Cancer Registries in 46 States, 3 Territories, and the District of Columbia.	Standard NPCR CSS Report	50	2	2

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22003 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60Day–26–1072; Docket No. CDC–2025–0752]

Proposed Data Collection Submitted for Public Comment and Recommendations

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice with comment period.

SUMMARY: The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden and maximize the utility of government information, invites the general public and other Federal agencies the opportunity to comment on a continuing information collection, as required by the Paperwork Reduction Act of 1995. This notice invites comment on a proposed information collection project titled STI Surveillance Network (SSuN). This information collection request is designed to strengthen national and local surveillance capacity for incident, new, and emerging sexually transmitted infections (STIs) by collecting information on patients at risk for STIs and providing more accurate estimates of the burden of disease, incidence of STIs, trends and impact of STIs at the population level.

DATES: CDC must receive written comments on or before February 3, 2026.

ADDRESSES: You may submit comments, identified by Docket No. CDC–2025–0752 by either of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329.

Instructions: All submissions received must include the agency name and Docket Number. CDC will post, without change, all relevant comments to *www.regulations.gov.*

Please note: Submit all comments through the Federal eRulemaking portal (*www.regulations.gov*) or by U.S. mail to the address listed above.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the information collection plan and instruments, contact Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE MS H21–8, Atlanta, Georgia 30329; Telephone: 404–639–7570; Email: *omb@cdc.gov.*

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. In addition, the PRA also requires federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each new proposed collection, each proposed extension of existing collection of information, and each reinstatement of previously approved information collection before submitting the collection to the OMB for approval. To comply with this requirement, we are publishing this notice of a proposed data collection as described below.

The OMB is particularly interested in comments that will help:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
3. Enhance the quality, utility, and clarity of the information to be collected;
4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submissions of responses; and
5. Assess information collection costs.

Proposed Project

The STI Surveillance Network (SSuN), (OMB Control No. 0920–1072, Exp. 09/30/2026)—Revision—National Center for HIV, Viral Hepatitis, STD, TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

The CDC is requesting a Revision of a currently approved information collection request (ICR) titled The STI Surveillance Network (SSuN) for a period of three years. The Revision submitted for this ICR reflects changes to the title of the currently approved ICR, inclusion of Doxycycline Post-exposure Prophylaxis (Doxy PEP) data elements, deletion of multiple data elements no longer required, and an updated anonymous patient clinic survey.

The purpose of the STI Surveillance Network (SSuN) is to enhance national capacity for STI surveillance. While U.S. jurisdictions voluntarily report STI cases to the CDC via the National Notifiable Diseases Surveillance System (NNDSS), these reports often lack essential patient demographics and detailed information on risk behaviors, treatment, co-infections, preventive services, and sexual networks.

SSuN enhances CDC's STI surveillance efforts by:

1. Providing comprehensive behavioral and demographic data on STI cases not available from standard case-based surveillance.
2. Monitoring trends in STI and HIV co-infection, screening, prevention interventions, and healthcare access among patients with gonorrhea or other STIs.
3. Providing an additional sentinel monitoring system for emerging health threats like mpox.

These data help public health authorities better understand STI trends, assess disease burden inequalities, and monitor treatment outcomes and adverse health effects among STI patients.

Data will be transmitted through CDC's Secure Access Management System (SAMS) by the 15 state and local health jurisdictions (eight jurisdictions funded for both Strategy A and B, four Strategy A only jurisdictions, and three Strategy B only jurisdictions) funded to conduct SSuN activities.

The revised project, SSuN Cycle 5 (2024–2029), comprises 15 US local/state health departments. SSuN recipients are funded to conduct either or both of the two core SSuN Strategies: Sentinel surveillance in specialty sexual health clinics (Strategy A) and Enhanced population-based surveillance for persons diagnosed with gonorrhea and adult syphilis (Strategy B). In Strategy A, data is abstracted from existing electronic medical records at 16 participating STI clinics across 12 funded jurisdictions, utilizing information already collected during routine clinical care. This reflects a total of 384 burden hours. These data are sent to the 12 funded health jurisdictions, where they are formatted and deduplicated by data managers into standardized formats. Records are also matched with the jurisdiction's HIV surveillance registry, providing data on HIV co-infection not available from

other multi-jurisdictional sources. All patient records are fully de-identified and securely transmitted to the CDC six times a year. Data managers at each of the 16 clinical facilities across 12 jurisdictions receiving funding are responsible for transmitting validated datasets for these activities to CDC every other month. This reflects 2,880 burden hours for Strategy A Health Department data management. Participating Strategy A clinics are also required to administer a one-time clinic patient survey between years 2–5 of the cycle. Clinic patient surveys will be conducted with approximately 3,000 patients across all funded sites for a total of five minutes each, resulting in 250 burden hours.

The second core data collection activity, Strategy B, includes: (1) abstraction, recoding, and reporting of all gonorrhea and syphilis cases in the collaborating jurisdiction; (2) enhanced investigations of a random sample of diagnosed individuals; and (3) Health Department abstraction and registry matching for a complete census of reported cases. Enhanced investigations include clinical data abstraction from providers, registry matching, and brief demographic and behavioral interviews. SSuN recipients implement data collection protocols that provide uniformly coded data on demographics, risk factors, clinical care, laboratory data, and healthcare-seeking behaviors, which are compiled into a national dataset after quality assurance at the CDC. For Activity 1, data managers at participating health jurisdictions are responsible for transmitting validated datasets case datasets to CDC every other month, resulting in 2,640 burden hours. In 2023, there were 187,833 cases of gonorrhea diagnosed and reported across the 11 Strategy B SSuN jurisdictions. Approximately 7%, or 13,148 gonorrhea cases were randomly sampled for enhanced investigation. Over past cycles, approximately 50% of patients contacted for investigations responded; we estimate this will result in 1,083 burden hours for patients with gonorrhea.

The estimated burden hours for this revised collection decreases from the previously approved 7,510 to 7,237 due to decreases in the number of participating clinical sites and expected number of interviews conducted by funded jurisdictions, a result of declines in reported gonorrhea cases. CDC requests OMB approval for an estimated 7,237 annual burden hours. There are no additional costs to respondents other than their time to participate.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Form name	Number of respondents	Number of responses per respondent	Average hours per response	Total response burden (hours)
Data managers at sentinel STI clinics.	Electronic Clinical Record Abstraction.	16	6	4	384
General Public—Adults (persons diagnosed with gonorrhea).	Patient interviews for a random sample of gonorrhea cases.	6,500	1	10/60	1,083
Data Managers: local/state health departments (strategy A).	Data cleaning/validation, HIV registry matching and data transmissions for all activity components.	12	6	40	2,880
Data Managers: local/state health departments (strategy B).	Data cleaning/validation, HIV registry matching and data transmissions for all activity components.	11	6	40	2,640
General Public—Adults (persons presenting for care in STI Clinics).	Clinic patient surveys	3,000	1	5/60	250
Total					7,237

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22009 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60Day–26–0765; Docket No. CDC–2025–0915]

Proposed Data Collection Submitted for Public Comment and Recommendations

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice with comment period.

SUMMARY: The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden and maximize the utility of government information, invites the general public and other federal agencies the opportunity to comment on a continuing information collection, as required by the Paperwork Reduction Act of 1995. This notice invites comment on a proposed information collection project titled Fellowship Management System (FMS). The Fellowship Management System is an information technology platform through which CDC invites and manages applications to CDC fellowship programs from potential fellows and host sites. FMS also is used by some programs to monitor fellows' progress.

DATES: CDC must receive written comments on or before February 3, 2026.

ADDRESSES: You may submit comments, identified by Docket No. CDC–2025–0915 by either of the following methods:

• *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.

• *Mail:* Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329.

Instructions: All submissions received must include the agency name and Docket Number. CDC will post, without change, all relevant comments to *www.regulations.gov.* Please note: Submit all comments through the Federal eRulemaking portal (*www.regulations.gov*) or by U.S. mail to the address listed above.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the information collection plan and instruments, contact Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329; Telephone: 404–639–7118; Email: *omb@cdc.gov.*

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. In addition, the PRA also requires federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each new proposed collection, each proposed extension of existing collection of information, and each reinstatement of previously approved information collection before submitting the collection to the OMB for approval. To comply with this requirement, we are publishing this notice of a proposed data collection as described below.

The OMB is particularly interested in comments that will help:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

3. Enhance the quality, utility, and clarity of the information to be collected;

4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submissions of responses; and

5. Assess information collection costs.

Proposed Project

Fellowship Management System (FMS) (OMB Control No. 0920–0765, Exp. 03/31/2026)—Revision—National Center for State, Tribal, Local, and Territorial Infrastructure and Workforce (NCSTLTIW), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

CDC's Division of Workforce Development (DWD) requests a three-year Revision to continue the use of the CDC Fellowship Management System (FMS) to collect data under the approved OMB Control No. 0920–0765. The mission of DWD is to provide leadership in public health training and education, and manage innovative, evidence-based programs to prepare the health workforce to meet public health challenges of the 21st century. Professionals in public health, epidemiology, medicine, economics, information science, veterinary medicine, nursing, public policy, and other related disciplines seek opportunities, through CDC fellowships, to broaden their knowledge and skills to improve the science and practice of public health. CDC fellows are assigned to state, tribal, local, and territorial public health agencies; federal government agencies, including CDC and Department of Health and Human Services' (HHS) operational divisions; and, in some cases, non-governmental organizations.

CDC uses FMS to collect, process, and manage data from nonfederal applicants seeking training or public health support services through CDC fellowships. FMS is used by CDC to electronically receive fellowship applications, receive fellowship host site proposals, and, for some programs, track completion of fellowship activities. FMS is a flexible, modern, secure, and robust electronic information system able to meet the unique needs of each CDC fellowship. The system is critical to efficient data and program management for CDC and essential for reducing burden and providing a high-quality user experience for respondents. FMS is key to CDC's ability to protect the public's health by facilitating training opportunities that strengthen the public health workforce.

The proposed Revision has two purposes: (1) streamline the fellowship management functions housed within FMS; and (2) update the time and respondent burdens. For the first purpose, all functions related to tracking fellowship alumni, and many functions related to tracking fellows' activities during their programs, are proposed for removal from the system. These functions are currently unnecessary, and in some cases, duplicative of other data management and collection processes. Embedding them in the new FMS platform was deemed not cost effective at this time. No other changes to the content of the FMS Application or Host Site Modules, or to the number and kind of fellowship programs that use this system, are included in this Revision request. However, the final information collection forms submitted as part of the 30-day **Federal Register** Notice for FMS may contain some minor content changes to those Modules. If so, these will be clearly enumerated and described beforehand in a formally submitted change request.

For the second purpose related to burden changes, this Revision proposes a modest decrease in total time burden. This is the result of more comprehensive estimations for fellow and host site applicants' respondent and time burdens, along with the changes related to streamlining the functions housed in the system. CDC determined that a thorough review of application submission trends and a series of pilot tests to better estimate time burden were warranted for this revision. The estimated burden per response for this revision request reflects the empirical results of application trends and pilot testing. For the FMS Application and Host Site Modules, the burdens based on the pilot test and feedback led to significant decreases in annual respondents and significant increases in estimated time burden per respondent. The time burden increases are conservative and more realistic and do not represent an increase in actual number or kind of questions asked. Below the detailed changes in time and respondents are outlined.

FMS Application Module: The estimated annual number of fellowship applicants is decreased in this request from 5286 to 2500 based on application submission trends from the most recent approval period. In accordance with a reduction in the number of applicants, a reduction in the number of reference letter requests is included as well. Based on the pilot test, in which CDC encouraged more comprehensive assessment of time needed to prepare and submit the information included in these applications, the average burden per response increased from 87 to 163 minutes.

FMS Host Site Module: As with the FMS Application Module, the revised number of host site applicants comes from FMS system reporting for the most recent approval period. New estimated annual number of host site applicants is decreased from 970 to 560 responses. Previously, estimates for the FMS Host Site Module's burden per response were based on the time it would take to fill out the form itself, assuming that responses were largely prepared or known ahead of time. The new estimate, created in part with feedback from former host site applicants, captures the true extent of burden imposed by discussing, drafting, reviewing, and submitting responses to these applications. Average burden per response is increased from 75 to 461 minutes.

FMS Activity Tracking Module: Given the significant reduction in the scope and use of this module, the estimated annual number of activity tracking respondents is decreased from 555 to 100. No change to time burden per response is requested, as CDC assessed the currently approved time burden to be a conservative, accurate estimate.

FMS Alumni Directory: Alumni Module is proposed for deactivation and thus has no burden in this Revision request.

Across these burden changes, compared to the currently approved burden of 13,477 hours annually, the new proposed burden is 12,655 hours. There are no costs to respondents other than their time to participate.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Form name	Number of respondents	Number of responses per respondent	Average burden per response (in hr)	Total burden (in hr)
Fellowship Applicants	FMS Application Module.	2,500	1	163/60	6,792
Reference Letter Writers	FMS Application Module.	5,000	1	15/60	1,250
Subset of FMS Fellowship Applicants (FMS Application Writing Samples).	FMS Application Module.	220	1	30/60	110
Public Health Agency or Organization Staff	FMS Host Site Module	560	1	461/60	4,303
Public Health Agency or Organization Staff	FMS Activity Tracking Module.	100	2	30/60	200
Fellowship Alumni	FMS Alumni Directory	0	1	37/60	0
Total					12,655

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22008 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60Day–25–0255; Docket No. CDC–2025–0717]

Proposed Data Collection Submitted for Public Comment and Recommendations

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice with comment period.

SUMMARY: The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden and maximize the utility of government information, invites the general public and other federal agencies the opportunity to comment on a continuing information collection, as required by the Paperwork Reduction Act of 1995. This notice invites comment on a proposed information collection project titled Resources and Services Database of the CDC National Prevention Information Network (NPIN). The NPIN Resources and Services Database contains entries on approximately 13,100 organizations and is the most comprehensive listing of HIV/AIDS, viral hepatitis, STD, and TB resources and services available throughout the country, and is available to the American public.

DATES: CDC must receive written comments on or before February 3, 2026.

ADDRESSES: You may submit comments, identified by Docket No. CDC–2025–0717 by either of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE MS H21–8, Atlanta, Georgia 30329.

Instructions: All submissions received must include the agency name and Docket Number. CDC will post, without change, all relevant comments to *www.regulations.gov.* Please note: Submit all comments through the Federal eRulemaking portal (*www.regulations.gov*) or by U.S. mail to the address listed above.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the information collection plan and instruments, contact Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329; Telephone: 404–639–7570; Email: *omb@cdc.gov.*

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. In addition, the PRA also requires federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each new proposed collection, each proposed extension of existing collection of information, and each reinstatement of previously approved information collection before submitting the collection to the OMB for approval. To comply with this requirement, we are publishing this notice of a proposed data collection as described below.

The OMB is particularly interested in comments that will help:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
3. Enhance the quality, utility, and clarity of the information to be collected;
4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submissions of responses; and
5. Assess information collection costs.

Proposed Project

Resources and Services Database of the National Prevention Information Network (NPIN) (OMB Control No. 0920–0255, Exp. 3/31/2026)—Revision—National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

The CDC requests approval of a Revision for the Resources and Services Database of the National Prevention Information Network (NPIN) information collection, currently approved under OMB Control No. 0920–0255. The National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis Prevention (NCHHSTP) has the primary responsibility within the CDC and the U.S. Public Health Service for the prevention and control of HIV infection, viral hepatitis, sexually transmitted diseases (STDs), and tuberculosis (TB), as well as for community-based HIV prevention activities, syphilis, and TB elimination programs. NPIN serves as the U.S. reference, referral, and distribution service for information on HIV/AIDS, viral hepatitis, STDs, and TB, supporting NCHHSTP's mission to link Americans to prevention, education, and care services. NPIN is a critical member of the network of government agencies, community organizations, businesses, health professionals, educators, and human services providers that educate the American public about the grave threat to public health posed by HIV/AIDS, viral hepatitis, STDs, and TB, and provides services for persons infected with human immunodeficiency virus (HIV).

The NPIN Resources and Services Database contains entries on approximately 13,100 organizations and is the most comprehensive listing of HIV/AIDS, viral hepatitis, STD, and TB resources and services available throughout the country. The American public can also access the NPIN Resources and Services database through the NPIN website. More than 616,557 unique visitors and more than 1,045,160 page views are recorded annually.

To accomplish CDC's goal of continuing efforts to maintain an up-to-date, comprehensive database, NPIN plans each year to add up to 1,200 newly identified organizations and to verify those organizations currently described in the NPIN Resources and Services Database each year. Organizations will be given the option to complete and submit an electronic version of the questionnaire by visiting the NPIN website.

CDEC requests OMB approval for an estimated 1,449 annual burden hours. There are no costs to respondents other than their time to participate.

ESTIMATED ANNUALIZED BURDEN HOURS

Form	Respondents	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total burden (in hours)
Initial Questionnaire Telephone Script.	Registered nurses, Social and community service managers, Health educators, and Social and Human service assistants.	1,200	1	7/60	140
Telephone Verification ..	Registered nurses, Social and community service managers, Health educators, and Social and Human service assistants.	11,135	1	6/60	1,113
Email Verification	Registered nurses, Health educators, Social and human service assistants, and Social and community service managers.	1,965	1	6/60	196
Total	.....	.....	.....	.....	1,449

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22007 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day–26–0639]

Agency Forms Undergoing Paperwork Reduction Act Review

In accordance with the Paperwork Reduction Act of 1995, the Centers for Disease Control and Prevention (CDC) has submitted the information collection request titled Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA) Special Exposure Cohort Petitions to the Office of Management and Budget (OMB) for review and approval. CDC previously published a ''Proposed Data Collection Submitted for Public Comment and Recommendations'' notice on July 28, 2025, to obtain comments from the public and affected agencies. CDC received one comment related to the previous notice. This notice serves to

allow an additional 30 days for public and affected agency comments.

CDC will accept all comments for this proposed information collection project. The Office of Management and Budget is particularly interested in comments that:

(a) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(b) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(c) Enhance the quality, utility, and clarity of the information to be collected;

(d) Minimize the burden of the collection of information on those who are to respond, including, through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses; and

(e) Assess information collection costs.

To request additional information on the proposed project or to obtain a copy of the information collection plan and instruments, call (404) 639–7570. Comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function. Direct written comments and/or suggestions regarding the items contained in this notice to the Attention: CDC Desk Officer, Office of Management and Budget, 725 17th Street NW, Washington, DC 20503 or by fax to (202) 395–5806. Provide written comments within 30 days of notice publication.

Proposed Project

Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA) Special Exposure Cohort Petitions. (OMB Control No. 0920–0639, Exp. 01/31/2026)—Extension—National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

On October 30, 2000, the Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), 42 U.S.C. 7384–7385 [1994, supp. 2001] was enacted. The Act established a compensation program to provide a lump sum payment of $150,000 and medical benefits as compensation to covered employees suffering from designated illnesses incurred as a result of their exposure to radiation, beryllium, or silica while in the performance of duty for the Department of Energy and certain of its vendors, contractors and subcontractors. This legislation also provided for payment of compensation for certain survivors of these covered employees. This program has been mandated to be in effect until Congress ends the funding.

Among other duties, the Department of Health and Human Services (HHS) was directed to establish and implement procedures for considering petitions by classes of nuclear weapons workers to be added to the ''Special Exposure Cohort'' (the ''Cohort''). In brief, EEOICPA authorizes HHS to designate such classes of employees for addition to the Cohort when NIOSH lacks sufficient information to estimate with sufficient accuracy the radiation doses of the employees, and if HHS also finds that the health of members of the class may have been endangered by the radiation dose the class potentially incurred. HHS must also obtain the advice of the Advisory Board on Radiation and Worker Health (the ''Board'') in establishing such findings. On May 28, 2004, HHS issued a rule that established procedures for adding such classes to the Cohort (42 CFR part 83). The rule was amended on July 10, 2007.

The HHS rule authorizes a variety of respondents to submit petitions. Petitioners are required to provide the information specified in the rule to qualify their petitions for a complete evaluation by HHS and the Board. HHS has developed two forms to assist the petitioners in providing this required information efficiently and completely. Form A is a one-page form to be used by EEOICPA claimants for whom NIOSH has attempted to conduct dose reconstructions and has determined that available information is not sufficient to complete the dose reconstruction. Form B, accompanied by separate instructions, is intended for all other petitioners. Forms A and B can be submitted electronically as well as in hard copy. Respondent/petitioners should be aware that HHS is not requiring respondents to use the forms. Respondents can choose to submit petitions as letters or in other formats, but petitions must meet the informational requirements stated in the rule. NIOSH expects, however, that all petitioners for whom Form A would be appropriate will actually use the form, since NIOSH will provide it to them upon determining that their dose reconstruction cannot be completed and encourage them to submit the petition. NIOSH expects the large majority of petitioners for whom Form B would be appropriate will also use the form, since it provides a simple, organized format for addressing the informational requirements of a petition.

NIOSH will use the information obtained through the petition for the following purposes: (a) identify the petitioner(s), obtain their contact information, and establish that the petitioner(s) is qualified and intends to petition HHS; (b) establish an initial definition of the class of employees being proposed to be considered for addition to the Cohort; (c) determine whether there is justification to require HHS to evaluate whether or not to designate the proposed class as an addition to the Cohort (such an evaluation involves potentially extensive data collection, analysis, and related deliberations by NIOSH, the Board, and HHS); and (d) target an evaluation by HHS to examine relevant potential limitations of radiation monitoring and/or dosimetry-relevant records and to examine the potential for related radiation exposures that might have endangered the health of members of the class.

Finally, under the rule, petitioners may contest the proposed decision of the Secretary to add or deny adding classes of employees to the cohort by submitting evidence that the proposed decision relies on a record of either factual or procedural errors in the implementation of these procedures. NIOSH estimates that the average time to prepare and submit such a challenge is five hours. Because of the uniqueness of this submission, NIOSH is not providing a form. The submission will typically be in the form of a letter to the Secretary.

CDC requests OMB approval for an estimated 43 annual burden hours. There are no costs to respondents unless a respondent/petitioner chooses to purchase the services of an expert in dose reconstruction, an option provided for under the rule.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondents	Form name	Number of respondents	Number of responses per respondent	Avg. burden per response (in hrs.)
Petitioners	Form A; 42 CFR 83.9	2	1	3/60
	Form B; 42 CFR 83.9	5	1	5
Petitioners using a submission format other than Form B (as permitted by rule).	42 CFR 83.9	1	1	6
Petitioners Appealing final HHS decision (no specific form is required).	42 CFR 83.18	2	1	5
Claimant authorizing a party to submit petition on his/her behalf.	Authorization Form; 42 CFR 83.7	3	1	3/60

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22004 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60Day–26–0824; Docket No. CDC–2025–0849]

Proposed Data Collection Submitted for Public Comment and Recommendations

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice with comment period.

SUMMARY: The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden and maximize the utility of government information, invites the general public and other federal agencies the opportunity to comment on a continuing information collection, as required by the Paperwork Reduction Act of 1995. This notice invites comment on a proposed information collection project titled the National Syndromic Surveillance Program (NSSP). The NSSP promotes and advances development of a syndromic surveillance system for the timely exchange of syndromic data.

DATES: CDC must receive written comments on or before February 3, 2026.

ADDRESSES: You may submit comments, identified by Docket No. CDC–2025–0849 by either of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329.

Instructions: All submissions received must include the agency name and Docket Number. CDC will post, without change, all relevant comments to *www.regulations.gov.*

Please note: Submit all comments through the Federal eRulemaking portal (*www.regulations.gov*) or by U.S. mail to the address listed above.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the information collection plan and instruments, contact Jeffrey M.Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329; Telephone: 404–639–7570; Email: *omb@cdc.gov.*

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. In addition, the PRA also requires federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each new proposed collection, each proposed extension of existing collection of information, and each reinstatement of previously approved information collection before submitting the collection to the OMB for approval. To comply with this requirement, we are publishing this notice of a proposed data collection as described below.

The OMB is particularly interested in comments that will help:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

3. Enhance the quality, utility, and clarity of the information to be collected;

4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submissions of responses; and

5. Assess information collection costs.

Proposed Project

National Syndromic Surveillance Program (OMB Control No. 0920–0824, Exp. 3/31/2026)—Revision—Office of Public Health Data, Surveillance, and Technology (OPHDST), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

Syndromic surveillance uses syndromic data and statistical tools to detect, monitor, and characterize unusual activity for further public health investigation or response. Syndromic data include electronic extracts of electronic health records (EHRs) from patient encounter data from emergency departments, urgent care, ambulatory care, and inpatient healthcare settings, as well as laboratory data. Though these data are being captured for different purposes, they are monitored in near real-time as potential indicators of an event, a disease, or an outbreak of public health significance. On the national level, these data are used to improve nationwide situational awareness and enhance responsiveness to hazardous events and disease outbreaks to protect America's health, safety, and security.

The BioSense Program was created by congressional mandate as part of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 and was launched by the CDC in 2003. The BioSense Program has since been

expanded into the National Syndromic Surveillance Program (NSSP) which promotes and advances development of a syndromic surveillance system for the timely exchange of syndromic data.

CDC requests a three-year approval for a Revision for NSSP (OMB Control No. 0920–0824, Expiration Date 3/31/26). This Revision includes a request for approval to continue to receive onboarding data from state, local and territorial public health departments about healthcare facilities in their jurisdiction; registration data needed to allow users access to the BioSense Platform tools and services; and data sharing permissions so that state, local and territorial health departments can share data with other state, local and territorial health departments and CDC.

NSSP features the BioSense Platform and a collaborative Community of Practice. The BioSense Platform is a secure integrated electronic health information system that CDC provides, primarily for use by state, local and territorial public health departments. It includes standardized analytic tools and processes that enable users to rapidly collect, evaluate, share, and store syndromic surveillance data. NSSP promotes a Community of Practice in which participants collaborate to advance the science and practice of syndromic surveillance. Health departments use the BioSense Platform to receive healthcare data from facilities in their jurisdiction, conduct syndromic surveillance, and share the data with other jurisdictions and CDC.

The BioSense Platform provides the ability to analyze healthcare encounter data from EHRs, as well as laboratory data. All EHR and laboratory data reside in a cloud-enabled, web-based platform that has Authorization to Operate from CDC. The BioSense Platform sits in the secure, private Government Cloud which is simply used as a storage and processing mechanism, as opposed to on-site servers at CDC. This environment provides users with easily managed on-demand access to a shared pool of configurable computing resources such as networks, servers, software, tools, storage, and services, with limited need for additional IT support. Each site (*i.e.,* state or local public health department) controls its data within the cloud and is provided with free secure data storage space with tools for posting, receiving, controlling and analyzing their data; an easy-to-use data display dashboard; and a shared environment where users can collaborate and advance public health surveillance practice. Each site is responsible for creating its own data use agreements with the facilities that are sending the data, retains ownership of any data it contributes to its exclusive secure space, and can share data with CDC or users from other sites.

NSSP has three different types of information collection:

(1) Collection of onboarding data about healthcare facilities needed for state, local, and territorial public health departments to submit EHR data to the BioSense Platform;

(2) Collection of registration data needed to allow users access to the BioSense Platform tools and services; and

(3) Collection of data sharing permissions so that state and local health departments can share data with other state and local health departments and CDC.

Healthcare data shared with CDC can include: (1) EHR data received by state and local public health departments from facilities including hospital emergency departments and inpatient settings, urgent care, and ambulatory care; (2) mortality data from state and local vital statistics offices; laboratory tests ordered and their results from a national private sector laboratory company; and (3) EHR data from the Department of Defense (DoD) and the Department of Health and Human Services (HHS) National Disaster Medical System (NDMS) Disaster Medical Assistance Teams (DMATs).

Respondents include state, local, and territorial public health departments. There are no costs to respondents other than their time to participate. The only burden incurred by the health departments is for submitting onboarding data about facilities to CDC, submitting registration data about users to CDC, and setting up data sharing permissions with CDC. The estimated annual burden is 54 hours. This is significantly lower than the previous three-year period because we have achieved high levels of participation with all states, one territory, and nearly 84% of emergency departments having been onboarded.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondents	Form name	Number of respondents	Number of responses per respondent	Avg. burden per response (in hours)	Total burden (in hours)
State, Local, and Territorial Public Health Departments.	Onboarding	15	10	10/60	25
State, Local, and Territorial Public Health Departments.	Registration	15	10	10/60	25
State, Local, and Territorial Public Health Departments.	Data Sharing Permissions	15	1	15/60	4
Total					54

Jeffrey M. Zirger,

Lead, Information Collection Review Office, Office of Public Health Ethics and Regulations, Office of Science, Centers for Disease Control and Prevention.

[FR Doc. 2025–22005 Filed 12–4–25; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

[Document Identifiers: CMS–10712]

Agency Information Collection Activities: Proposed Collection; Comment Request

AGENCY: Centers for Medicare & Medicaid Services, Health and Human Services (HHS).

ACTION: Notice.

SUMMARY: The Centers for Medicare & Medicaid Services (CMS) is announcing an opportunity for the public to comment on CMS' intention to collect information from the public. Under the Paperwork Reduction Act of 1995 (PRA), federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information (including each proposed extension or reinstatement of an existing collection of information) and to allow 60 days for public comment on the proposed action. Interested persons are invited to send comments regarding our burden estimates or any other aspect of this collection of information, including the necessity and utility of the proposed information collection for the proper performance of the agency's functions, the accuracy of the estimated burden, ways to enhance the quality, utility, and clarity of the information to be collected, and the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

DATES: Comments must be received by February 3, 2026.

ADDRESSES: When commenting, please reference the document identifier or OMB control number. To be assured consideration, comments and recommendations must be submitted in any one of the following ways:

1. *Electronically.* You may send your comments electronically to *http://www.regulations.gov.* Follow the instructions for ''Comment or Submission'' or ''More Search Options'' to find the information collection document(s) that are accepting comments.

2. *By regular mail.* You may mail written comments to the following address: CMS, Office of Strategic Operations and Regulatory Affairs, Division of Regulations Development, Attention: Document Identifier: ____/OMB Control Number: ____, Room C4–26–05, 7500 Security Boulevard, Baltimore, Maryland 21244–1850.

To obtain copies of a supporting statement and any related forms for the proposed collection(s) summarized in this notice, please access the CMS PRA website by copying and pasting the following web address into your web browser: *https://www.cms.gov/Regulations-and-Guidance/Legislation/PaperworkReductionActof1995/PRA-Listing.*

FOR FURTHER INFORMATION CONTACT: William N. Parham at (410) 786–4669.

SUPPLEMENTARY INFORMATION:

Contents

This notice sets out a summary of the use and burden associated with the following information collections. More detailed information can be found in each collection's supporting statement and associated materials (see **ADDRESSES**).

Under the PRA (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. The term ''collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA requires federal agencies to publish a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension or reinstatement of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, CMS is publishing this notice.

Information Collections

1. *Type of Information Collection Request:* Existing Collection in use without an OMB control number; *Title of Information Collection:* Religious Nonmedical Health Care Institutions (RNHCIs) Conditions of Participation; *Use:* The purpose of this package is to request approval for this existing collection in use without an OMB Control Number for Religious Nonmedical Health Care Institutions (RNHCIs) Conditions of Participation (CoPs). RNHCIs are facilities that provide non-medical nursing items and services to patients who choose to rely solely upon a religious method of healing and for whom the acceptance of medical health services would be inconsistent with their religious beliefs.

The information collections (ICs) for RNHCIs enable CMS to ensure these facilities comply with health and safety requirements under Title 42 Code of Regulations (CFR) Section 403, Subpart G. The specific ICs associated with burdens are as follows: IC–1: §§ 403.724(a)(2) & (a)(3)—Sign, Date & Notarize election statement; IC–2: § 403.724(a)(4)—Copy & Submit Election Statement to CMS; IC–3: § 403.730(a)—Provide Patients Notice of Rights; IC–4: § 403.736(a)—Provide Discharge Plan.

The previous iteration of this package included an estimated annual burden of 1,943 hours and an annual cost of $79,998. For this iteration, the total annual hourly burden is revised to 824 hours, with an annual burden cost of $38,113. There is no collection instrument. *Form Number:* CMS–10712 (OMB control number: 0938–NEW); *Frequency:* Quarterly; *Affected Public:* Private Sector—Not-for-profit institutions; *Number of Respondents:* 56; *Total Annual Responses:* 2,476; *Total Annual Hours:* 824. (For policy questions regarding this collection contact Claudia Molinar at (410) 786–8445).

William N. Parham, III

Director, Division of Information Collections and Regulatory Impacts, Office of Strategic Operations and Regulatory Affairs.

[FR Doc. 2025–21978 Filed 12–4–25; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

[Office of Management and Budget #0970–0036]

Proposed Information Collection Activity; ORR–6 Performance Report

AGENCY: Office of Refugee Resettlement, Administration for Children and Families, U.S. Department of Health and Human Services.

ACTION: Request for Public Comments.

SUMMARY: The Office of Refugee Resettlement (ORR), Administration for Children and Families (ACF), U.S. Department of Health and Human Services, seeks Office of Management and Budget (OMB) approval for a 3-year extension to the existing data collection for the ORR–6 Performance Report forms (OMB #0970–0036, expiration December 31, 2025) with minor changes to the instructions. The minor proposed changes remove parts of the instructions that are no longer relevant due to expired program funding and clarify existing instructions.

DATES: *Comments due* February 3, 2026.

ADDRESSES: In compliance with the requirements of the Paperwork Reduction Act (PRA) of 1995, ACF is soliciting public comment on the specific aspects of the information collection described above. You can obtain copies of the proposed collection of information and submit comments by emailing *infocollection@acf.hhs.gov.* Identify all requests by the title of the information collection.

SUPPLEMENTARY INFORMATION:

Description: The ORR–6 is designed to satisfy the statutory requirements of the Immigration and Nationality Act (INA). Specifically, section 412(a)(7) of INA (8 U.S.C. 1522(a)(7)) requires that the Director monitor refugee resettlement assistance, including collecting data on the services provided and the results achieved. Data elements include output data that measure services provided by programs for school-aged youth, elderly populations, and for overall health promotion. The data collected will inform evidence-based policymaking and program design. The ORR–6 is an OMB-approved form under PRA. ORR proposes to extend OMB approval for the ORR–6 with minor changes to the instructions. ORR staff and ORR funding recipients will benefit from accurate and clear instructions that support current reporting requirements. ACF estimates the proposed changes will not increase response burden.

Respondents: States, Replacement Designees, and the District of Columbia.

ANNUAL BURDEN ESTIMATES

Instrument	Total number of respondents	Annual number of responses per respondent	Average burden hours per response	Annual burden hours
ORR–6 Performance Report	70	2	15	2,100

Comments: The Department specifically requests comments on (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted within 60 days of this publication.

Authority: 8 U.S.C.1522(a)(7).

Mary C. Jones,

ACF/OPRE Certifying Officer.

[FR Doc. 2025–22021 Filed 12–4–25; 8:45 am]

BILLING CODE 4184–89–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2007–D–0369]

Product-Specific Guidances; Draft and Revised Draft Guidances for Industry; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA, Agency, or we) is announcing the availability of additional draft and revised draft product-specific guidances. The draft guidances provide product-specific recommendations on, among other things, the design of bioequivalence (BE) studies to support abbreviated new drug applications (ANDAs). In the **Federal Register** of June 11, 2010, FDA announced the availability of a guidance for industry entitled ''Bioequivalence Recommendations for Specific Products'' that explained the process that would be used to make product-specific guidances available to the public on FDA's website. The draft guidances identified in this notice were developed using the process described in that guidance.

DATES: Submit either electronic or written comments on the draft guidance by February 3, 2026 to ensure that the Agency considers your comment on this draft guidance before it begins work on the final version of the guidance.

ADDRESSES: You may submit comments on any guidance at any time as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *https://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *https://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand Delivery/Courier (for written/paper submissions)*: Dockets Management Staff (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2007–D–0369 for ''Product-Specific Guidances; Draft and Revised Draft Guidances for Industry.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *https://www.regulations.gov* or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday, 240–402–7500.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your

comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *https://www.regulations.gov.* Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *https://www.govinfo.gov/content/pkg/FR-2015-09-18/pdf/2015-23389.pdf.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *https://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852, 240–402–7500.

You may submit comments on any guidance at any time (see 21 CFR 10.115(g)(5)).

Submit written requests for single copies of the draft guidance to the Division of Drug Information, Center for Drug Evaluation and Research, Food and Drug Administration, 10001 New Hampshire Ave., Hillandale Building, 4th Floor, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your requests. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the draft guidance document.

FOR FURTHER INFORMATION CONTACT: Joseph Kotsybar, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 75, Rm. 3623A, Silver Spring, MD 20993–0002, 240–402–1062, *PSG-Questions@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

In the **Federal Register** of June 11, 2010 (75 FR 33311), FDA announced the availability of a guidance for industry entitled ''Bioequivalence Recommendations for Specific Products'' that explained the process that would be used to make product-specific guidances available to the public on FDA's website at *https://www.fda.gov/drugs/guidance-compliance-regulatory-information/guidances-drugs.*

As described in that guidance, FDA adopted this process to develop and disseminate product-specific guidances and provide a meaningful opportunity for the public to consider and comment on those guidances. Under that process, draft guidances are posted on FDA's website and announced periodically in the **Federal Register**. The public is encouraged to submit comments on those recommendations within 60 days of their announcement in the **Federal Register**. FDA considers any comments received and either publishes final guidances or publishes revised draft guidances for comment. Guidances were last announced in the **Federal Register** on November 21, 2025 (90 FR 223). This notice announces draft product-specific guidances, either new or revised, that are posted on FDA's website.

II. Drug Products for Which New Draft Product-Specific Guidances Are Available

FDA is announcing the availability of new draft product-specific guidances for industry for drug products containing the following active ingredients:

TABLE 1—NEW DRAFT PRODUCT-SPECIFIC GUIDANCES FOR DRUG PRODUCTS

Active ingredient(s)
Acoramidis hydrochloride
Apomorphine hydrochloride
Arimoclomol citrate
Birch triterpenes
Bupropion hydrochloride; Dextromethorphan hydrobromide
Cabergoline
Cefepime hydrochloride; Enmetazobactam
Crinecerfont (multiple reference listed drugs)
Desmopressin acetate
Deutivacaftor; Tezacaftor; Vanzacaftor calcium
Docetaxel
Elafibranor
Elexacaftor, Ivacaftor, Tezacaftor; Ivacaftor
Ensartinib hydrochloride
Escitalopram oxalate
Estradiol; Norethindrone Acetate; Relugolix
Estradiol; Progesterone
Fenfluramine hydrochloride
Flurpiridaz F–18
Gepotidacin mesylate
Hydrochlorothiazide
Hydroxychloroquine sulfate
Iomeprol (multiple reference listed drugs)
Isotretinoin
Ketorolac tromethamine; Phenylephrine hydrochloride
Levacetylleucine
Omeprazole; Sodium bicarbonate
Pegulicianine acetate
Pivmecillinam hydrochloride
Potassium chloride
Prednisolone acetate
Primidone
Pyridostigmine bromide (multiple reference listed drugs)
Revumenib citrate
Roflumilast
Selpercatinib
Suzetrigine
Talazoparib tosylate
Tenapanor hydrochloride
Testosterone undecanoate
Treosulfan

III. Drug Products for Which Revised Draft Product-Specific Guidances Are Available

FDA is announcing the availability of revised draft product-specific guidances for industry for drug products containing the following active ingredients:

TABLE 2—REVISED DRAFT PRODUCT-SPECIFIC GUIDANCES FOR DRUG PRODUCTS

Active ingredient(s)
Baclofen
Baricitinib
Brigatinib
Budesonide (multiple reference listed drugs)
Calcitonin salmon
Carbinoxamine maleate
Carvedilol phosphate
Cenobamate
Dabrafenib mesylate
Dasiglucagon hydrochloride
Diltiazem hydrochloride
Epinephrine (multiple reference listed drugs)
Etodolac
Fluticasone propionate
Glucagon (multiple reference listed drugs)
Hydrochlorothiazide; Metoprolol tartrate
Ixazomib
Liraglutide (multiple reference listed drugs)
Mesalamine
Omeprazole; Sodium bicarbonate
Pegcetacoplan (multiple reference listed drugs)
Poscaconazole
Pyridostigmine bromide
Semaglutide
Sunitinib malate
Tapinarof
Teriparatide

TABLE 2—REVISED DRAFT PRODUCT-SPECIFIC GUIDANCES FOR DRUG PRODUCTS—Continued

Active ingredient(s)
Tirzepatide
Treprostinil
Tretinoin
Trospium chloride
Vosoritide

For a complete history of previously published **Federal Register** notices related to product-specific guidances, go to *https://www.regulations.gov* and enter Docket No. FDA–2007–D–0369.

These draft guidances are being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). These draft guidances, when finalized, will represent the current thinking of FDA on, among other things, the product-specific design of BE studies to support ANDAs. They do not establish any rights for any person and are not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

As we develop final guidance on this topic, FDA will consider comments on costs or cost savings the guidance may generate, relevant for Executive Order 14192.

IV. Paperwork Reduction Act of 1995

While these guidances contain no collection of information, they do refer to previously approved FDA collections of information. The previously approved collections of information are subject to review by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3521). The collections of information in 21 CFR part 312 for investigational new drugs have been approved under OMB control number 0910–0014. The collections of information in 21 CFR part 314 for applications for FDA approval to market a new drug and in 21 CFR part 320 for bioavailability and bioequivalence requirements have been approved under OMB control number 0910–0001.

V. Electronic Access

Persons with access to the internet may obtain the draft guidance at *https://www.fda.gov/drugs/guidance-compliance-regulatory-information/guidances-drugs*, *https://www.fda.gov/regulatory-information/search-fda-guidance-documents*, or *https://www.regulations.gov*.

Lowell M. Zeta,

Acting Deputy Commissioner for Policy, Legislation, and International Affairs.

[FR Doc. 2025–22131 Filed 12–4–25; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Auditory and Hearing Sciences.

Date: January 16, 2026.

Time: 9:30 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Kausik Ray, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1009–J, Bethesda, MD 20892, 301–594–8015, *rayk@nidcd.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22097 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center For Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Social and Community Influences on Health Integrated Review Group; Psychosocial Development, Risk and Prevention Study Section.

Date: January 22, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Anna L Riley, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3114, MSC 7759, Bethesda, MD 20892, 301–435–2889, *rileyann@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22082 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections

552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; PAR–25–210 and PAR–25–211: Enhancing Mechanistic Research on Precision Probiotic Therapies.

Date: January 7, 2026.

Time: 10:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Dayadevi Jirage, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4422, Bethesda, MD 20892, (301) 867–5309, *jiragedb@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22058 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Genes, Genomes, and Genetics Integrated Review Group; Therapeutic Approaches to Genetic Diseases Study Section.

Date: January 20, 2026.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Maddalena Tilli Shiffert, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 710P, Bethesda, MD 20892, (301) 594–4257, *shiffertmt@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22027 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Integrative, Functional and Cognitive Neuroscience Integrated Review Group; Behavioral Neuroendocrinology, Neuroimmunology, Rhythms, and Sleep Study Section.

Date: January 22–23, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Simon Peter Peron, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Dr., Room 1009K, Bethesda, MD 20892, (301) 594–6236, *peronsp@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22065 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Infectious Diseases and Immunology B Integrated Review Group; HIV Comorbidities and Clinical Studies Study Section.

Date: January 23, 2026.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Shannon J. Sherman, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, 301–594–0715, *shannon.sherman@nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22092 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to Section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Small Business: Health Services and Systems B.

Date: January 22, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Sandhya Sanghi, Ph.D., Scientific Review Officer, Scientific Review Branch, National Institute on Aging, National Institutes of Health, 5601 Fishers Lane, Suite 8B, Rockville, MD 20892, (301) 496–2879, *sandhya.sanghi@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22022 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Diabetes and Digestive and Kidney Diseases; Notice of Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of a meeting of the Board of Scientific Counselors, NIDDK.

The meeting will be open to the public as indicated below, with attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the meeting.

The meeting will be closed to the public as indicated below in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended for the review, discussion, and evaluation of individual grant applications conducted by the National Institute Of Diabetes And Digestive And Kidney Diseases, including consideration of personnel qualifications and performance, and the competence of individual investigators, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Scientific Counselors, NIDDK.

Date: January 13–14, 2026.

Open: January 13, 2026, 9:00 a.m. to 12:30 p.m.

Agenda: NIDDK Overview.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Closed: January 13, 2026, 12:30 p.m. to 1:45 p.m.

Agenda: Closed Discussion sessions.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Open: January 13, 2026, 1:45 p.m. to 4:00 p.m.

Agenda: NIDDK Overview.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Closed: January 13, 2026, 4:00 p.m. to 5:30 p.m.

Agenda: Closed Discussion sessions.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Open: January 14, 2026, 9:00 a.m. to 12:30 p.m.

Agenda: NIDDK Overview.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Closed: January 14, 2026, 12:30 p.m. to 1:45 p.m.

Agenda: Closed Discussion sessions.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Open: January 14, 2026, 1:45 p.m. to 4:00 p.m.

Agenda: NIDDK Overview.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Closed: January 14, 2026, 4:00 p.m. to 5:30 p.m.

Agenda: Closed Discussion sessions.

Address: National Institutes of Health, Building 10, 10 Center Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Michael W. Krause, Ph.D., Scientific Director, NIDDK, National Institute of Diabetes and Digestive and, Kidney Diseases, National Institutes of Health, Building 5, Room B104, Bethesda, MD 20892–1818 (301) 402–4633, *mwkrause@helix.nih.gov*.

In the interest of security, NIH has procedures at *https://security.nih.gov/visitors/Pages/visitor-campus-access.aspx* for entrance into on-campus and off-campus facilities. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors attending a meeting on campus or at an off-campus federal facility will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

(Catalogue of Federal Domestic Assistance Program Nos. 93.847, Diabetes, Endocrinology and Metabolic Research; 93.848, Digestive Diseases and Nutrition Research; 93.849, Kidney Diseases, Urology and Hematology Research, National Institutes of Health, HHS)

Dated: December 3, 2025.

Margaret N. Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22132 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Healthcare Delivery and Methodologies Integrated Review Group; Healthcare and Health Disparities Study Section.

Date: January 6, 2026.

Time: 9:00 a.m. to 6:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Tara Roshell Earl, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1007C, Bethesda, MD 20892, (301) 402–6857, *earltr@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22040 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Social and Community Influences on Health Integrated Review Group; Health Promotion in Communities Study Section.
Date: January 14, 2026.
Time: 9:00 a.m. to 6:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Helena Eryam Dagadu, MPH., Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3137, Bethesda, MD 20892, (301) 435–1266, *dagaduhe@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22080 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Special Topics in Molecular Genetics and Prokaryotic Biology.
Date: January 27, 2026.
Time: 10:00 a.m. to 5:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Maryam Rohani, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 761–6656, *maryam.rohani@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22086 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Digestive, Kidney and Urological Systems Integrated Review Group; Environmental Determinants of Disease Study Section.
Date: January 28–29, 2026.
Time: 8:30 a.m. to 6:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Stacey Nicole Williams, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 867–5309, *stacey.williams@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22072 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections

552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Social and Community Influences on Health Integrated Review Group; Population and Public Health Approaches to HIV/AIDS Study Section.

Date: January 21, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Aubrey S Madkour, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1000C, Bethesda, MD 20892, (301) 594–6891, *madkouras@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22059 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Genes, Genomes, and Genetics Integrated Review Group; Maximizing Investigators' Research Award—F Study Section.

Date: January 26–27, 2026.

Time: 9:00 a.m. to 9:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health 6701 Rockledge Drive Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Brian Paul Chadwick, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 594–3586, *chadwickbp@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22025 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Integrative, Functional and Cognitive Neuroscience Integrated Review Group; Learning, Memory and Decision Neuroscience Study Section.

Date: January 20–21, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Roger Janz, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 402–8515, *janzr2@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22094 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Genes, Genomes, and Genetics Integrated Review Group; Genetic Variation and Evolution Study Section.

Date: January 22, 2026.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Michael Patrick O'Connell, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 867–5309, *oconnellmp@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22075 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review, Special Emphasis Panel; NRSA Institutional Research Training Grant and Research Education Programs.

Date: January 14, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Sonia Ivette Ortiz-Miranda, Ph.D., Scientific Review Officer, National Institute of General Medical Sciences, National Institutes of Health, Bethesda, MD 20892, 301–594–0534, *sonia.ortiz-miranda@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22032 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Genes, Genomes, and Genetics Integrated Review Group; Genetics of Health and Disease Study Section.

Date: January 26, 2026.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Christopher Payne, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 2208, Bethesda, MD 20892, 301–402–3702, *christopher.payne@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22093 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Biobehavioral and Behavioral Processes Integrated Review Group; Biobehavioral Regulation, Learning and Ethology Study Section.

Date: January 9, 2026.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Sara Louise Hargrave, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institute of Health, 6701 Rockledge Drive, Room 3170, Bethesda, MD 20892, (301) 443–7193, *hargravesl@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22041 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Program Project: Silvio O. Conte Centers for Basic Neuroscience or Translational Mental Health Research.

Date: January 8, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Andrea B. Kelly, Ph.D., Scientific Review Officer, NIDCD, National Institutes of Health, 6001 Executive Blvd., Room 8343, Rockville, MD 20852, (301) 451–6339, *kellya2@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22037 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; PAR Panel: HIV and Substance Use Disorder Pioneer Award and Innovator Award Programs (DP1 and DP2).

Date: January 21–22, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Kristina S. Wickham, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 761–5390, *kristina.wickham@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22043 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Infectious Diseases and Immunology A Integrated Review Group; Molecular and Structural Immunology Study Section.

Date: January15–16, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Velasco Cimica, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 594–1760, *velasco.cimica@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22091 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Healthcare Delivery and Methodologies Integrated Review Group; Science of Implementation in Health and Healthcare Study Section.

Date: January 8, 2026.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Lauren Penney, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 496–1968, *penneyls@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22039 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Interdisciplinary Molecular Sciences and Training Integrated Review Group; Advancing Therapeutics—B Study Section.

Date: January 14–15, 2026.

Time: 09:30 a.m. to 06:30 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Lystranne Maynard-Smith, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, 301–480–9601, *lystranne.maynard-smith@nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22071 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Individual, Mentored Career Development Awards in Molecular Genetics and Genomics.
Date: January 15, 2026.
Time: 9:30 a.m. to 6:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Manas Chattopadhyay, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, Rockledge Drive, Bethesda, MD 20872, *manasc@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22088 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Integrative, Functional and Cognitive Neuroscience Integrated Review Group; Auditory System Study Section.
Date: January 21–22, 2026.
Time: 10:00 a.m. to 5:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Brian H. Scott, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, 301–827–7490, *brianscott@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22095 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; PAR Panel: Catalyze Research on Heart, Lung, Blood, and Sleep (HLBS) Diseases and Disorders.
Date: January 26, 2026.
Time: 08:00 a.m. to 07:00 p.m.
Agenda: To review and evaluate grant applications.
Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.
Meeting Format: Virtual Meeting.
Contact Person: Dylan Flather, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, 301–594–2763, *dylan.flather@nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22070 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Environmental Health Sciences; Notice of Partially Closed Meeting

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of a meeting of the Board of Scientific Counselors, National Institute Environmental Health Sciences.

The meeting will be partially open to the public as indicated below, with

attendance limited to space available. Individuals who plan to attend as well as those who need special assistance, such as sign language interpretation or other reasonable accommodations, must notify the Contact Person listed below in advance of the meeting. The open session will be videocast and can be accessed from the NIH Videocasting and Podcasting website (*http://videocast.nih.gov/*).

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The intramural programs and projects as well as the grant applications and/or contract proposals and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications and/or contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Scientific Counselors, National Institute of Environmental Health Sciences.

Date: February 8–10, 2026.

Closed: February 8, 2026, 7:00 p.m. to 9:00 p.m.

Agenda: To review and evaluate discussion of BSC Reviews.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Open: February 9, 2026, 8:30 a.m. to 9:15 a.m.

Agenda: Meeting Overview.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Open: February 9, 2026, 9:30 a.m. to 11:10 a.m.

Agenda: Q&A Sessions.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Closed: February 9, 2026, 11:10 a.m. to 12:40 p.m.

Agenda: Session with Investigators and Working Lunch.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Open: February 9, 2026, 12:40 p.m. to 2:20 p.m.

Agenda: Q&A Sessions.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Open: February 9, 2026, 2:35 p.m. to 3:25 p.m.

Agenda: Q&A Session.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Closed: February 9, 2026, 3:25 p.m. to 4:10 p.m.

Agenda: Session with Investigators.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Open: February 10, 2026, 8:30 a.m. to 9:40 a.m.

Agenda: Poster Session.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Open: February 10, 2026, 9:40 a.m. to 10:30 a.m.

Agenda: Q&A Session.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Closed: February 10, 2026, 10:30 a.m. to 10:45 a.m.

Agenda: 1:1 Session with Investigator.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Closed: February 10, 2026, 11:00 a.m. to 12:45 p.m.

Agenda: 1:1 Session with Programmatic Staff Scientists and Working Lunch.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Closed: February 10, 2026, 12:45 p.m. to 1:45 p.m.

Agenda: Closed Session with Fellows and Staff Scientists.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Closed: February 10, 2026, 2:00 p.m. to 4:30 p.m.

Agenda: Closed BSC Discussion and Debriefing to NIEHS/DIR Leadership.

Address: National Institute of Environmental Health Sciences, Rodbell Auditorium, 111 TW Alexander Drive, Research Triangle Park, NC 27709.

Meeting Format: Virtual and In-Person.

Contact Person: Darryl C. Zeldin, MD, Scientific Director, National Institute of Environmental Health Sciences, NIH, DHHS, 111 T.W. Alexander Drive, Bldg. 101, Room A214, Research Triangle Park, NC 27709, (984) 287–3641, *zeldin@niehs.nih.gov*.

Registration is not required to attend the open portion of this meeting.

Any interested person may file written comments with the committee by forwarding the statement to the Contact Persons listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

Any member of the public interested in presenting oral comments to the committee may notify the Contact Person listed on this notice at least 10 days in advance of the meeting. Interested individuals and representatives of an organization may submit a letter of intent, a brief description of the organization represented and a short description of the oral presentation. Only one representative of an organization may be allowed to present oral comments and presentations may be limited to five minutes. Both printed and electronic copies are requested for the record. In addition, any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

In the interest of security, NIH has procedures at *https://www.nih.gov/about-nih/visitor-information/campus-access-security* for entrance into on-campus and off-campus facilities. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors attending a meeting on campus or at an off-campus federal facility will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

(Catalogue of Federal Domestic Assistance Program Nos. 93.115, Biometry and Risk Estimation—Health Risks from Environmental Exposures; 93.142, NIEHS Hazardous Waste Worker Health and Safety Training; 93.143, NIEHS Superfund Hazardous Substances—Basic Research and Education; 93.894, Resources and Manpower Development in the Environmental Health Sciences; 93.113, Biological Response to Environmental Health Hazards; 93.114, Applied Toxicological Research and Testing, National Institutes of Health, HHS)

Dated: December 2, 2025.

Denise Santeufemio,

Supervisory Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22030 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center For Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the

provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; PAR23–138: Instrumentation Grant Program for Resource-Limited Institutions (S10).

Date: January 13–14, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Jasenka Borzan, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (667) 900–1640, *jasenka.borzan@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22085 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Neurotoxicology, Alcohol, Neurobiology of Motivated Behavior, and Training Grant Applications.

Date: January 8, 2026.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Mamatha Garige, Ph.D., Scientific Review Officer, Extramural Project Review Branch, National Institute on Alcohol Abuse and Alcoholism, 6700B Rockledge Drive, Room 2118, Bethesda, MD 20817, (301) 443–9737, *mamatha.garige@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22098 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Healthcare Delivery and Methodologies Integrated Review Group; Health Services: Quality and Effectiveness Study Section.

Date: January 21–22, 2026.

Time: 9:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Angela D. Thrasher, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1000J, Bethesda, MD 20892, 301–480–6894, *thrasherad@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22028 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Radiation Therapy, Radiopharmaceuticals, and Radiobiology Review.

Date: February 5, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Susan Lynn Spence, Ph.D., Scientific Review Officer, Research Technology and Contract Review Branch, Division of Extramural Activities, 9609 Medical Center Drive, Rm. 7W126, National Cancer Institute, Rockville, MD 20850, 301.867.5309, *susan.spence@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22069 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; RFA Panel: BRAIN Initiative, Translational, and Intervention Applications.

Date: January 27, 2026.

Time: 9:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Victor Henriquez, Ph.D., Scientific Review Officer, National Center for Advancing Translational Sciences (NCATS), National Institutes of Health, 6701 Democracy Blvd., Democracy 1, Room 1066, Bethesda, MD 20892–4878, (301) 435–0813, *victor.henriquez@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist,Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22050 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Social and Community Influences on Health Integrated Review Group; Social Sciences and Population Studies B Study Section.

Date: January 23, 2026.

Time: 9:30 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Kate Fothergill, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3142, Bethesda, MD 20892, 301–435–2309, *fothergillke@mail.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22076 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Special Topics in Bacterial-Host Interactions.

Date: January 15, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Mairi Noverr, Ph.D., Scientific Review Officer, 5601 Fishers Lane, Room 3G13A, Rockville, MD 20852, (240) 747–7530, *mairi.noverr@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22087 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Social and Community Influences on Health Integrated Review Group; Community Influences on Health Behavior Study Section.

Date: January 30, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Maria De Jesus Diaz Perez, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1000G, Bethesda, MD 20892, (301) 496–4227, *diazperezm2@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844,

93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22078 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Special Topics in Psychosocial Risk and Interpersonal Processes of Health.

Date: January 22, 2026.

Time: 10:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Janetta Lun, Ph.D., Scientific Review Officer, SRB, National Institute on Aging, National Institutes of Health, 5601 Fishers Lane, Suite 8B, Bethesda, MD 20892, (301) 827–4588, *janetta.lun@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22045 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Aging and Neurodegeneration Integrated Review Group; Cognitive Disorders and Brain Aging Study Section.

Date: January 22–23, 2026.

Time: 8:00 a.m. to 2:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Simone Chebabo Weiner, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1011K, Bethesda, MD 20892, (301) 435–1042, *weinersc@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22099 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Topics in Health Services: Cancer, Transplantation, and Aging.

Date: January 21, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Shiv A. Prasad, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, National Institutes of Health, NIAID, Rockville, MD 20892, *shiv.prasad@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22023 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member Conflict: Topics in Adaptive and Innate Immunity.

Date: January 14, 2026.

Time: 09:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Seyhan Boyoglu Barnum, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 480–1446, *seyhan.boyoglu-barnum@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22042 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Special Topics in Genomics, Genetic Evolution, and Technology Development.

Date: January 29, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Karin Garabed Jegalian, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 712R, Bethesda, MD 20892, (301) 867–5309, *jegaliak@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22044 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Population Sciences and Epidemiology Integrated Review Group; Kidney Endocrine and Digestive Disorders Study Section.

Date: January 26, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Lan Tian, Ph.D., Scientific Review Officer, Division of Extramural Activates, NIDDK, National Institutes of Health, 6707 Democracy Boulevard, Room 7016, Bethesda, MD 20892, *tianl@niddk.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22090 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Social and Community Influences on Health Integrated Review Group; Social Sciences and Population Studies A Study Section.

Date: January 20, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Suzanne Ryan, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3139, MSC 7770, Bethesda, MD 20892, (301) 435–1712, *ryansj@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22079 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections

552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Cellular and Molecular Aspects of the Blood-Brain Barrier and Neurovascular System and Therapeutic Strategies.

Date: January 22, 2026.

Time: 9:00 a.m. to 5:30 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Eric S. Tucker, Ph.D., Scientific Review Officer, Scientific Review Branch, National Institutes of Health, Neuroscience Center, 6001 Executive Blvd., Rockville, MD 20852, (301) 827–0799, *eric.tucker@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22066 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Institutional Research Training Grants & Research Education Programs in the Behavioral and Social Sciences.

Date: January 13–14, 2026.

Time: 9:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Kimberly L. Houston, MD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, Bethesda, MD 20892, (301) 827–4902, *Kimberly.Houston@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22077 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member Conflict: Auditory and Sensory-Motor Neuroscience.

Date: January 15, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Mamatha Garige, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 443–9737, *mamatha.garige@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22096 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Small Business: Social and Community Influences across the Lifecourse.

Date: January 23, 2026.

Time: 8:30 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: David E. Pollio, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 1006F, Bethesda, MD 20892, (301) 594–4002, *polliode@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22073 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Member Conflict: Mechanisms of neurodevelopment, neurodegeneration, and neural repair.

Date: January 29, 2026.

Time: 9:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Eric S. Tucker, Ph.D., Scientific Review Officer, Scientific Review Branch, National Institutes of Health, Neuroscience Center, 6001 Executive Blvd., Rockville, MD 20852, (301) 827–0799, *eric.tucker@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Sterlyn H. Gibson,

Program Specialist, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22067 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Mentored Career and Research Development Awards (Ks).

Date: January 22, 2026.

Time: 10:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Deborah Ismond, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 594–2704, *deborah.ismond@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22074 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Digestive, Kidney and Urological Systems Integrated Review Group; Digestive System Host Defense, Microbial Interactions and Immune and Inflammatory Disease Study Section.

Date: January 20–21, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Aiping Zhao, MD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 2188, Bethesda, MD 20892–7818, (301) 435–0682, *zhaoa2@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22031 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Genes, Genomes, and Genetics Integrated Review Group; Maximizing Investigators' Research Award A Study Section.

Date: January 28–29, 2026.

Time: 9:30 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Mollie Kim Manier, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 594–0510, *mollie.manier@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22024 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Genes, Genomes, and Genetics Integrated Review Group; Prokaryotic Cell and Molecular Biology Study Section.

Date: January 16, 2026.

Time: 8:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Rebecca Catherine Burgess, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 480–8034, *rebecca.burgess@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22084 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Fellowships: Genes, Genomes and Genetics.

Date: January 14, 2026.

Time: 9:00 a.m. to 8:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Linda Wagner Jurata, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 496–8032, *linda.jurata@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22089 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; NRSA Institutional Research Training Grant Review.

Date: January 9, 2026.

Time: 10:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: DeAnna L. Adkins, Ph.D., Scientific Review Officer, Scientific Review Branch, NSC Building, Bethesda, MD 20892, 301–496–9223, *deanna.adkins@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22038 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Research Enhancement Awards: Molecular Genetics, Cellular and Cancer Biology.

Date: January 12, 2026.

Time: 10:00 a.m. to 6:30 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Sandip Bhattacharyya, Scientific Review Officer, Scientific Review Program, DEA/NIAID/NIH/DHHS, 5601 Fishers Lane, MSC–9823, Rockville, MD 20852, (301) 594–7121, *sandip.bhattacharyya@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 2, 2025.

Margaret Vardanian,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22026 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 1009 of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Population Sciences and Epidemiology Integrated Review Group; Social and Environmental Determinants of Health Study Section.

Date: January 16, 2026.

Time: 9:00 a.m. to 6:00 p.m.

Agenda: To review and evaluate grant applications.

Address: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892.

Meeting Format: Virtual Meeting.

Contact Person: Gheda Khodr Temsah, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 402–2342, *temsahgk@csr.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: December 3, 2025.

Bruce A. George,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2025–22081 Filed 12–4–25; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF THE INTERIOR

National Park Service

[OMB Control Number 1024–0018PPWOCRADI0; NPS–WASO–CR–NPS 0040749; PCU00RP15.R50000, 212P104215]

Agency Information Collection Activities; Nomination of Properties for Listing in the National Register of Historic Places

AGENCY: National Park Service, Interior.

ACTION: Notice of information collection; request for comment.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, we, the National Park Service (NPS, we) are proposing to renew an information collection without change.

DATES: Interested persons are invited to submit comments, which NPS must receive on or before February 3, 2026.

ADDRESSES: Written comments and suggestions on the information collection requirements should be submitted by the date specified above in **DATES** to *https://www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under Review—Open for Public Comments'' or by using the search function. Please provide a copy of your comments to the NPS Information Collection Clearance Officer (ADIR–ICCO), 13461 Sunrise Valley Drive, (MS–263) Herndon, VA 20191 (mail); or *phadrea_ponds@nps.gov* (email). Please reference include ''1024–0018'' in the subject line of your comments.

FOR FURTHER INFORMATION CONTACT: Alexis Abernathy, National Register of Historic Places, at *alexis_abernathy@nps.gov* (email), or by 202 354–2236 (telephone). Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States. You may also view the Information Collection Request (ICR) at *http://www.reginfo.gov/public/do/PRAMain*

SUPPLEMENTARY INFORMATION: In accordance with the Paperwork Reduction Act of 1995 (PRA, 44 U.S.C. 3501 *et seq.*) and 5 CFR 1320.8(d)(1), all information collections require approval under the PRA. As part of our continuing effort to reduce paperwork and respondent burdens, we invite the public and other Federal agencies to comment on new, proposed, revised, and continuing collections of information. This helps us assess the impact of our information collection requirements and minimize the public's reporting burden. It also helps the public understand our information collection requirements and provide the requested data in the desired format.

We are especially interested in public comment addressing the following:

(1) Whether or not the collection of information is necessary for the proper performance of the functions of the agency, including whether or not the information will have practical utility.

(2) The accuracy of our estimate of the burden for this collection of information, including the validity of the methodology and assumptions used.

(3) Ways to enhance the quality, utility, and clarity of the information to be collected.

(4) How might the agency minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of response.

Comments that you submit in response to this notice are a matter of public record. We will include or summarize each comment in our request to OMB to approve this ICR. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Abstract: The National Register of Historic Places (NRHP) is the official Federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. National Register properties have significance to the history of communities, States, Tribes, or the Nation. The National Historic Preservation Act of 1966 requires the

Secretary of the Interior to maintain and expand the National Register, and to establish criteria and guidelines for including properties on the National Register. National Register properties must be considered in the planning for Federal or federally assisted projects and listing in the National Register is required for eligibility for Federal rehabilitation tax incentives.

The NPS is responsible for administering the National Register. Nominations for listing historic properties come from State Historic Preservation Officers (SHPO), from Federal Preservation Officers (FPO) for properties owned or controlled by the United States Government, and from Tribal Historic Preservation Officers (THPO) for properties on Tribal lands. Private individuals and organizations, local governments, and Tribes often initiate this process and prepare the necessary documentation. Regulations at 36 CFR part 60 and 63 establish the criteria and guidelines for listing and for determining the eligibility of properties.

Title of Collection: Nomination of Properties for Listing in the National Register of Historic Places.

OMB Control Number: 1024–0018.

Form Number: 10–900, 10–900–a, and 10–900–b.

Type of Review: Extension of a currently approved collection.

Respondents/Affected Public: Individuals, Private Sector, Tribes, and Government.

Total Estimated Number of Annual Respondents: 2,552.

Total Estimated Number of Annual Responses: 1,276.

Estimated Completion Time per Response: Varies from 6 hours to 250 hours, depending on respondent and/or activity.

Total Estimated Number of Annual Burden Hours: 163.328 hours.

Respondent's Obligation: Required to obtain or retain a benefit.

Frequency of Collection: On occasion.

Total Estimated Annual Non Hour Burden Cost: None.

An agency may not conduct, or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

The authority for this action is the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Phadrea Ponds,

Information Collection Clearance Officer, National Park Service.

[FR Doc. 2025–22000 Filed 12–4–25; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF THE INTERIOR

National Park Service

[OMB Control Number 1024–0275; NPS–NRSS–OSAE–NPS0034512; PPMRSNR1Y.NM0000 PPWONRADD3]

Agency Information Collection Activities; Using Web and Mobile-Based Apps During NPS Citizen Science Events

AGENCY: National Park Service, Interior.

ACTION: Notice of Information Collection; request for comment.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, we, the National Park Service (NPS, we) are proposing to renew an information collection.

DATES: Interested persons are invited to submit comments on or before February 3, 2026.

ADDRESSES: Send your comments on this information collection request (ICR) by mail to NPS Information Collection Clearance Officer (ADIR–ICCO), National Park Service, 13461 Sunrise Valley Drive, (MS–263) Reston, VA 20191 (mail); or to *phadrea_ponds@nps.gov* (email). Please reference Office of Management and Budget (OMB) Control Number 1024–0275 in the subject line of your comments.

FOR FURTHER INFORMATION CONTACT: To request additional information about this ICR, contact Bryan Faehner, Stewardship and Science Coordinator, Natural Resource Stewardship and Science Directorate, National Park Service, 1849 C Street NW, Mail stop 2254, Washington, DC 20240 (mail); *bryan_faehner@nps.gov* (email). Please reference OMB Control Number 1024–0275 in the subject line of your comments. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point of contact in the United States.

SUPPLEMENTARY INFORMATION: In accordance with the Paperwork Reduction Act of 1995 (PRA, 44 U.S.C. 3501 *et seq.*) and 5 CFR 1320.8(d)(1), all information collections require approval under the PRA. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

As part of our continuing effort to reduce paperwork and respondent burdens, we invite the public and other Federal agencies to comment on new, proposed, revised, and continuing collections of information. This helps us assess the impact of our information collection requirements and minimize the public's reporting burden. It also helps the public understand our information collection requirements and provide the requested data in the desired format.

We are especially interested in public comment addressing the following:

(1) Whether or not the collection of information is necessary for the proper performance of the functions of the agency, including whether or not the information will have practical utility.

(2) The accuracy of our estimate of the burden for this collection of information, including the validity of the methodology and assumptions used.

(3) Ways to enhance the quality, utility, and clarity of the information to be collected.

(4) How might the agency minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of response.

Comments that you submit in response to this notice are a matter of public record. We will include or summarize each comment in our request to OMB to approve this ICR. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Abstract: The NPS is authorized by 54 U.S. Code section 100701, Protection, interpretation, and research in System, to collect this information. The NPS is requesting approval to use mobile and web-based apps (*e.g.,* iNaturalist, eBird, Geoforms, PictureThis, Nature ID, etc.) to collect natural history and observational information during NPS sponsored-citizen science events. The information will be used to substantiate the occurrence of plant, wildlife, and invertebrate species within NPS units during these events. By using citizen science apps, information will be immediately available to all parks and others interested in species identification and advancing the

knowledge of the natural world. Using mobile and web-based apps will enable parks to increase the understanding of biodiversity within the park systems.

Title of Collection: Using web and mobile-based apps during NPS Citizen Science events.

OMB Control Number: 1024–0275.

Form Number: None.

Type of Review: Extension of a currently approved collection.

Description of Respondents: General public, individual households, and non-federal scientists.

Total Estimated Number of Annual Respondents: 15,500.

Total Estimated Number of Annual Responses: 187,500.

Estimated Completion Time per Response: 5 minutes.

Total Estimated Number of Annual Burden Hours: 15,625 hours.

Respondent's Obligation: Voluntary.

Frequency of Collection: One time.

Total Estimated Annual Nonhour Burden Cost: None.

The authority for this action is the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Phadrea Ponds,

Information Collection Clearance Officer, National Park Service.

[FR Doc. 2025–22001 Filed 12–4–25; 8:45 am]

BILLING CODE 4312–52–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 731–TA–991 (Fourth Review)]

Silicon Metal From Russia; Revised Schedule for the Subject Proceeding

AGENCY: United States International Trade Commission.

ACTION: Notice.

DATES: November 26, 2025.

FOR FURTHER INFORMATION CONTACT: Kenneth Gatten III (202–708–1447), Office of Investigations, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its internet server (*https://www.usitc.gov*). The public record for this proceeding may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov.*

SUPPLEMENTARY INFORMATION: Effective May 1, 2025, the Commission established a schedule for the conduct of the subject proceeding (90 FR 18701, May 1, 2025). Due to the lapse in appropriations and ensuing cessation of Commission operations, the Commission is revising its schedule as follows: the staff report will be placed in the nonpublic record on November 26, 2025; comments are due on December 2, 2025.

For further information concerning this proceeding, see the Commission's notice cited above and the Commission's Rules of Practice and Procedure, part 201, subparts A and B (19 CFR part 201), and part 207, subparts A, D, E, and F (19 CFR part 207).

Authority: This proceeding is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.62 of the Commission's rules.

By order of the Commission.

Issued: December 3, 2025.

Lisa Barton,

Secretary to the Commission.

[FR Doc. 2025–22128 Filed 12–4–25; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

Notice of Receipt of Complaint; Solicitation of Comments Relating to the Public Interest

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has received a complaint entitled *Certain Bicycle Trainers and Components Thereof, DN 3862;* the Commission is soliciting comments on any public interest issues raised by the complaint or complainant's filing pursuant to the Commission's Rules of Practice and Procedure.

FOR FURTHER INFORMATION CONTACT: Lisa R. Barton, Secretary to the Commission, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205–2000. The public version of the complaint can be accessed on the Commission's Electronic Document Information System (EDIS) at *https://edis.usitc.gov.* For help accessing EDIS, please email *EDIS3Help@usitc.gov.*

General information concerning the Commission may also be obtained by accessing its internet server at United States International Trade Commission (USITC) at *https://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's Electronic Document Information System (EDIS) at *https://edis.usitc.gov.* Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205–1810.

SUPPLEMENTARY INFORMATION: The Commission has received a complaint and a submission pursuant to § 210.8(b) of the Commission's Rules of Practice and Procedure filed on behalf Wahoo Fitness L.L.C. on December 3, 2025. The complaint alleges violations of section 337 of the Tariff Act of 1930 (19 U.S.C. 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain bicycle trainers and components thereof. The complaint names as a respondent: JetBlack Cycling Pty Ltd. of Australia. The complainant requests that the Commission issue a limited exclusion order, cease and desist orders, and impose a bond upon respondents' alleged infringing articles during the 60-day Presidential review period pursuant to 19 U.S.C. 1337(j).

Proposed respondents, other interested parties, members of the public, and interested government agencies are invited to file comments on any public interest issues raised by the complaint or § 210.8(b) filing. Comments should address whether issuance of the relief specifically requested by the complainant in this investigation would affect the public health and welfare in the United States, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers.

In particular, the Commission is interested in comments that:

(i) explain how the articles potentially subject to the requested remedial orders are used in the United States;

(ii) identify any public health, safety, or welfare concerns in the United States relating to the requested remedial orders;

(iii) identify like or directly competitive articles that complainant, its licensees, or third parties make in the United States which could replace the subject articles if they were to be excluded;

(iv) indicate whether complainant, complainant's licensees, and/or third party suppliers have the capacity to replace the volume of articles potentially subject to the requested exclusion order and/or a cease and

desist order within a commercially reasonable time; and

(v) explain how the requested remedial orders would impact United States consumers.

Written submissions on the public interest must be filed no later than by close of business, eight calendar days after the date of publication of this notice in the **Federal Register**. There will be further opportunities for comment on the public interest after the issuance of any final initial determination in this investigation. Any written submissions on other issues must also be filed by no later than the close of business, eight calendar days after publication of this notice in the **Federal Register**. Complainant may file replies to any written submissions no later than three calendar days after the date on which any initial submissions were due, notwithstanding § 201.14(a) of the Commission's Rules of Practice and Procedure. No other submissions will be accepted, unless requested by the Commission. Any submissions and replies filed in response to this Notice are limited to five (5) pages in length, inclusive of attachments.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. Submissions should refer to the docket number (''Docket No. 3862'') in a prominent place on the cover page and/or the first page. (*See* Handbook for Electronic Filing Procedures, Electronic Filing Procedures [1]). Please note the Secretary's Office will accept only electronic filings during this time. Filings must be made through the Commission's Electronic Document Information System (EDIS, *https://edis.usitc.gov*). No in-person paper-based filings or paper copies of any electronic filings will be accepted until further notice. Persons with questions regarding filing should contact the Secretary at *EDIS3Help@usitc.gov.*

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this Investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel,[2] solely for cybersecurity purposes. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.[3]

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and of §§ 201.10 and 210.8(c) of the Commission's Rules of Practice and Procedure (19 CFR 201.10, 210.8(c)).

By order of the Commission.

Issued: December 3, 2025.

Lisa Barton,

Secretary to the Commission.

[FR Doc. 2025–22126 Filed 12–4–25; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

Notice of Receipt of Complaint; Solicitation of Comments Relating to the Public Interest

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has received a complaint entitled *Certain Screen Protectors, Screen Protector Systems, and Components Thereof, DN 3861;* the Commission is soliciting comments on any public interest issues raised by the complaint or complainant's filing pursuant to the Commission's Rules of Practice and Procedure.

FOR FURTHER INFORMATION CONTACT: Lisa R. Barton, Secretary to the Commission, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205–2000. The public version of the complaint can be accessed on the Commission's Electronic Document Information System (EDIS) at *https://edis.usitc.gov.* For help accessing EDIS, please email *EDIS3Help@usitc.gov.*

General information concerning the Commission may also be obtained by accessing its internet server at United States International Trade Commission (USITC) at *https://www.usitc.gov* . The public record for this investigation may be viewed on the Commission's Electronic Document Information System (EDIS) at *https://edis.usitc.gov.* Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205–1810.

SUPPLEMENTARY INFORMATION: The Commission has received a complaint and a submission pursuant to § 210.8(b) of the Commission's Rules of Practice and Procedure filed on behalf Superior Communications Inc. on December 3, 2025. The complaint alleges violations of section 337 of the Tariff Act of 1930 (19 U.S.C. 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of entitled certain screen protectors, screen protector systems, and components thereof. The complaint names as respondents: Belkin International, Inc. of El Segundo, CA. and Belkin Inc. of El Segundo, CA. The complainant requests that the Commission issue a limited exclusion order, cease and desist orders, and impose a bond upon respondents' alleged infringing articles during the 60-day Presidential review period pursuant to 19 U.S.C. 1337(j).

Proposed respondents, other interested parties, members of the public, and interested government agencies are invited to file comments on any public interest issues raised by the complaint or § 210.8(b) filing. Comments should address whether issuance of the relief specifically requested by the complainant in this investigation would affect the public health and welfare in the United States, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers.

In particular, the Commission is interested in comments that:

(i) explain how the articles potentially subject to the requested remedial orders are used in the United States;

(ii) identify any public health, safety, or welfare concerns in the United States relating to the requested remedial orders;

(iii) identify like or directly competitive articles that complainant, its licensees, or third parties make in the

[1] Handbook for Electronic Filing Procedures: *https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf.*

[2] All contract personnel will sign appropriate nondisclosure agreements.

[3] Electronic Document Information System (EDIS): *https://edis.usitc.gov.*

United States which could replace the subject articles if they were to be excluded;

(iv) indicate whether complainant, complainant's licensees, and/or third party suppliers have the capacity to replace the volume of articles potentially subject to the requested exclusion order and/or a cease and desist order within a commercially reasonable time; and

(v) explain how the requested remedial orders would impact United States consumers.

Written submissions on the public interest must be filed no later than by close of business, eight calendar days after the date of publication of this notice in the **Federal Register**. There will be further opportunities for comment on the public interest after the issuance of any final initial determination in this investigation. Any written submissions on other issues must also be filed by no later than the close of business, eight calendar days after publication of this notice in the **Federal Register**. Complainant may file replies to any written submissions no later than three calendar days after the date on which any initial submissions were due, notwithstanding § 201.14(a) of the Commission's Rules of Practice and Procedure. No other submissions will be accepted, unless requested by the Commission. Any submissions and replies filed in response to this Notice are limited to five (5) pages in length, inclusive of attachments.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. Submissions should refer to the docket number (''Docket No. 3861'') in a prominent place on the cover page and/or the first page. (*See* Handbook for Electronic Filing Procedures, Electronic Filing Procedures [1]). Please note the Secretary's Office will accept only electronic filings during this time. Filings must be made through the Commission's Electronic Document Information System (EDIS, *https://edis.usitc.gov*.) No in-person paper-based filings or paper copies of any electronic filings will be accepted until further notice. Persons with questions regarding filing should contact the Secretary at *EDIS3Help@usitc.gov.*

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this Investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel,[2] solely for cybersecurity purposes. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.[3]

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and of §§ 201.10 and 210.8(c) of the Commission's Rules of Practice and Procedure (19 CFR 201.10, 210.8(c)).

By order of the Commission.

Issued: December 3, 2025.

Lisa Barton,

Secretary to the Commission.

[FR Doc. 2025–22111 Filed 12–4–25; 8:45 am]

BILLING CODE 7020–02–P

[1] Handbook for Electronic Filing Procedures: *https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf.*

[2] All contract personnel will sign appropriate nondisclosure agreements.

[3] Electronic Document Information System (EDIS): *https://edis.usitc.gov.*

DEPARTMENT OF JUSTICE

Notice of Lodging of Proposed Second Consent Decree Under the Toxic Substances Control Act

On November 25, 2025, the Department of Justice lodged a proposed Second Consent Decree with the United States District Court for the Central District of California in the lawsuit entitled *United States* v. *Lowe's Home Centers, LLC,* Civil Action No. 2:25–cv–09324–CV–RAO.

The proposed Second Consent Decree resolves Lowe's Home Centers, LLC's (''Lowe's'') violations of the Toxic Substances Control Act (''TSCA''), 15 U.S.C. 2682(c) and 2686(b), and EPA's Renovation, Repair, and Painting Rule codified at 40 CFR part 745, subpart E (''RRP Rule''), as well as Lowe's violations of a 2014 Consent Decree that resolved earlier violations of the RRP Rule. The proposed Second Consent Decree requires Lowe's to implement management systems that will improve its compliance (and its subcontractors' compliance) with the RRP Rule. Lowe's will also pay a $12.5 million penalty.

The publication of this notice opens a period for public comment on the proposed Second Consent Decree. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division, and should refer to *United States* v. *Lowe's Home Centers, LLC,* D.J. Ref. No. 90–5–1–1–10673. All comments must be submitted no later than thirty (30) days after the publication date of this notice. Comments may be submitted either by email or by mail:

To submit comments:	*Send them to:*
By email	*pubcomment-ees.enrd@usdoj.gov.*
By mail	Assistant Attorney General, U.S. DOJ—ENRD, P.O. Box 7611, Washington, DC 20044–7611.

Any comments submitted in writing may be filed in whole or in part on the public court docket without notice to the commenter.

During the public comment period, the proposed Second Consent Decree may be examined and downloaded at this Justice Department website: *https://www.justice.gov/enrd/consent-decrees.* If you require assistance accessing the proposed Second Consent Decree, you may request assistance by email or by mail to the addresses provided above for submitting comments.

Jason A. Dunn,

Assistant Section Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 2025–21968 Filed 12–4–25; 8:45 am]

BILLING CODE 4410–15–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice: (25–045)]

Privacy Act of 1974; System of Records

AGENCY: National Aeronautics and Space Administration (NASA).

ACTION: Notice of a modified system of records.

SUMMARY: In accordance with the requirements of the Privacy Act of 1974,

the National Aeronautics and Space Administration is providing public notice of a modification to an existing system of records entitled NASA Core Financial Management Records (CFMR). The notice updates the Routine Use section to include two additional routine uses . The system of records is more fully described in the **SUPPLEMENTARY INFORMATION** section of this notice.

DATES: Submit comments within 30 calendar days from the date of this publication. The proposed system will take effect at the end of that period if no significant adverse comments are received.

ADDRESSES: Submit comments to Stayce Hoult, Privacy Act Officer, Office of the Chief Information Officer, Mary W. Jackson NASA Headquarters, Washington, DC 20546–0001, 757–864–3292, or *NASA-PAOfficer@nasa.gov.*

FOR FURTHER INFORMATION CONTACT: NASA Privacy Act Officer, Stayce Hoult, 256–544–7705, or *NASA-PAOfficer@nasa.gov.*

SUPPLEMENTARY INFORMATION: This system of records notice (SORN) is modified to incorporate Routine Use section with two additional routine uses (1) as mandated by Executive Order 14249, Protecting America's Bank Account Against Fraud, Waste and Abuse and Office of Management and Budget (OMB) M–25–32, ''Preventing Improper Payments and Protecting Privacy Through Do Not Pay'' and (2) providing for additional coverage and extra clarity. It also updates the Privacy Act Officer and contact information. Finally, it is also modified to make editorial changes.

Stayce D. Hoult,
NASA Chief Privacy Officer.

SYSTEM NAME AND NUMBER:

Core Financial Management Records, NASA 10CFMR.

SECURITY CLASSIFICATION:

This system is categorized in accordance with OMB Circular A–11 as a Special Management Attention Major Information System. A security plan for this system has been established in accordance with OMB Circular A–130, Management of Federal Information Resources.

SYSTEM LOCATION:

George C. Marshall Space Flight Center, National Aeronautics and Space Administration, Marshall Space Flight Center, AL 35812.

SYSTEM MANAGER(S):

- Director, Agency Financial Systems Office, Mary W. Jackson NASA Headquarters, National Aeronautics and Space Administration, Washington, DC 20546–0001.
- IS90/Associate Chief Information Officer, Applications Division, George C. Marshall Space Flight Center, National Aeronautics and Space Administration, Marshall Space Flight Center, AL 35812.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

Any disclosures of information will be compatible with the purpose for which the Agency collected the information. The following are routine uses:

1. Furnish data to the Department of Treasury for financial reimbursement of individual expenses, such as travel, books, and other miscellaneous items.

2. Process payments and collections in which an individual is reimbursing the Agency.

3. Ongoing administration and maintenance of the records, which is performed by authorized NASA employees, both civil servants and contractors.

4. To the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

In addition, information may be disclosed under the following NASA Standard Routine Uses:

1. *Law Enforcement*—When a record on its face, or in conjunction with other information, indicates a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule, or order, disclosure may be made to the appropriate agency, whether Federal, foreign, State, local, or tribal, or other public authority responsible for enforcing, investigating or prosecuting such violation or charged with enforcing or implementing the statute, or rule, regulation, or order, if NASA determines by careful review that the records or information are both relevant and necessary to any enforcement, regulatory, investigative or prosecutive responsibility of the receiving entity.

2. *Certain Disclosures to Other Agencies*—A record from this SOR may be disclosed to a Federal, State, or local agency maintaining civil, criminal, or other relevant enforcement information or other pertinent information, such as current licenses, if necessary, to obtain information relevant to an agency decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant, or other benefit.

3. *Certain Disclosures to Other Federal Agencies*—A record from this SOR may be disclosed to a Federal agency, in response to its request, for a matter concerning the hiring or retention of an employee, the issuance of a security clearance, the reporting of an investigation of an employee, the letting of a contract, or the issuance of a license, grant, or other benefit by the requesting agency, to the extent that the information is relevant and necessary to the requesting agency's decision on the matter.

4. *Department of Justice*—A record from this SOR may be disclosed to the Department of Justice when (a) NASA, or any component thereof; or (b) any employee of NASA in his or her official capacity; or (c) any employee of NASA in his or her individual capacity where the Department of Justice has agreed to represent the employee; or (d) the United States, where NASA determines that litigation is likely to affect NASA or any of its components, is a party to litigation or has an interest in such litigation, and by careful review, the use of such records by the Department of Justice is deemed by NASA to be relevant and necessary to the litigation.

5. *Courts*—A record from this SOR may be disclosed in an appropriate proceeding before a court, grand jury, or administrative or adjudicative body, when NASA determines that the records are relevant to the proceeding; or in an appropriate proceeding before an administrative or adjudicative body when the adjudicator determines the records to be relevant to the proceeding.

6. *Response to an Actual or Suspected Compromise or Breach of Personally Identifiable Information*—A record from this SOR may be disclosed to appropriate agencies, entities, and persons when (1) NASA suspects or has confirmed that there has been a breach of the system of records; (2) NASA has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, NASA (including its information systems,

programs, and operations), the Federal Government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with NASA's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

7. *Contractors*—A record from this SOR may be disclosed to contractors, grantees, experts, consultants, students, volunteers, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for the Federal Government, when necessary to accomplish a NASA function related to this SOR.

Individuals provided information under this routine use are subject to the same Privacy Act requirements and limitations on disclosure as are applicable to NASA employees.

8. *Members of Congress*—A record from this SOR may be disclosed to a Member of Congress or to a Congressional staff member in response to an inquiry of the Congressional office made at the written request of the constituent about whom the record is maintained.

9. *Disclosures to Other Federal Agencies in Response to an Actual or Suspected Compromise or Breach of Personally Identifiable Information*—A record from this SOR may be disclosed to another Federal agency or Federal entity, when NASA determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the Federal Government, or national security, resulting from a suspected or confirmed breach.

10. *National Archives and Records Administration*—A record from this SOR may be disclosed as a routine use to the officers and employees of the National Archives and Records Administration (NARA) pursuant to records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

11. *Audit*—A record from this SOR may be disclosed to another agency, or organization for purpose of performing audit or oversight operations as authorized by law, but only such information as is necessary and relevant to such audit or oversight function.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Records in this system are maintained on electronic media.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Records are retrieved from the system by name or SSN (Tax ID).

POICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Records are stored in the NASA Applications & Platform Services (APS) database and managed, retained and dispositioned in accordance with NASA Records Retention Schedules, Schedule 9, Items 11 and 16.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Electronic records are maintained on secure NASA servers and protected in accordance with all Federal standards and those established in NASA regulations at 14 CFR 1212.605. Additionally, server and data management environments employ infrastructure encryption technologies both in data transmission and at rest on servers. Electronic messages sent within and outside of the Agency that convey sensitive data are encrypted and transmitted by staff via pre-approved electronic encryption systems as required by NASA policy. Approved security plans are in place for information systems containing the records in accordance with the Federal Information Security Management Act of 2002 (FISMA) and OMB Circular A–130, Management of Federal Information Resources. Only authorized personnel requiring information in the official discharge of their duties are authorized access to records through approved access or authentication methods. Access to electronic records is achieved only from workstations within the NASA Intranet or via a secure Virtual Private Network (VPN) connection that requires two-factor hardware token authentication or via employee PIV badge authentication from NASA-issued computers. Non-electronic records are secured in locked rooms or locked file cabinets.

RECORD ACCESS PROCEDURES:

In accordance with 14 CFR part 1212, Privacy Act—NASA Regulations, information may be obtained by contacting in person or in writing the system or subsystem manager listed above at the location where the records are created and/or maintained. Requests must contain the identifying data concerning the requester, *e.g.,* first, middle and last name; date of birth; description and time periods of the records desired. NASA Regulations also address contesting contents and appealing initial determinations regarding records access.

CONTESTING RECORD PROCEDURES:

In accordance with 14 CFR part 1212, Privacy Act—NASA Regulations, information may be obtained by contacting in person or in writing the system or subsystem manager listed above at the location where the records are created and/or maintained. Requests must contain the identifying data concerning the requester, *e.g.,* first, middle and last name; date of birth; description and time periods of the records desired. NASA Regulations also address contesting contents and appealing initial determinations regarding records access.

NOTIFICATION PROCEDURES:

In accordance with 14 CFR part 1212, Privacy Act—NASA Regulations, information may be obtained by contacting in person or in writing the system or subsystem manager listed above at the location where the records are created and/or maintained. Requests must contain the identifying data concerning the requester, *e.g.,* first, middle and last name; date of birth; description and time periods of the records desired. NASA Regulations also address contesting contents and appealing initial determinations regarding records access.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

- (15–115, 80 FR 246, pp. 79937–79947).
- (15–068, 80 FR 193, pp. 60410–60411).
- (11–091, 76 FR 200, pp. 64112–64114).

[FR Doc. 2025–21971 Filed 12–4–25; 8:45 am]

BILLING CODE 7510–13–P

NATIONAL SCIENCE FOUNDATION

[Docket No. NSF–2025–OGC–0003]

Privacy Act of 1974; System of Records

AGENCY: U.S. National Science Foundation.

ACTION: Notice of Modified Systems of Records.

SUMMARY: The U.S. National Science Foundation (NSF) is amending the routine uses for two existing systems of records: NSF–13, Fellowship Payroll, and NSF–65, NSF Electronic Payment

File. NSF is amending a routine use to both systems of records to cover disclosure of information to the U.S. Department of Treasury's Do Not Pay system for the purposes of identifying improper payments. NSF is also making updates and clarifying edits, as well as non-substantive formatting changes to both systems of records.

DATES: The routine uses described in this notice will take effect on January 5, 2026, unless modified by a subsequent notice to incorporate comments received from the public. Submit comments on or before January 5, 2026.

ADDRESSES: You may submit comments, identified by docket number ''NSF–2025–OGC–0003'' by any one of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments.
- *Email:* Tom Boger, Acting Senior Agency Official for Privacy (SAOP), NSF, *privacy@nsf.gov.* Include ''NSF–2025–OGC–0003'' in the subject line of the message.

Instructions: NSF will post all in-scope comments on the NSF's website (*https://www.nsf.gov*). All comments submitted in response to this Notice will become a matter of public record, including any personally identifiable information (PII) provided. Therefore, you should submit only information that you wish to make publicly available.

FOR FURTHER INFORMATION CONTACT: Suzanne H. Plimpton, Reports Clearance Officer, National Science Foundation, 2415 Eisenhower Avenue, Alexandria, Virginia 22314; telephone (703) 292–7556; or send email to *splimpto@nsf.gov.* Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including Federal holidays).

SUPPLEMENTARY INFORMATION: NSF–13, Fellowship Payroll, contains records about fellows under certain NSF fellowship programs being paid directly by the government. NSF–65, NSF Electronic Payment File, contains records about individuals who receive electronic payment from NSF for goods or services. NSF is proposing to amend a routine use applicable to both of these systems to expressly provide for disclosure of information to the U.S. Department of Treasury's Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments of Federal funds. The Do Not Pay Initiative, 31 U.S.C. 3354, includes multiple resources to help the Federal Government, and certain State agencies, review payment and award eligibility for purposes of identifying and preventing improper payments. NSF is proposing these amendments to ensure compliance with Executive Order 14249 (Mar. 25, 2025), and in accordance with guidance from the Office of Management and Budget (OMB) Memorandum M–25–32 (Aug. 20, 2025). The updated routine uses are compatible with the purpose of the original collection of the information.

In NSF–13, NSF is modifying the Authorities section to remove references to guidance documents and to add the following to the list of authorities relevant to the system: the Debt Collection Improvement Act of 1996 and the Payment Integrity Information Act of 2019.

In NSF–65, NSF is modifying the list of categories of individuals covered by the system to include individual grantees or individuals who receive payments from NSF pursuant to a grant. This change clarifies that information about grantees needed to make payment is also contained in this system of records. NSF is also modifying the Authorities section of NSF–65 to include the Payment Integrity Information Act of 2019, and 31 U.S.C. 7701, regarding Taxpayer Identifying Numbers. NSF is also modifying the purpose statement in NSF–65 to expressly state that the purpose includes making appropriate electronic payments.

In addition, NSF is making non-substantive formatting changes to the systems of records to align with the requirements of OMB Circular A–108 and for consistency with other NSF SORNs.

Dated: December 3, 2025.

Thomas A. Boger,

Acting Senior Agency Official for Privacy, National Science Foundation.

NSF–13

SYSTEM NAME AND NUMBER:

Fellowship Payroll, NSF–13.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

National Science Foundation (NSF) headquarters, Virginia.

SYSTEM MANAGER(S):

Director, Division of Financial Management, NSF headquarters, Virginia.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

42 U.S.C. 1861; the Debt Collection Improvement Act of 1996, Public Law 104–134, and the Payment Integrity Information Act of 2019, Public Law 116–117.

PURPOSE(S) OF THE SYSTEM:

This system enables the NSF to maintain data regarding the payment of fellowship payroll in a single location and ensures that appropriate payments are made.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals participating in certain NSF Fellowship Programs being paid directly by the federal government (Fellows).

CATEGORIES OF RECORDS IN THE SYSTEM:

Copies of the fellowship award letter, acceptance form, starting certificates, and records of stipend payments.

RECORD SOURCE CATEGORIES:

Information is obtained from Fellows.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

The following NSF standard routine uses apply:

1. Members of Congress. Information from a system may be disclosed to congressional offices in response to inquiries from the congressional offices made at the request of the individual to whom the record pertains.

2. Freedom of Information Act/Privacy Act Compliance. Information from a system may be disclosed to the Department of Justice or the Office of Management and Budget in order to obtain advice regarding NSF's obligations under the Freedom of Information Act and the Privacy Act.

3. Counsel. Information from a system may be disclosed to NSF's legal representatives, including the Department of Justice and other outside counsel, where the agency is a party in litigation or has an interest in litigation and the information is relevant and necessary to such litigation, including when any of the following is a party to the litigation or has an interest in such litigation: (a) NSF, or any component thereof; (b) any NSF employee in his or her official capacity; (c) any NSF employee in his or her individual capacity, where the Department of Justice has agreed to, or is considering a request to, represent the employee; or (d) the United States, where NSF determines that litigation is likely to affect the agency or any of its components.

4. National Archives, General Services Administration. Information from a system may be disclosed to representatives of the General Services

Administration and the National Archives and Records Administration (NARA) during the course of records management inspections conducted under the authority of 44 U.S.C. 2904 and 2906.

5. Response to an Actual or Suspected Compromise or Breach of Personally Identifiable Information. NSF may disclose information from the system to appropriate agencies, entities, and persons when: (1) NSF suspects or has confirmed that there has been a breach of the system of records; (2) NSF has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals; NSF (including its information systems, programs, and operations); the Federal Government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with NSF efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm. Furthermore, NSF may disclose information from the system to another Federal agency or Federal entity, when NSF determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in: (1) Responding to a suspected or confirmed breach; or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the Federal Government, or national security, resulting from a suspected or confirmed breach.

6. Courts. Information from a system may be disclosed to the Department of Justice or other agencies in the event of a pending court or formal administrative proceeding, when the information is relevant and necessary to that proceeding, for the purpose of representing the government, or in the course of presenting evidence, or the information may be produced to parties or counsel involved in the proceeding in the course of pre-trial discovery.

7. Contractors. Information from a system may be disclosed to contractors, agents, experts, consultants, or others performing work on a contract, service, cooperative agreement, job, or other activity for NSF and who have a need to access the information in the performance of their duties or activities for NSF.

8. Audit. Information from a system may be disclosed to government agencies and other entities authorized to perform audits, including financial and other audits, of the agency and its activities.

9. Law Enforcement. Information from a system may be disclosed, where the information indicates a violation or potential violation of civil or criminal law, including any rule, regulation or order issued pursuant thereto, to appropriate Federal, State, or local agencies responsible for investigating, prosecuting, enforcing, or implementing such statute, rule, regulation, or order.

10. Disclosure When Requesting Information. Information from a system may be disclosed to Federal, State, or local agencies which maintain civil, criminal, or other relevant enforcement information or other pertinent information, such as current licenses, if necessary, to obtain information relevant to an agency decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant, or other benefit.

11. To the news media and the public when: (1) A matter has become public knowledge, (2) the NSF Office of the Director determines that disclosure is necessary to preserve confidence in the integrity of NSF or is necessary to demonstrate the accountability of NSF's officers, employees, or individuals covered by this system, or (3) the Office of the Director determines that there exists a legitimate public interest in the disclosure of the information, except to the extent that the Office of the Director determines in any of these situations that disclosure of specific information in the context of a particular case would constitute an unwarranted invasion of personal privacy.

In addition, information may be disclosed:

12. To the U.S. Department of the Treasury for the purpose of issuing the payment directly to the financial account of the payee.

13. To the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally-recognized Indian tribe) in a state-administered, federally-funded program.

14. To financial institutions for the purpose of direct deposit.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Records are stored in paper and/or on electronic digital media.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Records are retrieved alphabetically by last name of Fellow, supplier number, or award number.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Records are maintained and disposed of in accordance with National Archives and Records Administration (NARA) approved records schedules.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Records are protected by administrative, technical, and physical safeguards administered by NSF.

RECORD ACCESS PROCEDURES:

Follow the Requesting Access to Records procedures found at 45 CFR part 613.

CONTESTING RECORD PROCEDURES:

Follow the procedures found at 45 CFR part 613.

NOTIFICATION PROCEDURES:

Follow the Requesting Access to Records procedures found at 45 CFR part 613.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

81 FR 37645 (June 10, 2016); 72 FR 46520 (Aug. 20, 2007); 62 FR 59895 (Nov. 5, 1997).

NSF–65

SYSTEM NAME AND NUMBER:

NSF Electronic Payment File, NSF–65.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

National Science Foundation (NSF) headquarters, Virginia.

SYSTEM MANAGER(S):

Director, Division of Financial Management, NSF headquarters, Virginia.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

The Debt Collection Improvement Act of 1996, Public Law 104–134, and the Payment Integrity Information Act of 2019, Public Law 116–117; 31 U.S.C. 7701.

PURPOSE(S) OF THE SYSTEM:

This system enables NSF to comply with the mandatory electronic payment

provisions of the Debt Improvement Collection Act of 1996 and to ensure appropriate electronic payments.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Employees of NSF, former employees, individual grantees or vendors, or other individuals who will or do receive electronic payment from NSF for goods and services or pursuant to grant funding.

CATEGORIES OF RECORDS IN THE SYSTEM:

Name, address, Social Security Number, and payee banking information.

RECORD SOURCE CATEGORIES:

Information is obtained from individuals or payees.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

The following NSF standard routine uses apply:

1. Members of Congress. Information from a system may be disclosed to congressional offices in response to inquiries from the congressional offices made at the request of the individual to whom the record pertains.

2. Freedom of Information Act/ Privacy Act Compliance. Information from a system may be disclosed to the Department of Justice or the Office of Management and Budget in order to obtain advice regarding NSF's obligations under the Freedom of Information Act and the Privacy Act.

3. Counsel. Information from a system may be disclosed to NSF's legal representatives, including the Department of Justice and other outside counsel, where the agency is a party in litigation or has an interest in litigation and the information is relevant and necessary to such litigation, including when any of the following is a party to the litigation or has an interest in such litigation: (a) NSF, or any component thereof; (b) any NSF employee in his or her official capacity; (c) any NSF employee in his or her individual capacity, where the Department of Justice has agreed to, or is considering a request to, represent the employee; or (d) the United States, where NSF determines that litigation is likely to affect the agency or any of its components.

4. National Archives, General Services Administration. Information from a system may be disclosed to representatives of the General Services Administration and the National Archives and Records Administration (NARA) during the course of records management inspections conducted under the authority of 44 U.S.C. 2904 and 2906.

5. Response to an Actual or Suspected Compromise or Breach of Personally Identifiable Information. NSF may disclose information from the system to appropriate agencies, entities, and persons when: (1) NSF suspects or has confirmed that there has been a breach of the system of records; (2) NSF has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals; NSF (including its information systems, programs, and operations); the Federal Government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with NSF efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm. Furthermore, NSF may disclose information from the system to another Federal agency or Federal entity, when NSF determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in: (1) Responding to a suspected or confirmed breach; or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the Federal Government, or national security, resulting from a suspected or confirmed breach.

6. Courts. Information from a system may be disclosed to the Department of Justice or other agencies in the event of a pending court or formal administrative proceeding, when the information is relevant and necessary to that proceeding, for the purpose of representing the government, or in the course of presenting evidence, or the information may be produced to parties or counsel involved in the proceeding in the course of pre-trial discovery.

7. Contractors. Information from a system may be disclosed to contractors, agents, experts, consultants, or others performing work on a contract, service, cooperative agreement, job, or other activity for NSF and who have a need to access the information in the performance of their duties or activities for NSF.

8. Audit. Information from a system may be disclosed to government agencies and other entities authorized to perform audits, including financial and other audits, of the agency and its activities.

9. Law Enforcement. Information from a system may be disclosed, where the information indicates a violation or potential violation of civil or criminal law, including any rule, regulation or order issued pursuant thereto, to appropriate Federal, State, or local agencies responsible for investigating, prosecuting, enforcing, or implementing such statute, rule, regulation, or order.

10. Disclosure When Requesting Information. Information from a system may be disclosed to Federal, State, or local agencies which maintain civil, criminal, or other relevant enforcement information or other pertinent information, such as current licenses, if necessary, to obtain information relevant to an agency decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant, or other benefit.

11. To the news media and the public when: (1) A matter has become public knowledge, (2) the NSF Office of the Director determines that disclosure is necessary to preserve confidence in the integrity of NSF or is necessary to demonstrate the accountability of NSF's officers, employees, or individuals covered by this system, or (3) the Office of the Director determines that there exists a legitimate public interest in the disclosure of the information, except to the extent that the Office of the Director determines in any of these situations that disclosure of specific information in the context of a particular case would constitute an unwarranted invasion of personal privacy.

In addition, information may be disclosed:

12. To the U.S. Department of the Treasury for the purpose of issuing the payment directly to the financial account of the payee, for reporting income paid in accordance with reporting requirements.

13. To the U.S. Department of the Treasure when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally-recognized Indian tribe) in a state-administered, federally-funded program.

14. To financial institutions for the purpose of direct deposit.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Records are stored on electronic digital media.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Records are retrieved by the payment recipient's assigned identification number in the system.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Records are maintained and disposed of in accordance with National Archives and Records Administration (NARA) approved records schedules.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Records are protected by administrative, technical, and physical safeguards administered by NSF.

RECORD ACCESS PROCEDURES:

Follow the Requesting Access to Records procedures found at 45 CFR part 613.

CONTESTING RECORD PROCEDURES:

Follow the procedures found at 45 CFR part 613.

NOTIFICATION PROCEDURES:

Follow the Requesting Access to Records procedures found at 45 CFR part 613.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

81 FR 37645 (June 10, 2016); 72 FR 46520 (Aug. 20, 2007); 63 FR 55901 (Oct. 19, 1998).

[FR Doc. 2025–22115 Filed 12–4–25; 8:45 am]

BILLING CODE 7555–01–P

NATIONAL SCIENCE FOUNDATION

[Docket No. NSF–2025–OGC–0004]

Privacy Act of 1974; System of Records

AGENCY: National Science Foundation.

ACTION: Notice of a new system of records.

SUMMARY: The U.S. National Science Foundation (NSF) is establishing a new agency system of records in connection with its online Standard Application Process (SAP) for collecting and maintaining requests from researchers or other individuals applying for access to confidential data assets from participating federal agencies and units for evidence-building, statistical purposes.

DATES: This system notice is effective as of December 5, 2025. The routine uses described in this notice will take effect on January 5, 2026, unless modified by a subsequent notice to incorporate comments received from the public. Submit comments on or before January 5, 2026.

ADDRESSES: U.S. National Science Foundation (NSF), National Center for Science and Engineering Statistics (NCSES), 2415 Eisenhower Ave., Alexandria, VA 22314.

You may submit comments, identified by docket number ''NSF–2025–OGC–0004'' by any one of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments.
- *Email:* John Finamore, Chief Statistician for the National Center for Science and Engineering Statistics, NSF, *jfinamor@nsf.gov.* Include ''NSF–2025–OGC–0004'' in the subject line of the message.
- *Mail:* John Finamore, Chief Statistician for the National Center for Science and Engineering Statistics, NSF, 2415 Eisenhower Ave., Alexandria, VA 22314.

Instructions: NSF will post all in-scope comments on the NSF's website (*https://www.nsf.gov*). All comments submitted in response to this Notice will become a matter of public record. Therefore, you should submit only information that you wish to make publicly available.

FOR FURTHER INFORMATION CONTACT: If you wish to submit general questions about this new system of records, please contact John Finamore, Chief Statistician for the National Center for Science and Engineering Statistics, NSF, at *jfinamor@nsf.gov* or by telephone at 703–292–2258. You may also contact the NSF acting Senior Agency Office for Privacy (SAOP), Tom Boger, *privacy@nsf.gov.*

SUPPLEMENTARY INFORMATION: NSF is publishing this new system of records notice (SORN) for the system entitled, ''Standard Application Process (NSF–83),'' to support the collection and maintenance of requests submitted by researchers and other individuals for access to confidential data assets held by certain federal agencies and units comprising the United States Federal Statistical System, as required by section 303(a) of the Foundations for Evidence-Based Policymaking Act of 2018 (the Act), 44 U.S.C. 3583.[1] In December 2022, the Office of Management and Budget (OMB) fulfilled the Act's requirement to establish a standard application process (SAP), including a SAP program management office (PMO), which serves to standardize project-related governance processes and facilitate sharing of resources, information, and tools between SAP working groups and the portal developers.

The NSF National Center for Science and Engineering Statistics (NCSES), as one of the Federal Statistical System agencies, has been designated by OMB to carry out the PMO responsibilities for the SAP, which includes the establishment of this Privacy Act system of records to support the SAP. The SAP marks an important milestone for the federal statistical system. For the first time, primary statistical agencies and units have coordinated and agreed to use the same application (*i.e.,* common form) for access to their restricted-use data assets.

Applications with the SAP must be for a statistical purpose and will be reviewed by the agency or agencies with ownership of the data. Applicants can use the SAP to apply for access to data from multiple agencies for the same project and track the application as it moves through the review process. The SAP collects information about individuals, as needed to assess or determine whether their requests for access to data can be granted, consistent with applicable privacy and confidentiality restrictions under Federal law, which will vary from agency to agency (for example, an agency may need to know citizenship status in cases where data access is legally limited to U.S. citizens). Participating agencies each have their own data security training which covers the handling of Personally Identifiable Information within their agencies. For

[1] The current participating member agencies and units of the U.S. Federal Statistical System are listed but non-participating agencies, including those not in the United States Federal Statistical System have the ability to apply to participate: Federal Bureau of Economic Analysis (Department of Commerce); Bureau of Justice Statistics (Department of Justice); Bureau of Labor Statistics (Department of Labor); Bureau of Transportation Statistics (Department of Transportation); Census Bureau (Department of Commerce); Center for Behavioral Health Statistics and Quality (Department of Health and Human Services); Economic Research Service (Department of Agriculture); Energy Information Administration (Department of Energy); Microeconomic Surveys Unit (Federal Reserve Board); National Agricultural Statistics Service (Department of Agriculture); National Animal Health Monitoring System (Department of Agriculture); National Center for Education Statistics (Department of Education); National Center for Health Statistics (Department of Health and Human Services); National Center for Science and Engineering Statistics (National Science Foundation); Office of Research, Evaluation, and Statistics (Social Security Administration); and Statistics of Income Division (Internal Revenue Service). These agencies shall be responsible for publishing their own SORNs if they choose to establish and maintain any additional or separate agency system(s) of records to track or evaluate requests (applications) received through the SAP by NSF.

questions about specific programs, datasets, or data files, applicants are asked to contact the data-owning agency or agencies. When an application is approved, the authorizing agency will guide the user through the process of gaining access. Users with questions about existing applications or arrangements for use of restricted-use data should contact the relevant agency directly.

This SORN describes below what records about individuals are to be collected and maintained in the system (*e.g.,* applications for access to data assets, system account information, and other system records documenting the review and grant or denial of such applications), and how these records are to be used, shared, and secured. Application data to be collected through the SAP is limited to information that is relevant and reasonably necessary for a participating statistical agency or unit to determine whether to grant or deny access to data assets, consistent with applicable law, regulation, and policy governing such access. The collection of these records through the SAP online portal has already been approved by OMB under the Paperwork Reduction Act (*see* OMB Control No. 3145–0271).

The system does not duplicate any other existing NSF or Government-wide systems of records under the Privacy Act. In accordance with subsection (r) the Privacy Act, at 5 U.S.C. 552a(r), and Office of Management and Budget (OMB) Circular No. A–108, in addition to publication in the **Federal Register**, NSF has also submitted notice of the establishment of this system of records to OMB and to the appropriate Congressional committees. All NSF SORNs, including this one may be viewed at *www.nsf.gov/privacy.*

SYSTEM NAME AND NUMBER:

Standard Application Process (SAP), NSF–83.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. National Science Foundation, National Center for Science and Engineering Statistics, 2415 Eisenhower Ave., Alexandria, VA 22314. System records may be stored by NSF's SAP Portal contractor location(s) and/or government-certified cloud storage.

SYSTEM MANAGER(S):

Division Director, NCSES, NSF.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Confidential Information Protection and Statistical Efficiency Act (CIPSEA), Public Law 107–347, t. V, as amended by the Foundations for Evidence-Based Policymaking Act of 2018, codified in relevant part at 44 U.S.C. 3583; NSF Act of 1950, as amended, 42 U.S.C. 1861 *et seq.;* Off. of Mgt. & Budget (OMB) Memorandum M–23–04. In addition, participating agencies may have legal authorities not specifically listed. For a current list of participating agencies, please refer to the standard application process web pages, located on the NCSES website.

PURPOSE(S) OF THE SYSTEM:

The information contained within the SAP Portal is used by participating agencies for the purposes listed below:

1. To evaluate and make determinations on applications requesting access to confidential data assets held by participating agencies.

2. To collect information to conduct an initial evaluation of applicant suitability for access to confidential data assets.

3. To contact applicants for additional information related to their applications and suitability evaluations.

4. To fulfill the public reporting obligations set forth in 44 U.S.C. 3583(a)(6), as described further in Routine Use 15 below.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

This system contains information about individuals who have requested access to confidential data assets held by federal agencies participating in the SAP and federal agency personnel involved in the application review process.

CATEGORIES OF RECORDS IN THE SYSTEM:

1. Application Data—Application information including, but not limited to, personal information and demographics, such as name, email address, phone number, institutional affiliations, citizenship status, U.S. residency status, security clearance status, and information about the purpose for which the applicant will use the data (project proposals).

2. Application Review Data—Evaluations from agency and other required reviewers, as listed in the SAP application; application determination (approve or reject).

3. Appeals Review Data—Evaluations from agency reviewers and an appeals determination.

RECORD SOURCE CATEGORIES:

Application information is obtained from the applicant. Records relating to application and appeal determinations are obtained from the reviewing agencies.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

The following NSF standard routine uses apply:

1. Members of Congress. Information from a system may be disclosed to congressional offices in response to inquiries from the congressional offices made at the request of the individual to whom the record pertains.

2. Freedom of Information Act/Privacy Act Compliance. Information from a system may be disclosed to the Department of Justice or the Office of Management and Budget in order to obtain advice regarding NSF's obligations under the Freedom of Information Act and the Privacy Act.

3. Counsel. Information from a system may be disclosed to NSF's legal representatives, including the Department of Justice and other outside counsel, where the agency is a party in litigation or has an interest in litigation and the information is relevant and necessary to such litigation, including when any of the following is a party to the litigation or has an interest in such litigation: (a) NSF, or any component thereof; (b) any NSF employee in his or her official capacity; (c) any NSF employee in his or her individual capacity, where the Department of Justice has agreed to, or is considering a request to, represent the employee; or (d) the United States, where NSF determines that litigation is likely to affect the agency or any of its components.

4. National Archives, General Services Administration. Information from a system may be disclosed to representatives of the General Services Administration and the National Archives and Records Administration (NARA) during the course of records management inspections conducted under the authority of 44 U.S.C. 2904 and 2906.

5. Response to an Actual or Suspected Compromise or Breach of Personally Identifiable Information. NSF may disclose information from the system to appropriate agencies, entities, and persons when: (1) NSF suspects or has confirmed that there has been a breach of the system of records; (2) NSF has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals; NSF (including its information systems, programs, and operations); the Federal Government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with NSF efforts to respond to the suspected or confirmed breach or

to prevent, minimize, or remedy such harm. Furthermore, NSF may disclose information from the system to another Federal agency or Federal entity, when NSF determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in: (1) Responding to a suspected or confirmed breach; or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the Federal Government, or national security, resulting from a suspected or confirmed breach.

6. Courts. Information from a system may be disclosed to the Department of Justice or other agencies in the event of a pending court or formal administrative proceeding, when the information is relevant and necessary to that proceeding, for the purpose of representing the government, or in the course of presenting evidence, or the information may be produced to parties or counsel involved in the proceeding in the course of pre-trial discovery.

7. Contractors. Information from a system may be disclosed to contractors, agents, experts, consultants, or others performing work on a contract, service, cooperative agreement, job, or other activity for NSF and who have a need to access the information in the performance of their duties or activities for NSF.

8. Audit. Information from a system may be disclosed to government agencies and other entities authorized to perform audits, including financial and other audits, of the agency and its activities.

9. Law Enforcement. Information from a system may be disclosed, where the information indicates a violation or potential violation of civil or criminal law, including any rule, regulation or order issued pursuant thereto, to appropriate Federal, State, or local agencies responsible for investigating, prosecuting, enforcing, or implementing such statute, rule, regulation, or order.

10. Disclosure When Requesting Information. Information from a system may be disclosed to Federal, State, or local agencies which maintain civil, criminal, or other relevant enforcement information or other pertinent information, such as current licenses, if necessary, to obtain information relevant to an agency decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant, or other benefit.

11. To the news media and the public when: (1) A matter has become public knowledge, (2) the NSF Office of the Director determines that disclosure is necessary to preserve confidence in the integrity of NSF or is necessary to demonstrate the accountability of NSF's officers, employees, or individuals covered by this system, or (3) the Office of the Director determines that there exists a legitimate public interest in the disclosure of the information, except to the extent that the Office of the Director determines in any of these situations that disclosure of specific information in the context of a particular case would constitute an unwarranted invasion of personal privacy.

In addition to the above standard routine uses, information may be routinely disclosed to:

12. Application reviewers. Records may be disclosed to designated reviewers from participating federal agencies for the evaluation of applicants and project proposals as part of individual agency application review processes. Records may also be disclosed to other federal agencies or other entities needing information regarding applicants and project proposals as part of joint application review processes.

13. Confidential data program staff. Records may be disclosed to staff from participating federal agencies responsible for managing their confidential data program in order to administer the program and fulfill data security requirements for providing data access to approved applicants in accordance with their agency policies and procedures.

14. Participating agency contractors. Records may be disclosed to contractor staff both at NSF and other participating federal agencies responsible for maintaining and operating the SAP Portal and/or involved in conducting reviews.

15. Public reporting. Records may be disclosed to the extent necessary and appropriate to fulfill the public reporting requirements set forth at 44 U.S.C. 3583(a)(6), which include:

a. For each application, the statistical agencies or units involved, the requested data assets, the project proposed duration (where applicable), and the requested method of access, along with an application number.

b. For each approved application, the title, abstract, approval data, and proposed duration of the project, and the name of the principal investigator and other persons requesting access.

c. For each application, whether it was approved or rejected, and the rationale for the determination, except for portions, if any, exempt from public disclosure under the Freedom of Information Act (FOIA), 5 U.S.C. 552.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Records are stored in electronic digital media.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Records are retrieved by the applicant's name or by an application number.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

This System of Records is governed by one or more general and/or NSF-specific records retention schedules approved by NARA. These schedules can be found at *https://archives.gov.* The SAP portal is covered under General Records Schedule GRS 4.2. This records schedule provides for disposal after two (2) years, with longer retention authorized as business needs of the individual agencies require.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Records are protected by administrative, technical, and physical safeguards administered by the SAP Portal contractor with oversight and management by NSF. The following auditing measures/controls and technical safeguards are in place to prevent exposure or misuse of information by authorized users (*e.g.,* records browsing, extraction):

a. The user interface application logs all actions (*e.g.,* login, logout, session termination)

b. The ingest application logs all user actions, along with their email address and user trace information.

c. These logs are read-only and are backed up to prevent tampering.

RECORD ACCESS PROCEDURES:

For access to any system records not routinely available to subject individuals through the SAP portal, such individuals must follow the procedures found at 45 CFR part 613.

CONTESTING RECORD PROCEDURES:

Follow the procedures found at 45 CFR part 613.

NOTIFICATION PROCEDURES:

See 45 CFR part 613.

EXEMPTIONS PROMULGATED FOR THIS SYSTEM:

None.

HISTORY:

None.

Dated: December 3, 2025.

Thomas A. Boger,

Acting Senior Agency Official for Privacy, National Science Foundation.

[FR Doc. 2025–22123 Filed 12–4–25; 8:45 am]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2025–0001]

Sunshine Act Meetings

TIME AND DATE: Weeks of December 8, 15, 22 and 29, 2025 and January 5 and 12, 2026. The schedule for Commission meetings is subject to change on short notice. The NRC Commission Meeting Schedule can be found on the internet at: *https://www.nrc.gov/public-involve/public-meetings/schedule.html.*

PLACE: The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings or need this meeting notice or the transcript or other information from the public meetings in another format (*e.g.,* braille, large print), please contact the Reasonable Accommodations Resource by email at *Reasonable_Accommodations.Resource@nrc.gov.* Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

STATUS: Public.

Members of the public may request to receive the information in these notices electronically. If you would like to be added to the distribution, please contact the Nuclear Regulatory Commission, Office of the Secretary, Washington, DC 20555, at 301–415–1969, or by email at *Betty.Thweatt@nrc.gov* or *Samantha.Miklaszewski@nrc.gov.*

MATTERS TO BE CONSIDERED:

Week of December 8, 2025

There are no meetings scheduled for the week of December 8, 2025.

Week of December 15, 2025—Tentative

There are no meetings scheduled for the week of December 15, 2025.

Week of December 22, 2025—Tentative

There are no meetings scheduled for the week of December 22, 2025.

Week of December 29, 2025—Tentative

There are no meetings scheduled for the week of December 29, 2025.

Week of January 5, 2026—Tentative

There are no meetings scheduled for the week of January 5, 2026.

Week of January 12, 2026—Tentative

There are no meetings scheduled for the week of January 12, 2026.

CONTACT PERSON FOR MORE INFORMATION: For more information or to verify the status of meetings, contact Wesley Held at 301–287–3591 or via email at *Wesley.Held@nrc.gov.*

The NRC is holding the meetings under the authority of the Government in the Sunshine Act, 5 U.S.C. 552b.

Dated: December 3, 2025.

For the Nuclear Regulatory Commission.

Wesley W. Held,

Policy Coordinator, Office of the Secretary.

[FR Doc. 2025–22135 Filed 12–3–25; 4:15 pm]

BILLING CODE 7590–01–P

POSTAL REGULATORY COMMISSION

[Docket Nos. MC2026–126 and K2026–126; MC2026–127 and K2026–127]

New Postal Products

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: The Commission is noticing a recent Postal Service filing for the Commission's consideration concerning a negotiated service agreement. This notice informs the public of the filing, invites public comment, and takes other administrative steps.

ADDRESSES: Submit comments electronically via the Commission's Filing Online system at *https://www.prc.gov.* Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: David A. Trissell, General Counsel, at 202–789–6820.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Introduction
II. Public Proceeding(s)
III. Summary Proceeding(s)

I. Introduction

Pursuant to 39 CFR 3041.405, the Commission gives notice that the Postal Service filed request(s) for the Commission to consider matters related to Competitive negotiated service agreement(s). The request(s) may propose the addition of a negotiated service agreement from the Competitive product list or the modification of an existing product currently appearing on the Competitive product list.

The public portions of the Postal Service's request(s) can be accessed via the Commission's website (*http://www.prc.gov*). Non-public portions of the Postal Service's request(s), if any, can be accessed through compliance with the requirements of 39 CFR 3011.301.[1]

Section II identifies the docket number(s) associated with each Postal Service request, if any, that will be reviewed in a public proceeding as defined by 39 CFR 3010.101(p), the title of each such request, the request's acceptance date, and the authority cited by the Postal Service for each request. For each such request, the Commission appoints an officer of the Commission to represent the interests of the general public in the proceeding, pursuant to 39 U.S.C. 505 and 39 CFR 3000.114 (Public Representative). The Public Representative does not represent any individual person, entity or particular point of view, and, when Commission attorneys are appointed, no attorney-client relationship is established. Section II also establishes comment deadline(s) pertaining to each such request.

The Commission invites comments on whether the Postal Service's request(s) identified in Section II, if any, are consistent with the policies of title 39. Applicable statutory and regulatory requirements include 39 U.S.C. 3632, 39 U.S.C. 3633, 39 U.S.C. 3642, 39 CFR part 3035, and 39 CFR part 3041. Comment deadline(s) for each such request, if any, appear in Section II.

Section III identifies the docket number(s) associated with each Postal Service request, if any, to add a standardized distinct product to the Competitive product list or to amend a standardized distinct product, the title of each such request, the request's acceptance date, and the authority cited by the Postal Service for each request. Standardized distinct products are negotiated service agreements that are variations of one or more Competitive products, and for which financial models, minimum rates, and classification criteria have undergone advance Commission review. *See* 39 CFR 3041.110(n); 39 CFR 3041.205(a). Such requests are reviewed in summary proceedings pursuant to 39 CFR 3041.325(c)(2) and 39 CFR 3041.505(f)(1). Pursuant to 39 CFR 3041.405(c)-(d), the Commission does not appoint a Public Representative or request public comment in proceedings to review such requests. The comment due date discussed below does not

[1] *See* Docket No. RM2018–3, Order Adopting Final Rules Relating to Non-Public Information, June 27, 2018, Attachment A at 19–22 (Order No. 4679).

apply to Section III proceedings (Docket Nos. MC2026–126 and K2026–126; MC2026–127 and K2026–127).

II. Public Proceeding(s)

None. See Section III for summary proceedings.

III. Summary Proceeding(s)

1. *Docket No(s).:* MC2026–126 and K2026–126; *Filing Title:* USPS Request to Add New Fulfillment Standardized Distinct Product, PM–GA Contract 936, and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* December 2, 2025; *Filing Authority:* 39 U.S.C. 3642 and 3633, 39 CFR 3035.105, and 39 CFR 3041.325.

2. *Docket No(s).:* MC2026–127 and K2026–127; *Filing Title:* USPS Request to Add New Fulfillment Standardized Distinct Product, PM–GA Contract 937, and Notice of Filing Materials Under Seal; *Filing Acceptance Date:* December 2, 2025; *Filing Authority:* 39 U.S.C. 3642 and 3633, 39 CFR 3035.105, and 39 CFR 3041.325.

This Notice will be published in the **Federal Register**.

Erica A. Barker,

Secretary.

[FR Doc. 2025–22104 Filed 12–4–25; 8:45 am]

BILLING CODE 7710–FW–P

RAILROAD RETIREMENT BOARD

Privacy Act of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a modified system of records.

SUMMARY: RRB–7, Applications for Unemployment Benefits and Placement Service under the Railroad Unemployment Insurance Act is used to store application data for railroad workers who apply for unemployment benefits and placement service.

DATES: This system of records notice (SORN) will become effective upon its publication, except for the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of 30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB), Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled RRB–7, Applications for Unemployment Benefits and Placement Service under the Railroad Unemployment Insurance Act. The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025.
By Authority of the Board.

Stephanie Hillyard,

Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–7, Applications for Unemployment Benefits and Placement Service under the Railroad Unemployment Insurance Act.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Office of Programs—Director of Policy and Systems, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 12(l) of the Railroad Unemployment Insurance Act (45 U.S.C. 362(l)).

PURPOSE(S) OF THE SYSTEM:

The purpose of this system of records is to be used as an individual's UI file. The records contained in the file are pertinent to the individual's claim for unemployment benefits under the RUIA.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals who have applied for unemployment benefits and employment service.

CATEGORIES OF RECORDS IN THE SYSTEM:

Name, address, account number, age, sex, education, employer, occupation, rate of pay, reason not working and last date worked, personal interview record, results of investigations, and electronic mail address.

RECORD SOURCE CATEGORIES:

Individual applicant or their authorized representative, present and former employers, state and federal departments of employment security, Social Security Administration, and labor organizations.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

a. Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

b. Disclosure may be made to contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

c. Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or if disclosure would be clearly in the

furtherance of the interest of the subject individual.

d. To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

e. To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that because of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

f. Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

g. Disclosure of non-medical information in this system of records may be made to the attorney representing such individual upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

h. Selected information may be disclosed to prospective employers for potential job placement.

i. In the event the Board has determined to designate a person to be the representative payee of an incompetent beneficiary, disclosure of information concerning the benefit amount and other similar information may be made to the representative payee from the record of the individual.

j. Beneficiary identification and entitlement information may be released to third party contacts to determine if the inability of the beneficiary or potential beneficiary to understand or use benefits exists, and to determine the suitability of a proposed representative payee.

k. A record from this system of records may be disclosed to a federal agency, in response to its request, in connection with the hiring or retention of an employee, the issuance of a security clearance, the reporting of an investigation of an employee, the letting of a contract, or the issuance of a license, grant, or other benefit by the requesting agency, to the extent that the information is relevant and necessary to the requesting agency's decision on the matter, provided that disclosure would be clearly in the furtherance of the interest of the subject individual.

l. Beneficiary identification, entitlement, and benefit rate information may be released to the Treasury Department to control for reclamation and return of outstanding benefit payments, to issue benefit payments, reconcile reports of non-delivery and to ensure delivery of payments to the correct address or account of the beneficiary or representative payee.

m. Information may be referred to the U.S. Postal Service for investigation of alleged forgery or theft of railroad unemployment or sickness benefit checks.

n. Beneficiary identification, entitlement, and benefit rate information may be released to the Social Security Administration, Bureau of Supplemental Security Income, and to federal, state, and local welfare or public aid agencies to assist them in processing applications for benefits under their respective programs.

o. The last addresses and employer information may be disclosed to Department of Health and Human Services in conjunction with the Parent Locator Service.

p. Identifying information such as full name, address, date of birth, Social Security number, employee identification number, and date last worked, may be released to any last employer to verify entitlement for benefits under the Railroad Unemployment Insurance Act.

q. Pursuant to a request from an employer covered by the Railroad Retirement Act or the Railroad Unemployment Insurance Act, information regarding the Board's payment of unemployment or sickness benefits, the methods by which such benefits are calculated, entitlement data and present address will be released to the requesting employer for the purposes of determining entitlement to and rates of private supplemental pension, sickness or unemployment benefits and to calculate estimated benefits due.

r. Information from the record of the individual concerning their benefit or anticipated benefit and concerning the method of calculating that benefit may be disclosed to an official of a labor organization of which the individual is a member, if the disclosure is made at the request of, and on behalf of, the individual.

s. Records may be disclosed in a court proceeding relating to any claims for benefits by the beneficiary under the Railroad Unemployment Insurance Act and may be disclosed during an administrative appeal to individuals who need the records to prosecute or decide the appeal or to individuals who are requested to provide information related to an issue involved in the appeal.

t. Records may be disclosed to the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Information from the system will be retrievable by Social Security number.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

In routine cases, held for three years after the end of the benefit year in which it originated. In those with adverse activities (claims denied), held for five years after end of benefit year in which originated. At end of both periods, files are destroyed in accordance with NIST guidance.

Paper: Destroy 180 days after it is scanned into the system or after

completion of the quality assurance process, whichever is later.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Paper: Maintained in areas not accessible to the public in locking filing cabinets. Access is limited to authorized RRB employees. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer, computer storage rooms and IBM zCloud storage are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For electronic records, system securities are established in accordance with National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information
2. A description of the record you wish to access

The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's record should be in writing addressed to the System Manager identified above, including the full name and Social Security number and claim number of the individual. Before information about any record is released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous September 30, 2014 **Federal Register** notice 79 FR 58880.

[FR Doc. 2025–22053 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

RAILROAD RETIREMENT BOARD

Privacy Act of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a modified system of records.

SUMMARY: RRB–1, Social Security Benefit Vouchering System is used to administer, certify, and voucher Social Security benefit payments.

DATES: This system of records notice (SORN) will become effective upon its publication, except for the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of 30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB), Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled, RRB–1, Social Security Benefit Vouchering System. The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025.

By Authority of the Board.

Stephanie Hillyard,

Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–1, Social Security Benefit Vouchering System.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Office of Programs—Director of Policy and Systems, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 7(b)(2) of the Railroad Retirement Act of 1974 (45 U.S.C. 231f(b)(2)).

PURPOSE(S) OF THE SYSTEM:

Records in the Social Security Vouchering System are maintained to administer Title II of the Social Security Act with respect to payment of benefits to individuals with 10 or more years or at least five years after 1995 of railroad service and their families.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Applicants after December 31, 1974, for benefits under Title II of the Social Security Act who have completed ten years or at least five years after 1995 of creditable service in the railroad industry, the spouse and/or divorced spouse or survivor of such an individual.

CATEGORIES OF RECORDS IN THE SYSTEM:

Name, address, Social Security number, claim number, type and amount of benefit, suspension and termination information, and electronic mail address.

RECORD SOURCE CATEGORIES:

Individual applicant or his or her authorized representative, the Social Security Administration, other record systems maintained by the U.S. Railroad Retirement Board.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

a. Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

b. Disclosure may be made to contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

c. Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or if disclosure would be clearly in the furtherance of the interest of the subject individual.

d. To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

e. To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

f. Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

g. Disclosure of non-medical information in this system of records may be made to the attorney representing such individuals upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

h. Benefit rate information may be disclosed to primary beneficiaries regarding secondary beneficiaries (or vice versa) when the addition of such beneficiary affects either the entitlement or benefit payment.

i. In the event the Board has determined to designate a person to be the representative payee of an incompetent beneficiary, disclosure of information concerning the benefit amount and other similar information may be made to the representative payee from the record of the individual.

j. Benefit rates, names and addresses may be released to the Department of Treasury to control for reclamation and return of outstanding benefit payments, to issue benefit payments, act on reports of non-receipt, to ensure delivery of payments to the correct address of the beneficiary or representative payee or to proper financial organization, and to investigate alleged forgery, theft or unlawful negotiation of railroad retirement for Social Security benefit checks or improper diversion of payments directed to a financial organization.

k. Beneficiary's name, address, check rate and date plus supporting evidence may be released to the U.S. Postal Service for investigation of alleged forgery or theft of railroad retirement or Social Security benefit checks.

l. Beneficiary identifying information, effective date, benefit rates, and months paid may be furnished to the Veterans Benefits Administration for the purpose of assisting that agency in determining eligibility for benefits or verifying continued entitlement to and the correct amount of benefits payable under programs which it administers.

m. Benefit rates and effective dates may be disclosed to the Social Security Administration, Bureau of Supplemental Security Income, and to federal, state and local welfare or public aid agencies to assist them in processing applications for benefits under their respective programs.

n. Last addresses information may be disclosed to the Department of Health and Human Services in conjunction with the Parent Locator Service.

o. Benefit rates, entitlement and other necessary information may be released to the Department of Labor in conjunction with payment of benefits under the Federal Coal Mine and Safety Act.

p. Pursuant to a request from an employer covered by the Railroad Retirement Act or the Railroad Unemployment Insurance Act or from an organization under contract to an employer or employers, information regarding the Board's payment of benefits, the methods by which such benefits are calculated, entitlement data and present address may be released to the requesting employer or the organization under contract to the employer or employers for the purposes of determining entitlement to and the rates of private supplemental pension benefits and to calculate estimated benefits due.

q. Information from the record of the individual concerning their benefit or anticipated benefit and concerning the method of calculating that benefit may be disclosed to an official of a labor organization of which the individual is a member, if the disclosure is made at the request of, and on behalf of, the individual.

r. Records deemed relevant and necessary may be disclosed in a court proceeding relating to any claims for benefits by the beneficiary under the Railroad Retirement Act and may be disclosed during an administrative appeal to individuals who need the records to prosecute or decide the appeal or to individuals who are requested to provide information relative to an issue involved in the appeal.

s. For payments made after December 31, 1983, beneficiary identifying information, address, amounts of benefits paid and repaid, beneficiary

withholding instructions, and amounts withheld by the RRB for tax purposes may be furnished to the Internal Revenue Service for tax administration.

t. Beneficiary identifying information, entitlement data, and benefit rates relevant and necessary may be released to the Department of State and embassy and consular officials, to the American Institute in Taiwan, and to the Veterans Benefits Administration Regional Office, Philippines, to aid in ensuring the continued payment of beneficiaries living abroad.

u. Entitlement data and benefit rates relevant and necessary may be released to any court, state, agency, or interested party, or to the representative of such court, state agency, or interested party, in connection with contemplated or actual legal or administrative proceeding concerning domestic relations and support matters.

v. Records may be disclosed to the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Information from the system will be retrievable by Social Security number and name.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Paper: Individual claim folders with records of all actions pertaining to the payment of claims are transferred to the Federal Records Center, Chicago, Illinois 5 years after the date of last payment or denial activity if all benefits have been paid, no future eligibility is apparent, and no erroneous payments are outstanding.

The claim folder is destroyed 25 years after the date it is received in the center. Accounts receivable listings and check writing operations daily activity listings are transferred to the Federal Records Center 1 year after date of issue and are destroyed 6 years and 3 months after receipt at the center. Other paper listings are destroyed 1 year after the date of issue. Changes of address source documents are destroyed after 1 year.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Paper: Maintained in areas not accessible to the public in locking filing cabinets. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer, computer storage rooms and IBM zCloud storage are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For computerized records electronically transmitted between headquarters and field office locations, system securities are established in accordance with the National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in-depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information.

2. A description of the record you wish to access.

The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's record should be in writing addressed to the System Manager identified above, including the full name, Social Security number and claim number of the individual. Before information about any record will be released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous September 30, 2014 **Federal Register** notice 79 FR 58886.

[FR Doc. 2025–22051 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

RAILROAD RETIREMENT BOARD

Privacy Act of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a Modified System of Records.

SUMMARY: RRB–18, Miscellaneous Payments paid/posted to the General Ledger by the Financial Management Integrated System (FMIS) is used to process and track non-payroll payments made by RRB—primarily travel reimbursements and employee expenses.

DATES: This system of records notice (SORN) will become effective upon its publication, except the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of 30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB),

Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled RRB–18, Miscellaneous Payments paid/posted to the General Ledger by the Financial Management Integrated System (FMIS). The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025.
By Authority of the Board.

Stephanie Hillyard,
Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–18, Miscellaneous Payments paid/posted to the General Ledger by the Financial Management Integrated System (FMIS).

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Chief Financial Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 7(b)(6) of the Railroad Retirement Act of 1974 (45 U.S.C. 231f(b)(6)); sec. 12(l) of the Railroad Unemployment Insurance Act (45 U.S.C. 362(l)).

PURPOSE(S) OF THE SYSTEM:

The system is used to pay the operating expenses of the agency to vendors for goods and services. Employees are reimbursed for travel expenses and miscellaneous expenses related to the performance of their jobs. Payments are made within federal limits and applicable guidelines.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Vendors who supply goods and services to the U.S. Railroad Retirement Board and employees of the agency who are reimbursed for travel and miscellaneous expenses.

CATEGORIES OF RECORDS IN THE SYSTEM:

Vendor invoice payments, travel vouchers, miscellaneous reimbursement vouchers, and electronic mail address.

RECORD SOURCE CATEGORIES:

Employees travel records, memoranda from bureau directors and office heads. Form G–409 Request for Reimbursement of Commuting Expenses and Form G–753 Application for Reimbursement of Medical and/or Eye Examination Fees. Vendor invoice records.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

a. Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

b. Disclosure may be made to contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

c. Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or if disclosure would be clearly in the furtherance of the interest of the subject individual.

d. To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

e. To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

f. Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

g. Disclosure of non-medical information in this system of records may be made to the attorney representing such individual upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

h. Identifying information and check amount may be released to the Treasury Department to issue checks.

i. Identifying information, check number, date and amount may be released to the U.S. Postal Service for investigation of alleged forgery or theft of reimbursement checks.

j. To the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian

tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Information from the system will be retrievable by name.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Paper: Retain at headquarters for two years then transferred to National Archives and Records Administration (NARA), Great Lakes Federal Records Center. The General Services Administration will destroy the records when authorized by the Government Accountability Office.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Paper: Maintained in areas not accessible to the public in locking filing cabinets. Access is limited to authorized RRB employees. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer, computer storage rooms and IBM zCloud storage are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For computerized records electronically transmitted between headquarters and field office locations, system securities are established in accordance with National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in-depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information
2. A description of the record you wish to access

The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's record should be addressed in writing to the System Manager identified above, including the full name, Social Security number and claim number of the individual. Before information about any record will be released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous September 30, 2014 **Federal Register** notice 79 FR 58885.

[FR Doc. 2025–22054 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

RAILROAD RETIREMENT BOARD

Privacy Act of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a modified system of records.

SUMMARY: RRB–6, Unemployment Insurance Record File is used to administer, manage, and verify unemployment and sickness benefits.

DATES: This system of records notice (SORN) will become effective upon its publication, except for the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of 30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB), Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled RRB–6, Unemployment Insurance Record File. The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025.

By Authority of the Board.

Stephanie Hillyard,

Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–6, Unemployment Insurance Record File.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Office of Programs—Director of Policy and Systems, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 12(l) of the Railroad Unemployment Insurance Act (45 U.S.C. 362(l)).

PURPOSE(S) OF THE SYSTEM:

This system of records is used for filing general information about applicants for RUIA benefits. If an applicant files for unemployment insurance (UI) benefits, some of the information in this file will be also placed in the claimants UI file.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Claimants for unemployment benefits under the Railroad Unemployment Insurance Act (RUIA) and their respective employers.

CATEGORIES OF RECORDS IN THE SYSTEM:

Development file containing letters from claimants, report of Railroad Unemployment Insurance Act fraud investigations and supporting evidence, erroneous payment investigations, protest and appeal requests and responses and electronic mail address.

RECORD SOURCE CATEGORIES:

Individual claimant or their authorized representative, employers, State employment and unemployment claims records, federal, and Social Security Administration employer compensation reports.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

a. Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

b. Disclosure may be made to contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

c. Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or if disclosure would be clearly in the furtherance of the interest of the subject individual.

d. To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

e. To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

f. Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

g. Disclosure of non-medical information in this system of records may be made to the attorney representing such individuals upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

h. Beneficiary identifying information may be released to third party contacts to determine if the inability of the beneficiary or potential beneficiary to understand or use benefits exists, and to determine the suitability of a proposed representative payee.

i. Benefit rate, name and address may be released to the Treasury Department to control for reclamation and return of outstanding benefit checks, to issue benefit checks, reconcile reports of non-delivery, and to ensure delivery of payments to the correct address or account of the beneficiary or representative payee.

j. Beneficiary's name, address, payment rate, date and number, plus supporting evidence may be released to the U.S. Postal Service for investigation of alleged forgery or theft of railroad unemployment or sickness benefit payments.

k. Identifying information such as full name, address, date of birth, Social Security number, employee identification number, and date last worked, may be released to any last employer to verify entitlement for benefits under the Railroad Unemployment Insurance Act.

l. Pursuant to a request from an employer covered by the Railroad Retirement Act or the Railroad Unemployment Insurance Act, information regarding the Board's payment of unemployment or sickness benefits, the methods by which such benefits are calculated, entitlement data and present address may be released to the requesting employer for the purposes of determining entitlement to and rates of private supplemental pension, sickness or unemployment benefits and to calculate estimated benefits due.

m. Benefit rates and effective dates may be released to the Social Security Administration, Bureau of Supplemental Security Income, and to federal, state and local welfare or public aid agencies to assist them in processing applications for benefits under their respective programs.

n. In the event the Board has determined to designate a person to be the representative payee of an incompetent beneficiary, disclosure of information concerning the benefit amount and other similar information may be made to the representative payee from the individual record.

o. The last addresses and employer information may be disclosed to the Department of Health and Human Services in conjunction with the Parent Locator Service.

p. Information from the record of the individual concerning their benefit or anticipated benefit and concerning the method of calculating that benefit may be disclosed to an official of a labor organization of which the individual is a member, if the disclosure is made at the request of, and on behalf of, the individual.

q. Records deemed relevant and necessary may be disclosed in a court proceeding relating to any claims for benefits by the beneficiary under the

Railroad Unemployment Insurance Act and may be disclosed during an administrative appeal to individuals who need the records to prosecute or decide the appeal or to individuals who are requested to provide information related to an issue involved in the appeal.

r. Beneficiary identifying and claim period information may be furnished to states for the purpose of notifying the RRB whether claimants were paid state unemployment or sickness benefits and whether wages were reported for them.

s. Records may be disclosed to the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Information from the system will be retrievable by Social Security number and name.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Paper: Destroy 90 days after the date scanned into the imaging system or after completion of the quality assurance process, whichever is later.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Paper: Maintained in areas not accessible to the public in steel filing cabinets and are available only to authorized district office and regional office personnel. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer, computer storage rooms and IBM zCloud storage are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For computerized records electronically transmitted between headquarters and field office locations, system securities are established in accordance with National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in-depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information.

2. A description of the record you wish to access.The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's record should be in writing addressed to the System Manager identified above, including the full name, Social Security number and claim number of the individual. Before information about any record is released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous September 30, 2014 **Federal Register** notice 79 FR 58879.

[FR Doc. 2025–22052 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

RAILROAD RETIREMENT BOARD

Privacy Act of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a modified system of records.

SUMMARY: RRB–22, Railroad Retirement, Survivor, and Pensioner Benefit System is used to manage records related to railroad retirement, survivor, and pensioner benefits.

DATES: This system of records notice (SORN) will become effective upon its publication, except for the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of 30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB), Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled RRB–22, Railroad Retirement, Survivor, and Pensioner Benefit System. The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025.

By Authority of the Board.

Stephanie Hillyard,

Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–22, Railroad Retirement, Survivor, and Pensioner Benefit System.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Office of Programs—Director of Policy and Systems, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 7(b)(6) of the Railroad Retirement Act of 1974 (U.S.C. 231f(b)(6)).

PURPOSE(S) OF THE SYSTEM:

Records in this system of records are maintained to administer the benefit provisions of the Railroad Retirement Act, sections of the Internal Revenue Code related to the taxation of railroad retirement benefits, and Title XVIII of the Social Security Act as it pertains to Medicare coverage for railroad retirement beneficiaries.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Applicants for retirement and survivor benefits, (spouses, divorced spouses, widows, surviving divorced spouses, children, students, parents, grandchildren), and individuals who filed for lump-sum death benefits and/or residual payments.

CATEGORIES OF RECORDS IN THE SYSTEM:

Information pertaining to the payment or denial of an individual's claim for benefits under the Railroad Retirement Act: Name, address, Social Security number, claim number, proofs of age, marriage, relationship, death, military service, creditable earnings and service months (including military service), entitlement to benefits under the Social Security Act, programs administered by the Veterans Benefits Administration, or other benefit systems, rates, effective dates, medical reports, correspondence and telephone inquiries to and about the beneficiary, suspension and termination dates, health insurance effective date, option, premium rate and deduction, direct deposit data, employer pension information, citizenship status and legal residency status (for annuitants living outside the United States), electronic mail address, and tax withholding information (instructions of annuitants regarding number of tax withholding exemptions claimed and additional amounts to be withheld, as well as actual amounts withheld for tax purposes).

RECORD SOURCE CATEGORIES:

Individual applicants or their representatives, railroad employers, other employers, physicians, labor organizations, federal, state and local government agencies, attorneys, funeral homes, congressmen, schools, foreign government.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

Disclosure may be made to contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or if disclosure would be clearly in the furtherance of the interest of the subject individual.

To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

Disclosure of non-medical information in this system of records may be made to the attorney representing such individuals upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

Beneficiary identifying information may be disclosed to third party contacts to determine if the inability of the beneficiary or potential beneficiary to understand or use benefits exists, and to determine the suitability of a proposed representative payee.

In the event the Board has decided to designate a person to be the representative payee of an incompetent beneficiary, disclosure of information concerning the benefit amount and other similar information may be made to the representative payee from the individual record.

Entitlement and benefit rates relevant and necessary may be released to primary beneficiaries regarding secondary beneficiaries (or vice versa) when the addition of such beneficiary affects either entitlement or benefit payment.

Identifying information such as full name, address, date of birth, Social Security number, employee identification number, and date last worked, may be released to any last employer to verify entitlement for

benefits under the Railroad Retirement Act.

Beneficiary identifying information, address, check rates, number and date may be released to the Department of the Treasury to control for reclamation and return of outstanding benefit payments, to issue benefit payments, act on report of non-receipt, to ensure delivery of payments to the correct address of the beneficiary or representative payee or to the proper financial organization, and to investigate alleged forgery, theft or unlawful negotiation of railroad retirement benefit checks or improper diversion of payments directed to a financial organization.

Beneficiary identifying information, address, check rate, date, number and other supporting evidence may be released to the U.S. Postal Service for investigation of alleged forgery or theft of railroad retirement or Social Security benefit checks.

Beneficiary identifying information, entitlement data, medical evidence and related evaluatory data and benefit rate may be released to the Social Security Administration and the Centers for Medicare & Medicaid Services to correlate actions with the administration of Title II and Title XVIII of the Social Security Act, as amended.

Beneficiary identifying information, including Social Security number, and supplemental annuity amounts may be released to the Internal Revenue Service, for tax purposes.

Beneficiary identifying information, entitlement, benefit rates, medical evidence and related evaluatory data, and months paid may be furnished to the Veterans Benefits Administration for the purpose of assisting that agency in determining eligibility for benefits or verifying continued entitlement to and the correct amount of benefits payable under programs which it administers.

Beneficiary identifying information, entitlement data and benefit rates relevant and necessary may be released to the Department of State and embassy and consular officials, the American Institute in Taiwan, and to the Veterans Benefits Administration Regional Office, Philippines, to aid in the development of applications, supporting evidence, and the continued eligibility of beneficiaries and potential beneficiaries living abroad.

Beneficiary identifying information, entitlement, benefit rates and months paid may be released to the Social Security Administration (Bureau of Supplemental Security Income), the Centers for Medicare & Medicaid Services, to federal, state and local welfare or public aid agencies to assist them in processing applications for benefits under their respective programs.

The last addresses and employer information may be released to the Department of Health and Human Services in conjunction with the Parent Locator Service.

Beneficiary identifying information, entitlement, rate and other pertinent data may be released to the Department of Labor in conjunction with payment of benefits under the Federal Coal Mine and Safety Act.

Medical evidence may be released to Board-appointed medical examiners to carry out their functions.

Information obtained in the administration of Title XVIII (Medicare) which may indicate unethical or unprofessional conduct of a physician or practitioner providing services to beneficiaries may be released to Professional Standards Review Organizations and State Licensing Boards.

Information necessary to study the relationship between benefits paid by the U.S. Railroad Retirement Board and civil service annuities may be released to the Office of Personnel Management.

Pursuant to a request from an employer covered by the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or from an organization under contract to an employer or employers, information regarding the Board's payment of retirement benefits, the methods by which such benefits are calculated, entitlement data and present address may be released to the requesting employer or the organization under contract to an employer or employers for the purposes of determining entitlement to and rates of private supplemental pension, sickness or unemployment benefits and to calculate estimated benefits due.

Information from the record of the individual concerning their benefit or anticipated benefit and concerning the method of calculating that benefit may be disclosed to an official of a labor organization of which the individual is a member, if the disclosure is made at the request of, and on behalf of, the individual.

Records deemed relevant and necessary may be disclosed in a court proceeding relating to any claims for benefits by the beneficiary under the Railroad Retirement Act and may be disclosed during an administrative appeal to individuals who need the records to prosecute or decide the appeal or to individuals who are requested to provide information relative to an issue involved in the appeal.

The amount of a residual lump-sum payment and the identity of the payee may be released to the Internal Revenue Service for tax audit purposes.

The amount of any death benefit or annuities accrued but unpaid at death and the identity of such payee may be released to the appropriate state taxing authorities for tax assessment and auditing purposes.

Beneficiary identifying information, including but not limited to name, address, Social Security number, payroll number and occupation, the fact of entitlement and benefit rate may be released to the Pension Benefit Guaranty Corporation to enable that agency to determine and pay supplemental pensions to qualified railroad retirees.

Medical records may be disclosed to vocational consultants in administrative proceedings.

Date employee filed application for annuity to the last employer under the Railroad Retirement Act for use in determining entitlement to continued major medical benefits under insurance programs negotiated with labor organizations.

Information regarding the determination and recovery of an overpayment made to an individual may be released to any other individual from whom any portion of the overpayment is being recovered.

Certain identifying information about annuitants, such as name, Social Security number, claim number, and date of birth, as well as address, year and month last worked for a railroad, last railroad occupation, application filing date, annuity beginning date, identity of last railroad employer, total months of railroad service, sex, disability onset date, disability freeze onset date, and cause and effective date of annuity termination may be furnished to insurance companies for administering group life and medical insurance plans negotiated between certain participating railroad employers and railway labor organizations.

For payments made after December 31, 1983, beneficiary identifying information, address, amounts of benefits paid and repaid, beneficiary withholding instructions, and amounts withheld by the RRB for tax purposes may be furnished to the Internal Revenue Service for tax administration purposes.

Last address and beneficiary identifying information may be furnished to railroad employers for the purpose of mailing railroad passes to retired employees and their families.

Entitlement data and benefits rates may be released to any court, state agency, or interested party, or to the representative of such court, state agency, or interested party, in connection with contemplated or actual legal or administrative proceedings concerning domestic relations and support matters.

Identifying information about annuitants and applicants may be furnished to agencies and/or companies from which such annuitants and applicants are receiving or may receive worker's compensation, public pension, or public disability benefits to verify the amount by which Railroad Retirement Act benefits must be reduced, where applicable.

Disability annuitant identifying information may be furnished to state employment agencies for the purpose of determining whether such annuitants were employed during times they receive disability benefits.

Identifying information about Medicare-entitled beneficiaries who may be working may be disclosed to the Centers for Medicare & Medicaid Services for the purposes of determining whether Medicare should be the secondary payer of benefits for such individuals.

Disclosure of information in claim folders is authorized for bonafide researchers doing epidemiological/mortality studies approved by the RRB who agree to record only information pertaining to deceased beneficiaries.

Identifying information for beneficiaries, such as name, SSN, and date of birth, may be furnished to the Social Security Administration and to any State for the purpose of enabling the Social Security Administration or State through a computer or manual matching program to assist the RRB in identifying female beneficiaries who remarried but who may not have notified the RRB of their remarriage.

An employee's date last worked, annuity filing date, annuity beginning date, and the month and year of death may be furnished to AMTRAK when such information is needed by AMTRAK to decide whether to award a travel pass to either the employee or the employee's widow.

The employee's Social Security number may be disclosed to an individual eligible for railroad retirement benefits on the employee's earnings record when the employee's Social Security number would be contained in the railroad retirement claim number. Records may be disclosed to the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Information from the system will be retrievable by Social Security number, claim number and name.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Paper: Destroyed by shredding in accordance with NIST standards, no sooner than 7 years and no later than 10 years after the close of the benefit year.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Paper: Maintained in areas not accessible to the public in locking filing cabinets. Access is limited to authorized RRB employees. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer and computer storage rooms are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For electronic records, system securities are established in accordance with the National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in-depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information
2. A description of the record you wish to access

The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's record should be in writing addressed to the System Manager identified above, including the full name, Social Security number and claim number of the individual. Before information about any record will be released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous May 15, 2015 **Federal Register** notice 80 FR 28018.

[FR Doc. 2025–22048 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

RAILROAD RETIREMENT BOARD

Privacy Act of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a modified system of records.

SUMMARY: RRB–42, Overpayment Accounts is used to maintain records related to overpayments.

DATES: This system of records notice (SORN) will become effective upon its publication, except for the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of

30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB), Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled RRB–42, Overpayment Accounts. The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025

By Authority of the Board.

Stephanie Hillyard,

Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–42, Overpayment Accounts.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Salary overpayments: Director, General Services Administration National Payroll Center, Attention: 6BCY, 1500 Bannister Road, Kansas City, Missouri 64131–3088.

Benefit overpayments: Chief Financial Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 7(b)(6) of the Railroad Retirement Act of 1974 (45 U.S.C. 231f(b)(6)); Section 12(l) of the Railroad Unemployment Insurance Act (45 U.S.C. 362(l)); Public Law 97–92 (Joint Resolution); Public Law 97–365 (Debt Collection Act of 1982); Federal Claims Collection Act (31 U.S.C. 3701 et. seq.); Public Law 104–134 (Debt Collection Improvement Act of 1996); Public Law 111–204 (Improper Payments Elimination and Recovery Act); Public Law 113–101 (The Digital Accountability and Transparency Act); 5 U.S.C. 5514, and 20 CFR 361.

PURPOSE(S) OF THE SYSTEM:

The records in this system are created, monitored and maintained to enable the Railroad Retirement Board to fulfill regulatory and statutory fiduciary responsibilities to its trust funds, the individuals to whom it pays salaries or benefits and the federal government as directed under the Railroad Retirement Act, Railroad Unemployment Insurance Act, Debt Collection Act of 1982, the Debt Collection Improvement Act of 1996, and the Digital and Transparency Act of 2014. These responsibilities include accurate and timely determination of debt; sending timely, accurate notice of the debt with correct repayment and rights options; taking correct and timely action when rights/appeals have been requested; assessing appropriate charges; using all appropriate collection tools, releasing required, accurate reminder notices; and correctly and timely entering all recovery, write-off, and waiver offsets to debts.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals or businesses who were overpaid in the salaries or benefits they received from the Railroad Retirement Board. Benefits overpaid are further delineated in the following two categories:

—Individuals or businesses overpaid the following types of annuities or benefits payable under the Railroad Retirement Act: retirement, disability, supplemental, and survivor.

—Individuals overpaid unemployment or sickness insurance benefits payable under the Railroad Unemployment Insurance Act.

CATEGORIES OF RECORDS IN THE SYSTEM:

Name, address, Social Security number, claim number, electronic mail address, whether salary or benefit and if benefit type of benefit previously paid, amount of overpayment, debt identification number, cause of overpayment, source of overpayment, original debt amount, current balance of debt, installment repayment history, recurring accounts receivable administrative offset history, waiver, reconsideration and debt appeal status, general billing, dunning, referral, collection, and payment history, amount of interest and penalties assessed and collected, name of federal agency to which account is referred for collection, date of such referral and amount collected.

RECORD SOURCE CATEGORIES:

Salary overpayments: General Services Administration maintains RRB salary records, including records of amounts overpaid to U.S. Railroad Retirement. The RRB also maintains salary overpayment records in folders and other RRB systems of records. Benefit overpayments: U.S. Railroad Retirement Board beneficiaries' overpayment records are contained in claim folders, the RRB's accounts receivable system, and other RRB systems of records.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follow:

a. Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

b. Disclosure may be made to contractors, grantees, experts, consultants, students, and others performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

c. Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act,

or if disclosure would be clearly in the furtherance of the interest of the subject individual.

d. To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

e. To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

f. Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

g. Disclosure of non-medical information in this system of records may be made to the attorney representing such individuals upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

h. Benefit overpayment amounts, history of collection actions and efforts, and personally identifiable information (name, address, Social Security number, railroad retirement claim number, etc.) may be disclosed to agencies of the federal government for the purpose of recovering delinquent debts.

i. Federal salary overpayment amounts, history of collection actions and efforts, and personally identifiable information (name, address, Social Security number, etc.) may be disclosed to agencies of the federal government for the purpose of recovering delinquent debts.

j. Personally identifiable information pertaining to delinquent benefit and federal salary overpayments may be disclosed to the Department of the Treasury, Financial Management Service (FMS), for the purpose of collecting through cross-servicing and offset of federal payments. FMS may disclose this personally identifiable information to other agencies to conduct computer matching programs to identify and locate delinquent debtors who are receiving federal salaries or benefit payments. FMS may refer these delinquent accounts and disclose pertinent information to other federal agencies and private collection agencies for the purpose of collection.

k. Personally identifiable information may be released to any federal agency for the purpose of enabling such agency to collect debts on the RRB's behalf.

l. Information from the record of the individual concerning their benefit or anticipated benefit and concerning the method of calculating that benefit may be disclosed to an official of a labor organization of which the individual is a member, if the disclosure is made at the request of, and on behalf of, the individual.

m. Records may be disclosed to the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Salary overpayments retrievable by Social Security number and name. Benefit overpayments retrievable by Social Security number, Railroad Retirement claim number, name, and debt identification number.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Paper: Documents, with benefit overpayment data, are shredded three years after receipt. These records are identified and destroyed annually.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Salary overpayment records are maintained at the General Services Administration under safeguards equal to those of the U.S. Railroad Retirement Board (see GSA Systems of Records Notice: GSA–PPFM–9).

Benefit overpayment records:

Paper: Maintained in areas not accessible to the public in locking filing cabinets. Access is limited to authorized RRB employees. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer and computer storage rooms are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For electronic records, system securities are established in accordance with the National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in-depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information.

2. A description of the record you wish to access.

The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's salary overpayment record should be in writing addressed to the Director, General Services Administration National Payroll Center at the address above. Requests for information regarding an individual's or business' benefit overpayment record should be in writing addressed to the System Manager identified above, including the full name, claim number, and Social Security number of the individual. Before information about any record is released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous September 30, 2014 **Federal Register** notice 79 FR 58896.

[FR Doc. 2025–22049 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

RAILROAD RETIREMENT BOARD

Privacy Act Of 1974; System of Records

AGENCY: United States Railroad Retirement Board (RRB).

ACTION: Notice of a modified system of records.

SUMMARY: RRB–21, Railroad Unemployment and Sickness Insurance Benefit System is used to collect, store, and manage information for railroad workers' unemployment claims.

DATES: This system of records notice (SORN) will become effective upon its publication, except the routine uses that have been modified as part of this modification, which will be effective at the end of a public comment period of 30 days from the date of publication. Please submit written comments on or before January 5, 2026.

ADDRESSES: Interested parties may comment on this publication by writing to Ms. Stephanie Hillyard, Secretary to the Board, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

FOR FURTHER INFORMATION CONTACT: Mr. Chad Peek, Chief Privacy Officer, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275, telephone 312–751–3389 or email at *chad.peek@rrb.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Privacy Act of 1974, 5 U.S.C. 552a, and the Office of Management and Budget (OMB), Circular No. A–108, the U.S. Railroad Retirement Board (RRB) has completed a review of its Privacy Act systems of records and proposes to modify a current RRB system of records titled RRB–21, Railroad Unemployment and Sickness Insurance Benefit System. The proposed modification to the system of records pursuant to 5 U.S.C. 552a(b)(3) adds the following categories of users to its Routine Uses section: Congressional representatives, contractors working for the federal government, law enforcement, other federal agencies and entities pertaining to breach notification, National Archives, and attorney representatives.

Dated: December 3, 2025.

By Authority of the Board.

Stephanie Hillyard,

Secretary to the Board.

SYSTEM NAME AND NUMBER:

RRB–21, Railroad Unemployment and Sickness Insurance Benefit System.

SECURITY CLASSIFICATION:

Unclassified.

SYSTEM LOCATION:

U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

SYSTEM MANAGER(S):

Office of Programs—Director of Policy and Systems, U.S. Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611–1275.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 12(l) of the Railroad Unemployment Insurance Act (45 U.S.C. 351, *et. seq.*).

PURPOSE(S) OF THE SYSTEM:

The purpose of this system of records is to carry out the function of collecting and storing information to administer the benefit program under the Railroad Unemployment Insurance Act.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM: APPLICANTS AND CLAIMANTS FOR UNEMPLOYMENT AND SICKNESS (INCLUDING MATERNITY) BENEFITS UNDER THE RAILROAD UNEMPLOYMENT INSURANCE ACT: SOME RAILROAD EMPLOYEES INJURED AT WORK WHO DID NOT APPLY FOR RAILROAD UNEMPLOYMENT INSURANCE ACT BENEFITS; ALL RAILROAD EMPLOYEES PAID SEPARATION ALLOWANCES.

CATEGORIES OF RECORDS IN THE SYSTEM:

Information pertaining to payment or denial of an individual's claim for benefits under the Railroad Unemployment Insurance Act: Name, address, sex, Social Security number, date of birth, total months of railroad service (including creditable military service), total creditable compensation for base year, last employer and date last worked before applying for benefits, last rate of pay in base year, reason not working, applications and claims filed, benefit information for each claim filed, disqualification periods and reasons for disqualification, entitlement to benefits under other laws, benefit recovery information about personal injury claims and pay for time not worked, medical reports, placement data, correspondence and telephone inquiries to and about the claimant, record of protest or appeal by claimant of adverse determinations made on their claims, and electronic mail address.

RECORD SOURCE CATEGORIES:

Applicant, claimant or his or her representative, physicians, employers, labor organizations, federal, state, and local government agencies, all U.S. Railroad Retirement Board files, insurance companies, attorneys, Congressmen, liable parties (in personal injury cases), funeral homes and survivors (for payment of death benefits).

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, all or a portion of the records or information contained in this system may be disclosed to authorized entities, as is determined to be relevant and necessary, outside RRB as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

Disclosure may be made to a congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual if that individual would not be denied access to the information.

Disclosure may be made to contractors, grantees, experts, consultants, students, and others

performing or working on a contract, service, grant, cooperative agreement, or other assignment for RRB, to the extent necessary to accomplish an RRB function related to this system of records.

Disclosure may be made to the appropriate agency, whether federal, state, local, or foreign, charged with the responsibility of investigating, enforcing, or prosecuting a violation or potential violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, or charged with enforcing or implementing the statute, rule, regulation, or order issued pursuant thereto, if the disclosure would be to an agency engaged in functions related to the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or if disclosure would be clearly in the furtherance of the interest of the subject individual.

To another federal agency or federal entity, when the U.S. Railroad Retirement Board determines that information from this system of records is reasonably necessary to assist the recipient agency or entity in (1) responding to a suspected or confirmed breach or (2) preventing, minimizing, or remedying the risk of harm to individuals, the recipient agency or entity (including its information systems, programs, and operations), the federal government, or national security, resulting from a suspected or confirmed breach.

To appropriate agencies, entities, and persons when (1) the U.S. Railroad Retirement Board suspects or has confirmed that there has been a breach of the system of records; (2) the U.S. Railroad Retirement Board has determined that as a result of the suspected or confirmed breach there is a risk of harm to individuals, the U.S. Railroad Retirement Board (including its information systems, programs, and operations), the federal government, or national security; and (3) the disclosure made to such agencies, entities, and persons is reasonably necessary to assist in connection with the U.S. Railroad Retirement Board's efforts to respond to the suspected or confirmed breach or to prevent, minimize, or remedy such harm.

Disclosure may be made to the National Archives and Records Administration or other federal government agencies for records management inspections being conducted under the authority of 44 U.S.C. 2904 and 2906.

Disclosure of non-medical information in this system of records may be made to the attorney representing such individual upon receipt of a written letter or declaration stating the fact of representation, if that individual would not be denied access to the information. Medical information may be released to an attorney when such records are requested for the purpose of contesting a determination either administratively or judicially.

Beneficiary identifying information may be disclosed to third party contacts to determine if incapacity of the beneficiary or potential beneficiary to understand or use benefits exists, and to determine the suitability of a proposed representative payee.

In the event the Board has determined to designate a person to be the representative payee of an incompetent beneficiary, disclosure of information concerning the benefit amount and other similar information may be made to the representative payee from the record of the individual.

Beneficiary identifying information, address, check rate, date and number may be released to the Treasury Department to control for reclamation and return outstanding benefit payments, to issue benefit payments, respond to reports of non-delivery and to insure delivery of check to the correct address or account of the beneficiary or representative payee.

Beneficiary identifying information, address, payment rate, date and number, plus other necessary supporting evidence may be released to the U.S. Postal Service for investigation of alleged forgery or theft of railroad unemployment/sickness benefit payments.

A record from this system of records may be disclosed to a federal agency, in response to its request, in connection with the hiring or retention of an employee, the issuance of a security clearance, the reporting of an investigation of an employee, the letting of a contract, the issuance of a license, grant, or other benefit by the requesting agency, to the extent that the information is relevant and necessary to the requesting agency's decision in the matter, provided that disclosure would be clearly in the furtherance of the interest of the subject individual.

Under Section 2(f), the U.S. Railroad Retirement Board has the right to recover benefits paid to an employee who later receives remuneration for the same period, therefore, the U.S. Railroad Retirement Board may notify the person or company paying the remuneration of the Board's right to recovery and the amount of benefits to be refunded.

Under Section 12(o), the U.S. Railroad Retirement Board is entitled to reimbursement of sickness benefits paid on account of the infirmity for which damages are paid, consequently, the U.S. Railroad Retirement Board may send a notice of lien to the liable party, and, upon request by the liable party, advise the amount of benefits subject to reimbursement.

Beneficiary identifying information, rate and entitlement data may be released to the Social Security Administration to correlate actions with the administration of the Social Security Act.

The last addresses and employer information may be released to Department of Health and Human Services in conjunction with the Parent Locator Service.

Benefit rate, entitlement and periods paid may be disclosed to the Social Security Administration, Bureau of Supplemental Security Income, and to federal, state and local welfare or public aid agencies to assist them in processing applications for benefits under their respective programs.

Beneficiary identifying information, entitlement, rate and other pertinent data may be released to the Department of Labor in conjunction with payment of benefits under the Federal Coal Mine and Safety Act.

s. Information from the record of the individual concerning their benefit or anticipated benefit and concerning the method of calculating that benefit may be disclosed to an official of a labor organization of which the individual is a member, if the disclosure is made at the request of, the individual.

Pursuant to a request from an employer covered by the Railroad Retirement Act or the Railroad Unemployment Insurance Act, or from an organization under contract to an employer or employers, information regarding the Board's payment of unemployment or sickness benefits, the methods by which such benefits are calculated, entitlement data and present address may be released to the requesting employer or the organization under contract to an employer or employers for the purposes of determining entitlement to and rates of private supplemental pension, sickness or unemployment benefits and to calculate estimated benefits due.

Records deemed relevant and necessary may be disclosed in a court proceeding relating to any claims for benefits by the beneficiary under the Railroad Unemployment Insurance Act and may be disclosed during an administrative appeal to individuals who need the records to prosecute or

decide the appeal or to individuals who are requested to provide information relative to an issue involved in the appeal.

Beneficiary identifying information, entitlement data, benefit rates and periods paid may be released to the Veterans Benefits Administration to verify continued entitlement to benefits.

Identifying information such as full name, Social Security number, employee identification number, date last worked, occupation, and location last worked may be released to any last employer to verify entitlement for benefits under the Railroad Unemployment Insurance Act.

The amount of unemployment benefits paid, if 10 dollars or more in a calendar year, and claimant identifying information, may be furnished to the Internal Revenue Service for tax administration purposes.

Beneficiary identifying and claim period information may be furnished to states for the purposes of their notifying the RRB whether claimants were paid state unemployment or sickness benefits and whether wages were reported for them. For claimants that a state identifies as having received state unemployment or sickness benefits, RRB benefit information may be furnished the state for the purpose of recovery of the amount of the duplicate payments which is made.

The amount of each sickness benefit that is subject to a tier 1 railroad retirement tax and the amount of the tier 1 tax withheld may be disclosed to the claimant's last railroad employer to enable that employer to compute its tax liability under the Railroad Retirement Tax Act.

The amount of sickness benefits paid and claimant identifying information, except for sickness benefits paid for an on-the-job injury, may be furnished to the Internal Revenue Service for tax administration purposes.

Entitlement data and benefit rates relevant and necessary may be released to any court, state agency, or interested party, or to the representative of such court, state agency, or interested party in connection with contemplated or actual legal or administrative proceedings concerning domestic relations and support matters.

Identifying information and information about a claim for benefits filed may be disclosed to an employee's base-year railroad employer and the employee's most recent railroad employer, if different, in order to afford that employer or those employers the opportunity to submit information concerning the claim. In addition, after the claim has been paid, if the base year railroad employer appeals the decision awarding benefits, all information regarding the claim may be disclosed to such base-year railroad employer that is necessary and appropriate for it to fully exercise its rights of appeal.

Non-medical information relating to the determination of sickness benefits may be disclosed to an insurance company administering a medical insurance program for railroad workers for purposes of determining entitlement to benefits under that program.

Scrambled Social Security number and complete home address information of unemployment claimants may be furnished to the Bureau of Labor Statistics for use in its Local Area Unemployment Statistics (LAUS) program.

Records may be disclosed to the U.S. Department of the Treasury when disclosure of the information is relevant to review payment and award eligibility through the Do Not Pay Working System for the purposes of identifying, preventing, or recouping improper payments to an applicant for, or recipient of, Federal funds, including funds disbursed by a state (meaning a state of the United States, the District of Columbia, a territory or possession of the United States, or a federally recognized Indian tribe) in a state-administered, federally funded program.

POLICIES AND PRACTICES FOR STORAGE OF RECORDS:

Paper records will be stored in file cabinets or at approved National Archives and Records Administration records centers. Electronic records are maintained on computer servers, computer hard drives, electronic databases, email, and FedRAMP approved cloud information systems.

POLICIES AND PRACTICES FOR RETRIEVAL OF RECORDS:

Information from the system will be retrievable by Social Security number, claim number and name.

POLICIES AND PRACTICES FOR RETENTION AND DISPOSAL OF RECORDS:

Paper: Destroyed by shredding in accordance with NIST standards, no sooner than 7 years and no later than 10 years after the close of the benefit year.

Electronic media: Storage drives and IBM zCloud storage: Continually updated and permanently retained. When storage drives and IBM zCloud storage or other electronic media are no longer serviceable, they are sanitized in accordance with NIST guidelines.

ADMINISTRATIVE, TECHNICAL, AND PHYSICAL SAFEGUARDS:

Paper: Maintained in areas not accessible to the public in locking filing cabinets. Access is limited to authorized RRB employees. Offices are locked during non-business hours. The building has 24-hour on-site security officers, closed circuit television monitoring and intrusion detection systems.

Electronic media: Computer and computer storage rooms are restricted to authorized personnel; on-line query safeguards include a lock/unlock password system, a terminal oriented transaction matrix, role-based access controls and audit trail. For electronic records, system securities are established in accordance with National Institute of Standards and Technology (NIST) guidelines, including network monitoring, defenses in-depth, incident response and forensics. In addition to the on-line query safeguards, they include encryption of all data transmitted and exclusive use of leased telephone lines.

RECORD ACCESS PROCEDURES:

Under 5 U.S.C. 552a (Privacy Act of 1974), individuals have the right to access and contest records maintained about them. To access or amend your records, submit a written request to the Railroad Retirement Board (RRB) with:

1. Your identifying information.

2. A description of the record you wish to access.

The RRB may request proof of identity. To correct a record, specify the change and provide justification. If denied, you can submit a statement of disagreement to be included with the record.

CONTESTING RECORD PROCEDURES:

For additional instructions, see the Record Access Procedures and Notification Procedures sections.

NOTIFICATION PROCEDURES:

Requests for information regarding an individual's record should be in writing addressed to the System Manager identified above, including the full name, Social Security number and claim number of the individual. Before information about any record will be released, the System Manager may require the individual to provide proof of identity or require the requester to furnish an authorization from the individual to permit release of information.

EXEMPTIONS PROMULGATED FOR THE SYSTEM:

None.

HISTORY:

System of Records Notice revision from previous May 15, 2015 **Federal Register** notice 80 FR 28016.

[FR Doc. 2025–22047 Filed 12–4–25; 8:45 am]

BILLING CODE 7905–01–P

SECURITIES AND EXCHANGE COMMISSION

[OMB Control No. 3235–0734]

Agency Information Collection Activities; Proposed Collection; Comment Request; Extension: Rule 22c–1

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), the Securities and Exchange Commission (SEC or ''Commission'') is soliciting comments on the collections of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

Rule 22c–1 (17 CFR 270.22c–1) under the Investment Company Act of 1940 (15 U.S.C. 80a) (the ''Investment Company Act'' or ''Act'') enables a fund to choose to use ''swing pricing'' as a tool to mitigate shareholder dilution. Rule 22c–1 is intended to promote investor protection by providing funds with an additional tool to mitigate the potentially dilutive effects of shareholder purchase or redemption activity and a set of operational standards that allow funds to gain comfort using swing pricing as a means of mitigating potential dilution.

The respondents to amended rule 22c–1 are open-end management investment companies (other than money market funds or exchange-traded funds) that engage in swing pricing. Compliance with rule 22c–1(a)(3) is mandatory for any fund that chooses to use swing pricing to adjust its NAV in reliance on the rule.

While we are not aware of any funds that have engaged in swing pricing,[1] we are estimating for the purpose of this analysis that 5 fund complexes have funds that may adopt swing pricing policies and procedures in the future pursuant to the rule. We estimate that the total burden associated with the preparation and approval of swing pricing policies and procedures by those fund complexes that would use swing pricing will be 280 hours.[2] We also estimate that it will cost a fund complex $77,038 to document, review and initially approve these policies and procedures, for a total cost of $385,190.[3]

Rule 22c–1 requires a fund that uses swing pricing to maintain the fund's swing policies and procedures that are in effect, or at any time within the past six years were in effect, in an easily accessible place.[4] The rule also requires a fund to retain a written copy of the periodic report provided to the board prepared by the swing pricing administrator that describes, among other things, the swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution and any back-testing performed.[5] The retention of these records is necessary to allow the staff during examinations of funds to determine whether a fund is in compliance with its swing pricing policies and procedures and with rule 22c–1. We estimate a time cost per fund complex of $388.[6] We estimate that the total for recordkeeping related to swing pricing will be 20 hours, at an aggregate cost of $1,940, for all fund complexes that we believe include funds that have adopted swing pricing policies and procedures.[7]

Amortized over a three-year period, we believe that the hour burdens and time costs associated with rule 22c–1, including the burden associated with the requirements that funds adopt policies and procedures, obtain board approval, and periodic review of an annual written report from the swing pricing administrator, and retain certain records and written reports related to swing pricing, will result in an average aggregate annual burden of 113.3 hours, and average aggregate time costs of $130,336.[8] We also estimate that rule 22c–1 imposes a total external cost burden of $2,920 for outside legal services related to compliance with the policies and procedures requirement.[9]

These estimates of average costs are made solely for the purposes of the Paperwork Reduction Act. The estimate is not derived from a comprehensive or even a representative survey or study of the costs of Commission rules. This collection of information is necessary to obtain a benefit and will not be kept confidential.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number.

Written comments are invited on: (a) whether this proposed collection of information is necessary for the proper performance of the functions of the SEC, including whether the information will have practical utility; (b) the accuracy of the SEC's estimate of the burden imposed by the proposed collection of information, including the validity of the methodology and the assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated, electronic collection techniques or other forms of information technology.

Please direct your written comments on this 60-Day Collection Notice to Austin Gerig, Director/Chief Data Officer, Securities and Exchange Commission, c/o Tanya Ruttenberg via email to *PaperworkReductionAct@sec.gov* by February 3, 2026. There will be a second opportunity to comment on this SEC request following the **Federal Register** publishing a 30-Day Submission Notice.

[1] No funds have engaged in swing pricing as reported on Form N–CEN as of October 31, 2025.

[2] This estimate is based on the following calculation: (48 + 2 + 6) hours × 5 fund complexes = 280 hours.

[3] These estimates are based on the following calculations: 24 hours × $266 (hourly rate for a senior accountant) = $6,384; 24 hours × $612 (blended hourly rate for assistant general counsel ($573) and chief compliance officer ($652)) = $14,688; 2 hours (for a fund attorney's time to prepare materials for the board's determinations) × $449 (hourly rate for a compliance attorney) = $898; 6 hours × $9,178 (hourly rate for a board of 9 directors) = $55,068; ($6,384 + $14,688 +$898 + $55,068) = $77,038; $77,038 × 5 fund complexes = $385,190; the estimated hourly wages are based on SIFMA's report on Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1,800-hour work-year and inflation, and adjusted to account for bonuses, firm size, employee benefits, and overhead; the staff has estimated the average cost of board of director time as $9,178 per hour for the board as a whole, based on information received from funds and their counsel.

[4] *See* rule 22c–1(a)(3)(iii).

[5] *See id.*

[6] This estimate is based on the following calculations: 2 hours × $77 (hourly rate for a general clerk) = $154; 2 hours × $117 (hourly rate for a senior computer operator) = $234. $154 + $234 = $388.

[7] These estimates are based on the following calculations: 4 hours × 5 fund complexes = 20 hours. 5 fund complexes × $388 = $1,940.

[8] These estimates are based on the following calculations: (280 hours (year 1) + (3 × 20 hours) (years 1, 2 and 3)) ÷ 3 = 113.3 hours; ($385,190 (year 1) + (3 × $1,940) (years 1, 2 and 3)) ÷ 3 = $130,336.

[9] This estimated burden is based on the estimated wage rate of $584 per hour for outside legal services and the following calculation: $584 × 5 fund complexes = $2,920.

Dated: December 3, 2025.

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–22124 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104286; File No. SR–NYSE–2025–20]

Self-Regulatory Organizations; New York Stock Exchange LLC; Notice of Designation of a Longer Period for Commission Action on Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change Amending Section 302.00 of the NYSE Listed Company Manual To Exempt Closed-End Funds Registered Under the Investment Company Act of 1940 From the Requirement To Hold Annual Shareholder Meetings

December 2, 2025.

On June 6, 2025, the New York Stock Exchange LLC (''NYSE'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Exchange Act'') [1] and Rule 19b–4 thereunder,[2] a proposed rule change to amend Section 302.00 of the NYSE Listed Company Manual (''Manual'') to exempt closed-end funds registered under the Investment Company Act of 1940 (''1940 Act'') [3] from the requirement to hold annual shareholder meetings. The proposed rule change was published for comment in the **Federal Register** on June 17, 2025.[4]

On July 25, 2025, pursuant to Section 19(b)(2) of the Exchange Act,[5] the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change.[6] On September 10, 2025, the Commission instituted proceedings under Section 19(b)(2)(B) of the Act [7] to determine whether to approve or disapprove the proposed rule change.[8]

Section 19(b)(2) of the Act [9] provides that, after instituting proceedings, the Commission shall issue an order approving or disapproving the proposed rule change no later than 180 days after the date of publication of notice of filing of the proposed rule change. The Commission may extend the period for issuing an order approving or disapproving the proposed rule change, however, by not more than 60 days if the Commission determines that a longer period is appropriate and publishes reasons for such determination. The proposed rule was published for comment in the **Federal Register** on June 17, 2025. The 180th day after publication of the proposed rule change is December 14, 2025. The Commission is extending the time period for approving or disapproving the proposed rule change for an additional 60 days.

The Commission finds that it is appropriate to designate a longer period within which to issue an order approving or disapproving the proposed rule change so that it has sufficient time to consider the proposed rule change and the issues raised therein. Accordingly, the Commission, pursuant to Section 19(b)(2) of the Act,[10] designates February 12, 2026, as the date by which the Commission shall either approve or disapprove the proposed rule change (File No. SR–NYSE–2025–20).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[11]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21983 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104289; File No. SR–MRX–2025–30]

Self-Regulatory Organizations; Nasdaq MRX, LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend the MRX Pricing Schedule at Options 7, Section 3

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 20, 2025, Nasdaq MRX, LLC (''MRX'' or ''Exchange'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend the Exchange's Pricing Schedule at Options 7, Section 3, Fees and Rebates for Regular Orders and All Crossing Orders.[3]

This fee change shall be effective on November 13, 2025.

The text of the proposed rule change is available on the Exchange's website at *https://listingcenter.nasdaq.com/rulebook/mrx/rulefilings,* and at the principal office of the Exchange.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

MRX proposes to amend the Exchange's Pricing Schedule at Options 7, Section 3, Fees and Rebates for Regular Orders and All Crossing Orders, to: (1) create a Tier 4 Priority Customer Maker Rebate; and (2)amend note 7 of Options 7, Section 3. Each change is described below.

Today, as set forth in Table 1 of Options 7, Section 3, the Exchange offers 4 tiers of Maker Fees and 4 tiers

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[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 80a–1 *et seq.*

[4] *See* Securities Exchange Act Release No. 103244 (June 12, 2025), 90 FR 25659 (''Notice''). Comments on the proposed rule change are available at: *https://www.sec.gov/comments/sr-nyse-2025-20/srnyse202520.htm.*

[5] 15 U.S.C. 78s(b)(2).

[6] *See* Securities Exchange Act Release No. 103549, 90 FR 35946 (July 30, 2025). The Commission designated September 15, 2025, as the date by which the Commission shall approve or disapprove, or institute proceedings to determine whether to disapprove, the proposed rule change.

[7] 15 U.S.C. 78s(b)(2)(B).

[8] *See* Securities Exchange Act Release No. 103931, 90 FR 44425 (Sept. 15, 2025).

[9] 15 U.S.C. 78s(b)(2).

[10] *Id.*

[11] 17 CFR 200.30–3(a)(57).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] On November 13, 2025, the Exchange filed SR–MRX–2025–28. On November 20, 2025, the Exchange withdrew SR–MRX–2025–28 and filed this proposal.

of Taker Fees/Rebates in Penny [4] and Non-Penny [5] Symbols that are based on Qualifying Tier Thresholds set forth in Table 3 of Options 7, Section 3.[6] With respect to Non-Penny Symbols in Table 1, the Exchange currently assesses Market Makers,[7] Non-Nasdaq MRX Market Makers (FarMM),[8] Firm Proprietary [9]/Broker-Dealers [10] and Professional Customers [11] Tiers 1–4 Maker Fees of $1.25 per contract. Today, Priority Customers [12] are not assessed Non-Penny Symbol Maker Fees. Additionally, today, the Exchange assesses Market Makers, Non-Nasdaq MRX Market Makers (FarMM), Firm Proprietary/Broker-Dealers and Professional Customers Tiers 1–4 Taker Fees of $1.10 per contract. Today, Priority Customers are paid Taker Rebates in Non-Penny Symbols as follows: a Tier 1 Taker Rebate of $0.80 per contract, a Tier 2 Taker Rebate of $0.90 per contract, a Tier 3 Taker Rebate of $1.00 per contract, and a Tier 4 Taker Rebate of $1.10 per contract.

At this time, the Exchange proposes to amend the Tier 4 Priority Customer Non-Penny Symbol Maker Fee of $0.00 per contract to a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate of $1.00 per contract. The Exchange believes that paying a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate of $1.00 per contract will attract Non-Penny Priority Customer order flow to MRX and other market participants will be able to interact with that order flow.

Note 7

Today, at Options 7, Section 3 the Exchange offers a note 7 incentive which provides that Priority Customer orders will not receive any Maker Rebates in Penny Symbols or Taker Rebates in Penny and Non-Penny Symbols for trades executed against another Priority Customer order. Instead, the Priority Customer order will be assessed $0.00 per contract.

The Exchange proposes to amend note 7 to add ''Non-Penny Symbols'' to the current rule text in note 7 so that Priority Customer orders will not receive any Maker Rebates in Penny Symbols and Non-Penny Symbols or Taker Rebates in Penny and Non-Penny Symbols for trades executed against another Priority Customer order. Instead, the Priority Customer order will be assessed $0.00 per contract. Because the Exchange proposes to offer a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate, the Exchange is amending note 7 so as not to pay the new Tier 4 Priority Customer Non-Penny Symbol Maker Rebate where there is a Priority Customer on both sides of the trade. Today, Priority Customers pay no Maker Fees in Non-Penny Symbols. The Exchange believes that despite not paying the Tier 4 Priority Customer Non-Penny Symbol Maker Rebate in the event the contra-side of the trade was another Priority Customer, the proposed amendments will attract a greater amount of Priority Customer Non-Penny Symbol order flow to MRX.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[13] in general, and furthers the objectives of Sections 6(b)(4) and 6(b)(5) of the Act,[14] in particular, in that it provides for the equitable allocation of reasonable dues, fees, and other charges among members and issuers and other persons using any facility, and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

The proposed changes are reasonable in several respects. As a threshold matter, the Exchange is subject to significant competitive forces in the market for options securities transaction services that constrain its pricing determinations in that market. The fact that this market is competitive has long been recognized by the courts. In *NetCoalition* v. *Securities and Exchange Commission,* the D.C. Circuit stated as follows: ''[n]o one disputes that competition for order flow is 'fierce.' . . . As the SEC explained, '[i]n the U.S. national market system, buyers and sellers of securities, and the broker-dealers that act as their order-routing agents, have a wide range of choices of where to route orders for execution'; [and] 'no exchange can afford to take its market share percentages for granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the execution of order flow from broker dealers'. . . .'' [15]

The Commission and the courts have repeatedly expressed their preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. In Regulation NMS, while adopting a series of steps to improve the current market model, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [16]

Numerous indicia demonstrate the competitive nature of this market. For example, clear substitutes to the Exchange exist in the market for options security transaction services. The Exchange is only one of eighteen options exchanges to which market participants may direct their order flow. Within this environment, market participants can freely and often do shift their order flow among the Exchange and competing venues in response to changes in their respective pricing schedules. As such, the proposal represents a reasonable attempt by the Exchange to increase its liquidity.

The Exchange's proposal to amend the Tier 4 Priority Customer Non-Penny Symbol Maker Fee of $0.00 per contract to a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate of $1.00 per

[4] ''Penny Symbols'' are options overlying all symbols listed on Nasdaq MRX that are in the Penny Interval Program. *See* Options 7, Section 1(c).

[5] ''Non-Penny Symbols'' are options overlying all symbols excluding Penny Symbols. *See* Options 7, Section 1(c).

[6] The tiered volume requirements are based on Total Customer ADV. Total Customer ADV is Priority Customer Total Consolidated Volume divided by Customer Total Consolidated Volume, including volume executed by Affiliated Members or Affiliated Entities. Priority Customer Total Consolidated Volume is a Member's total Priority Customer volume executed on MRX in that month, including volume executed by Affiliated Members or Affiliated Entities. All eligible volume from Affiliated Members or an Affiliated Entity is aggregated in determining applicable tiers. The highest tier threshold attained applies retroactively in a given month to all eligible traded contracts and applies to all eligible market participants.

[7] The term ''Market Makers'' refers to ''Competitive Market Makers'' and ''Primary Market Makers'' collectively. *See* Options 1, Section 1(a)(22).

[8] A ''Non-Nasdaq MRX Market Maker'' is a market maker as defined in Section 3(a)(38) of the Securities Exchange Act of 1934, as amended, registered in the same options class on another options exchange. *See* Options 1, Section 1(a)(22).

[9] A ''Firm Proprietary'' order is an order submitted by a Member for its own proprietary account. *See* Options 1, Section 1(a)(22).

[10] A ''Broker-Dealer'' order is an order submitted by a Member for a broker-dealer account that is not its own proprietary account. *See* Options 1, Section 1(a)(22).

[11] A ''Professional Customer'' is a person or entity that is not a broker/dealer and is not a Priority Customer. *See* Options 1, Section 1(a)(22).

[12] The term ''Priority Customer'' means a person or entity that (i) is not a broker or dealer in securities, and (ii) does not place more than 390 orders in listed options per day on average during a calendar month for its own beneficial account(s). *See* Options 1, Section 1(a)(22).

[13] 15 U.S.C. 78f(b).

[14] 15 U.S.C. 78f(b)(4) and (5).

[15] *NetCoalition* v. *SEC,* 615 F.3d 525, 539 (D.C. Cir. 2010) (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782–83 (December 9, 2008) (SR–NYSEArca–2006–21)).

[16] Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (''Regulation NMS Adopting Release'').

contract is reasonable because this new Maker Rebate will attract Non-Penny Symbol Priority Customer order flow to MRX. Other market participants will be able to interact with that order flow. Priority Customers will continue to receive more favorable pricing as compared to other market participants in Non-Penny Symbols.

The Exchange's proposal to amend the Tier 4 Priority Customer Non-Penny Symbol Maker Fee of $0.00 per contract to a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate of $1.00 per contract is equitable and not unfairly discriminatory as Priority Customer liquidity benefits all market participants. An increase in Priority Customer order flow enhances liquidity on the Exchange to the benefit of all market participants by providing more trading opportunities, which in turn attracts Market Makers and other market participants that may interact with this order flow.

The Exchange's proposal to amend note 7 of Options 7, Section 3 so that Priority Customer orders will not receive any Maker Rebates in Penny Symbols and Non-Penny Symbols or Taker Rebates in Penny and Non-Penny Symbols for trades executed against another Priority Customer order is reasonable because Priority Customers pay no Maker Fees in either Penny or Non-Penny Symbols. The Exchange believes that despite not paying a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate in the event the contra-side of the trade was another Priority Customer, the proposed amendments will attract a greater amount of Priority Customer Non-Penny Symbol order flow to MRX. Priority Customers will continue to receive more favorable pricing as compared to other market participants in Penny and Non-Penny Symbols.

The Exchange's proposal to amend note 7 of Options 7, Section 3 so that Priority Customer orders will not receive any Maker Rebates in Penny Symbols and Non-Penny Symbols or Taker Rebates in Penny and Non-Penny Symbols for trades executed against another Priority Customer order is equitable and not unfairly discriminatory because it will apply uniformly to all Priority Customers. The Exchange does not believe it is unfairly discriminatory to apply the proposed changes to only Priority Customers because Priority Customers will continue to receive more favorable pricing in both Penny and Non-Penny Symbols as compared to Non-Customers.[17] Furthermore, Priority Customer order flow enhances liquidity on the Exchange for the benefit of all market participants by providing more trading opportunities, which in turn attracts Market Makers and other market participants that may trade with this order flow.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

Intermarket Competition

The Exchange believes its proposal remains competitive with other options markets, and will offer market participants with another choice of venue to transact options. The Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues if they deem fee levels at a particular venue to be excessive, or rebate opportunities available at other venues to be more favorable. Because competitors are free to modify their own fees in response, and because market participants may readily adjust their order routing practices, the Exchange believes that the degree to which fee changes in this market may impose any burden on competition is extremely limited.

Intramarket Competition

The Exchange's proposal to amend the Tier 4 Priority Customer Non-Penny Symbol Maker Fee of $0.00 per contract to a Tier 4 Priority Customer Non-Penny Symbol Maker Rebate of $1.00 per contract does not impose an undue burden on competition as Priority Customer liquidity benefits all market participants. An increase in Priority Customer order flow enhances liquidity on the Exchange to the benefit of all market participants by providing more trading opportunities, which in turn attracts Market Makers and other market participants that may interact with this order flow.

The Exchange's proposal to amend note 7 of Options 7, Section 3 so that Priority Customer orders will not receive any Maker Rebates in Penny Symbols and Non-Penny Symbols or Taker Rebates in Penny and Non-Penny Symbols for trades executed against another Priority Customer order does not impose an undue burden on competition because it will apply uniformly to all Priority Customers. Priority Customers will continue to receive more favorable pricing in Penny and Non-Penny Symbols compared to Non-Priority Customers. Furthermore, Priority Customer order flow enhances liquidity on the Exchange for the benefit of all market participants by providing more trading opportunities, which in turn attracts Market Makers and other market participants that may trade with this order flow.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act.[18] At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is: (i) necessary or appropriate in the public interest; (ii) for the protection of investors; or (iii) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–MRX–2025–30 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–MRX–2025–30. This file number should be included on the subject line if email is used. To help the

[17] The term ''Non-Customer'' means a person or entity that is a broker or dealer in securities. *See* Options 1, Section 1(a)(22).

[18] 15 U.S.C. 78s(b)(3)(A)(ii).

Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–MRX–2025–30 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[19]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21985 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104288; File No. SR–BOX–2025–31]

Self-Regulatory Organizations; BOX Exchange LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend BOX Rule 5030 (Withdrawal of Approval of Underlying Securities) To Adopt an Exception for Opening Transactions by Market Makers To Accommodate Closing Transactions of Other Market Participants

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 20, 2025, BOX Exchange LLC (the ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend BOX Rule 5030 (Withdrawal of Approval of Underlying Securities) to adopt an exception for opening transactions by Market Makers to accommodate closing transactions of other market participants. The text of the proposed rule change is available from the principal office of the Exchange, and also on the Exchange's internet website at *https://rules.boxexchange.com/rulefilings.*

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend BOX Rule 5030 (Withdrawal of Approval of Underlying Securities) to adopt an exception for opening transactions by Market Makers to accommodate closing transactions of other market participants. The Exchange believes that this proposed exception, to allow Market Makers to facilitate closing transactions of market participants, would help market participants close positions in classes that will be delisted by the Exchange, which helps to protect investors and the public interest. The Exchange believes that permitting such opening transactions by Market Makers would enhance investor protection and further maintain fair and orderly markets. The Exchange notes that the proposed exception in Rule 5030 is consistent with the listing rules of other options exchanges.[3]

Background

Generally, Rule 5030 is designed to protect investors and maintain orderly markets by establishing criteria for when an underlying security no longer meets the Exchange's listing standards. Rule 5030 provides a mechanism to withdraw approval for securities that no longer meet the Exchange's listing standards, while allowing for limited exceptions to maintain liquidity.

Currently, whenever the Exchange determines that an underlying security previously approved for BOX Transactions[4] does not meet the then current requirements for continuance of such approval or for any other reason should no longer be approved, the Exchange will not open for trading any additional series of options of the class covering that underlying security and may prohibit any opening purchase transactions in series of options of that class previously opened. Provided, however, that where exceptional circumstances have caused an underlying security not to comply with the Exchange's current approval maintenance requirements regarding number of publicly held shares, number of shareholders, trading volume or market price, the Exchange may, in the interest of maintaining a fair and orderly market or for the protection of investors, determine to continue to open additional series of options contracts of the class covering that underlying security.

Proposal

The Exchange is now proposing to amend Rule 5030 to adopt an exception for certain opening transactions by Market Makers. Specifically, the Exchange is proposing to add language providing that opening transactions by Market Makers executed to accommodate closing transactions of other market participants may be permitted. Under proposed Rule 5030, a Participant that is acting as a Market Maker may enter into an opening transaction in order to facilitate closing transactions of another market participant in option series that are restricted to closing-only transactions. Allowing Market Makers to enter into opening transactions to facilitate closing transactions of other market participants will help market participants close positions in classes that will be delisted by the Exchange, which helps to protect

[19] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78a.

[2] 17 CFR 240.19b–4.

[3] *See* Cboe Exchange, Inc.(''Cboe'') Rule 4.4. (Withdrawal of Approval of Underlying Securities); Miami International Securities Exchange, LLC (''MIAX'') Rule 403 (Withdrawal of Approval of Underlying Securities); MIAX PEARL, LLC (''PEARL'') Rule 403 (Withdrawal of Approval of Underlying Securities); MIAX Sapphire, LLC (''Sapphire'') Rule 403 (Withdrawal of Approval of Underlying Securities); and Nasdaq ISE, LLC (''ISE'') Options 4, Section 4 (Withdrawal of Approval of Underlying Securities). *See also* Securities Exchange Act Release Nos. 48142 (July 9, 2003), 68 FR 42150 (July 16, 2003) (SR–CBOE–2002–36); and 60879 (October 26, 2009), 74 FR 56252 (October 30, 2009) (SR–PHLX–2009–90); and 62216 (June 3, 2010), 75 FR 32977 (June 10, 2010) (SR–ISE–2010–51).

[4] *See* BOX Rule 100(a)(8). The term ''BOX Transaction'' means a transaction involving an options contract that is effected on or through BOX or its facilities or systems.

investors and the public interest. The Exchange believes that permitting such opening transactions by Market Makers is consistent with and further supports a Market Maker's duty to maintain fair and orderly markets under Rule 8040. The Exchange also notes, that pursuant to Rule 5030, where exceptional circumstances have caused an underlying security not to comply with the Exchange's current approval maintenance requirements, regarding number of publicly held shares or publicly held principal amount, number of shareholders, trading volume or market price, the Exchange, in the interest of maintaining a fair and orderly market or for the protection of investors, may determine to continue to open additional series of option contracts of the class covering that underlying security.[5]

2. Statutory Basis

The Exchange believes that the proposal is consistent with the requirements of Section 6(b) of the Securities Exchange Act of 1934 (the ''Act''),[6] in general, and Section 6(b)(5) of the Act,[7] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest.

In particular, the Exchange believes that the proposal to adopt an exception for opening transactions by Market Makers to accommodate closing transactions of other market participants will remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, protect investors because the proposal to permit Market Makers to enter into opening transactions to facilitate closing transactions of other market participants will help market participants close positions in classes that will be delisted by the Exchange, which helps to protect investors and the public interest. The Exchange believes that permitting such opening transactions by Market Makers further supports fair and orderly markets. Currently, in Rule 5030, whenever the Exchange determines that an underlying security previously approved for BOX Transactions does not meet the then current requirements for continuance of such approval or for any other reason should no longer be approved, the Exchange will not open for trading any additional series of options of the class covering that underlying security and may prohibit any opening purchase transactions in series of options of that class previously opened. Current Rule 5030, also provides, however, that, in certain exceptional circumstances, the Exchange may, in the interest of maintaining a fair and orderly market or for the protection of investors, determine to continue to open additional series of options contracts of the class covering that underlying security. The Exchange believes that the exception proposed herein is consistent with the Act and protects investors and the public interest because permitting Market Makers to submit certain opening transactions will help market participants close positions in classes that will be delisted by the Exchange. The Exchange believes further that permitting such opening transactions by Market Makers is in the interest of all market participants and is consistent with and further supports a Market Maker's duty to maintain fair and orderly markets under Rule 8040. The Exchange does not believe that the proposed rule change will adversely affect the quality of the Exchange's markets or lead to a material decrease in liquidity.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. In this regard and as indicated above, this proposed change is to conform Rule 5030 to similar provisions in listing rules of other options exchanges.[8]

The Exchange does not believe that the proposed rule change will impose any burden on intramarket competition as the proposed changes to Rule 5030 will apply equally to all Market Makers. Allowing Market Makers to enter into opening transactions to facilitate closing transactions of other market participants will help close positions in classes that will be delisted by the Exchange, which helps to protect investors and the public interest and does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange also does not believe that the proposed rule change will impose any burden on intermarket competition that is not necessary or appropriate in furtherance of the purposes of the Act, as, the proposed rule change is consistent with the existing rules of other options exchanges.[9]

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The Exchange has filed the proposed rule change pursuant to Section 19(b)(3)(A)(iii) of the Act[10] and Rule 19b-4(f)(6) thereunder.[11] Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii)impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[12] and subparagraph (f)(6) of Rule 19b–4 thereunder.[13]

A proposed rule change filed under Rule 19b–4(f)(6)[14] under the Act does not normally become operative prior to 30 days after the date of the filing. However, pursuant to Rule 19b–4(f)(6)(iii),[15] the Commission may designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has requested that the Commission waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Exchange states that waiver of the operative delay is consistent with the protection of investors and the public

[5] *See* Rule 5030.

[6] 15 U.S.C. 78f(b).

[7] 15 U.S.C. 78f(b)(5).

[8] *See* Cboe Rule 4.4. (Withdrawal of Approval of Underlying Securities); MIAX Rule 403 (Withdrawal of Approval of Underlying Securities); PEARL Rule 403 (Withdrawal of Approval of Underlying Securities); Sapphire Rule 403 (Withdrawal of Approval of Underlying Securities); ISE Options 4, Section 4 (Withdrawal of Approval of Underlying Securities).

[9] *Id.*

[10] 15 U.S.C. 78s(b)(3)(A)(iii).

[11] 17 CFR 240.19b–4(f)(6).

[12] 15 U.S.C. 78s(b)(3)(A).

[13] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied the pre-filing requirement.

[14] 17 CFR 240.19b–4(f)(6).

[15] 17 CFR 240.19b–4(f)(6)(iii).

interest because it will allow the exception to permit Market Makers to facilitate closing transaction of other market participants in classes that will be delisted by the Exchange to be implemented without delay. The Exchange further notes that the proposed change is consistent with the rules of other options exchanges.[16] The Commission does not believe the proposal raises any new or novel regulatory issues. Therefore, the Commission believes that waiver of the 30-day operative delay is consistent with the protection of investors and the public interest. Accordingly, the Commission hereby waives the 30-day operative delay and designates the proposed rule change as operative upon filing.[17]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–BOX–2025–31 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–BOX–2025–31. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–BOX–2025–31 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21984 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

[16] *See supra* note 8.

[17] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[18] 17 CFR 200.30–3(a)(12), (59).

SECURITIES AND EXCHANGE COMMISSION

[OMB Control No. 3235–0767]

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Extension: Rule 204–5

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (the ''Commission'') has submitted to the Office of Management and Budget a request for extension of the previously approved collection of information discussed below.

The title for the collection of information is: ''Rule 204–5 under the Investment Advisers Act of 1940.'' Rule 204–5 requires an investment adviser to deliver an electronic or paper version of the relationship summary to each retail investor before or at the time the adviser enters into an investment advisory contract with the retail investor. The purpose of the relationship summary is to assist retail investors in making an informed choice when choosing an investment firm and professional, and type of account. Retail investors can use the information required in the relationship summary to determine whether to hire or retain an investment adviser, as well as what types of accounts and services are appropriate for their needs.

We estimate the total collection of information burden for rule 204–5 to be 1,241,670 annual aggregate hours per year, or 124 hours per respondent, for a total annual aggregate monetized cost of $95,678,622, or $9,520 per adviser.

The likely respondents to this information collection are approximately 10,050 investment advisers registered with the Commission that are required to deliver a relationship summary to retail investors pursuant to rule 204–5. We also note that these figures include the 291 registered broker-dealers that are dually registered as investment advisers.

The requirements of this collection of information are mandatory. Responses will not be kept confidential. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB Control Number.

The public may view and comment on this information collection request at: *https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=202509-3235-011* or email comment to *MBX.OMB.OIRA.SEC_desk_officer@omb.eop.gov* within 30 days of the day after publication of this notice, by January 5, 2026.

Dated: December 2, 2025.

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21976 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104282; File No. SR–BX–2025–028]

Self-Regulatory Organizations; Nasdaq BX, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Proposal To Delay Introduction of BX OTTO

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 19, 2025, Nasdaq BX, Inc. (''BX'' or ''Exchange'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to delay the implementation of SR–BX–2024–048 [3] related to ''Ouch to Trade Options'' or ''OTTO.''

The text of the proposed rule change is available on the Exchange's website at *https://listingcenter.nasdaq.com/rulebook/bx/rulefilings,* and at the principal office of the Exchange.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to delay the implementation of SR–BX–2024–048 related to the adoption of an OTTO Protocol.

Background

The OTTO protocol is a proprietary protocol of Nasdaq, Inc. OTTO would allow Participants and their Sponsored Customers [4] to connect, send, and receive messages related to orders, auction orders, and auction responses to the Exchange. OTTO features would include the following: (1) options symbol directory messages (*e.g.,* underlying and complex instruments); (2) System [5] event messages (*e.g.,* start of trading hours messages and start of opening); (3) trading action messages (*e.g.,* halts and resumes); (4) execution messages; (5) order messages; (6) risk protection triggers and cancel notifications; (7) auction notifications; (8) auction responses; and (9) post trade allocation messages. The Exchange notes that unlike FIX, which offers routing capability, OTTO does not permit routing.

Delay of Implementation

In connection with adopting the OTTO protocol, SR–BX–2024–048 adopted certain rules which are effective, but not operative.[6] The Exchange noted in SR–BX–2024–048 that it would implement the proposed rules on or before December 20, 2025 and announce the operative date to Participants in an Options Trader Alert.[7]

At this time, the Exchange proposes to delay the implementation of SR–BX–2024–048 to a date on or before Q2 2027. This delay would allow the Exchange additional time to code and test the OTTO functionality in light of other technology migrations that are currently underway on other Nasdaq affiliated markets. The Exchange would issue an Options Trader Alert announcing the exact implementation date to Participants at least thirty days prior to implementation.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[8] in general, and furthers the objectives of Section 6(b)(5) of the Act,[9] in particular, in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest.

The Exchange's proposal to delay the implementation of SR–BX–2024–048 to a date on or before Q2 2027 is consistent with the Act because it would allow the Exchange additional time to code and test the OTTO functionality in light of other technology migrations that are currently underway on other Nasdaq affiliated markets. The Exchange would issue an Options Trader Alert announcing the exact implementation date to Participants at least thirty days prior to implementation.

B. Self-Regulatory Organization's Statement on Burden on Competition

The proposed rule change does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

Delay of Implementation

The Exchange's proposal to delay the implementation of SR–BX–2024–048 to a date on or before Q2 2027 does not impose an undue burden on competition because it will allow BX additional time to code and test the functionality. The new OTTO protocol will not be available to any BX Participant until implementation.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A)(iii) of the Act [10] and subparagraph (f)(6) of Rule 19b–4 thereunder.[11]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings

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[3] *See* Securities Exchange Act Release No. 101743 (November 25, 2024), 89 FR 95321 (December 2, 2024) (SR–BX–2024–048) (Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Adopt an OTTO Protocol).

[4] General 2, Section 22 describes Sponsored Access arrangements.

[5] The term ''System'' or ''Trading System'' means the automated system for order execution and trade reporting owned and operated by BX as the BX Options market. The BX Options market comprises: (A) an order execution service that enables Participants to automatically execute transactions in option series; and provides Participants with sufficient monitoring and updating capability to participate in an automated execution environment; (B) a trade reporting service that submits ''locked-in'' trades for clearing to a registered clearing agency for clearance and settlement; transmits last-sale reports of transactions automatically to the Options Price Reporting Authority for dissemination to the public and industry; and provides participants with monitoring and risk management capabilities to facilitate participation in a ''locked-in'' trading environment; and (C) the data feeds described in Options 3, Section 23. *See* BX Options 1, Section 1(a)(59).

[6] *See supra* note 3.

[7] *See id.*

[8] 15 U.S.C. 78f(b).

[9] 15 U.S.C. 78f(b)(5).

[10] 15 U.S.C. 78s(b)(3)(A)(iii).

[11] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–BX–2025–028 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–BX–2025–028. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–BX–2025–028 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[12]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21979 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

[12] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104291; File No. SR–BX–2025–029]

Self-Regulatory Organizations; Nasdaq BX, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend BX Equity 4, Rule 4702(b)(4)(C) To Specify That the "Time-in-Force" Order Attribute of "Immediate-or-Cancel" Is Not Available to Post-Only Orders Entered Through the CORE FIX protocol

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 24, 2025, Nasdaq BX, Inc. (''BX'' or ''Exchange'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend BX Equity 4, Rule 4702(b)(4)(C) to specify that the ''Time-in-Force'' Order Attribute of ''Immediate-or-Cancel'' is not available to Post-Only Orders entered through the CORE FIX protocol. The proposed amendment will not make any other substantive change to the rules.

The text of the proposed rule change is available on the Exchange's website at *https://listingcenter.nasdaq.com/rulebook/bx/rulefilings,* and at the principal office of the Exchange.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange's rules provide Participants five Order [3] entry protocols: OUCH,[4] RASH,[5] FIX,[6] FLITE,[7] and CORE FIX.[8] Due to differences in the technical designs and capabilities of these protocols, they offer market participants different functionalities and experiences with respect to order handling. That is, order handling behaviors on the Exchange vary, in certain circumstances, depending upon the particular protocol that a Participant chooses to utilize to enter its Orders in

[3] The term ''Order'' means an instruction to trade a specified number of shares in a specified NMS stock submitted to the BX Equities Market by a customer. *See* BX Equity 1, Section 1(a)(11).

[4] The OUCH Order entry protocol is a proprietary protocol that allows subscribers to quickly enter orders into the System and receive executions. OUCH accepts limit Orders from members, and if there are matching Orders, they will execute. Non-matching Orders are added to the Limit Order Book, a database of available limit Orders, where they are matched in price-time priority. OUCH only provides a method for members to send Orders and receive status updates on those Orders. *See https://www.nasdaqtrader.com/Trader.aspx?id=OUCH.*

[5] RASH (Routing and Special Handling) is a proprietary protocol that allows participants to enter Orders, cancel existing Orders and receive executions while providing smart order routing and special handling features. RASH also allows participants to use advanced functionality, including discretion, random reserve, pegging and routing. *See https://www.nasdaqtrader.com/Trader.aspx?id=RASH.*

[6] FIX is a vendor-neutral standard message protocol that defines an electronic message exchange for communicating securities transactions between two parties. The Exchange's FIX implementation acts like a router, converting incoming FIX messages into OUCH messages and back again. *See https://www.nasdaqtrader.com/Trader.aspx?id=FIX* and *https://www.nasdaqtrader.com/content/ProductsServices/Trading/Protocols_quickref.pdf.*

[7] FIX Lite or ''FLITE'' is an Order entry protocol based on a subset of FIX. *See https://www.nasdaqtrader.com/Trader.aspx?id=FLITE* and *https://www.nasdaqtrader.com/content/ProductsServices/Trading/Protocols_quickref.pdf.*

[8] CORE FIX is a proprietary order entry protocol that will allow participants to code for FIX, while enjoying the faster direct access to the Exchange that is offered by OUCH. The CORE FIX order entry protocol became effective on BX on September 5, 2025, but it has not yet become operative on the Exchange. *See https://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2025-57 and* Securities Exchange Act Release No. 103891 (Sept. 5, 2025), 90 FR 43705 (Sept. 10, 2025) (File No. SR–BX–2025–017) (Self-Regulatory Organizations; Nasdaq BX, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Add the CORE FIX Order Entry Protocol and To Amend Nasdaq BX Equity 4, Rules 4120, 4702, 4703, and 4757).

connection with particular Order Types [9] and Order Attributes.[10]

Currently, BX Equity 4, Rule 4702(b)(4)(C) specifies that a Post-Only Order with a Time-in-Force of Immediate-or-Cancel (''IOC'') [11] may not be entered through RASH or FIX. The Exchange proposes to amend this rule to specify that this provision also applies to orders entered through the CORE FIX protocol. In other words, a Post-Only Order with a Time-in-Force of IOC may not be entered through RASH, FIX, or CORE FIX.

The Exchange will announce the implementation date of the new CORE FIX Order Entry Protocol, including the functionality described in this filing, in an Equity Trader Alert at least 30 days prior to implementation. At present, the Exchange expects that the new CORE FIX functionality will be ready for implementation in the first quarter of 2026, although that time frame is subject to change.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[12] in general, and furthers the objectives of Section 6(b)(5) of the Act,[13] in particular, in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest.

As a preliminary matter, the Exchange notes that this proposal is not novel. Earlier this year The Nasdaq Stock Market LLC made a similar change to its rulebook when it established CORE FIX on its equities market.[14] The CORE FIX functionality under Nasdaq Equity 4, Rule 4702(b)(4)(C) [15] is substantially similar to the CORE FIX functionality proposed by BX in the present filing.

It is consistent with the Act to amend the rulebook to specify the functionality of the new CORE FIX order entry protocol. All that the current filing does is specify that Post-Only Orders with a Time-in-Force of IOC that are submitted through CORE FIX will be rejected, just as they are rejected when entered through RASH or FIX. Participants who wish to avail themselves of the Time-in-Force of IOC for Post-Only Orders may continue to do so by utilizing other order entry protocols for that purpose.

Finally, this proposal is consistent with the Act and is designed to promote just and equitable principles of trade because it ensures that the rulebook accurately reflects the functionality of the of Time-in-Force Order Attribute of IOC for Post-Only Orders. Specifying in the rulebook that this Order Attribute is not available for Post-Only Orders entered through CORE FIX will help market participants choose the most appropriate order entry protocol to achieve their trading objectives.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. As a general principle, the proposed changes are reflective of the significant competition among exchanges and non-exchange venues for order flow. In this regard, a proposed change that amends and clarifies the Exchange's Rules regarding its Order Types and Order Attributes is pro-competitive because it bolsters the efficiency, functionality, and overall attractiveness of the Exchange in an absolute sense and relative to its peers. Moreover, the proposed change will not unduly burden intra-market competition among various Exchange participants. Participants will experience no competitive impact from this proposal, as the change in this proposal will apply equally to all Participants, and Participants remain free to use other order entry protocols if they wish to continue to avail themselves of the Time-in-Force of IOC for Post-Only Orders.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A)(iii) of the Act [16] and subparagraph (f)(6) of Rule 19b–4 thereunder.[17]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–BX–2025–029 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–BX–2025–029. This file

[9] An ''Order Type'' is a standardized set of instructions associated with an Order that define how it will behave with respect to pricing, execution, and/or posting to the Exchange Book when submitted to the System. *See* BX Equity 1, Section 1(a)(11). The ''System,'' which is another term for the Nasdaq BX Equities Market, is the automated system for order execution and trade reporting owned and operated by the Exchange. *See* Nasdaq BX Equity 1, Section 1(a)(6).

[10] An ''Order Attribute'' is a further set of variable instructions that may be associated with an Order to further define how it will behave with respect to pricing, execution, and/or posting to the Exchange Book when submitted to the System. *See* BX Equity 1, Section 1(a)(11).

[11] An order with an IOC Order Attribute is to be executed in whole or in part upon receipt. Any portion not so executed is cancelled.

[12] 15 U.S.C. 78f(b).

[13] 15 U.S.C. 78f(b)(5).

[14] *See* Securities Exchange Act Release No. 102661 (Mar. 13, 2025), 90 FR 12858 (Mar. 19, 2025) (File No. SR–NASDAQ–2025–027) (Self-Regulatory Organizations; The Nasdaq Stock Market LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend Equity 4, Rules 4120, 4702 4703, and 4757) (''Nasdaq Filing'').

[15] As amended in the Nasdaq Filing, this Nasdaq rule reads as follows: ''The following Order Attributes may be assigned to a Post-Only Order . . . Time-in-Force; provided, however, that a Post-Only Order with a Time-in-Force of IOC may not be entered through CORE FIX, RASH, QIX, or FIX.''

[16] 15 U.S.C. 78s(b)(3)(A)(iii).

[17] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–BX–2025–029 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21987 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104285; File No. SR–CboeBZX–2025–072]

Self-Regulatory Organizations; Cboe BZX Exchange, Inc.; Notice of Designation of a Longer Period for Commission Action on Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change To Exempt Closed-End Management Investment Companies Registered Under the Investment Company Act of 1940 That Are Listed as of or After May 20, 2025 From the Annual Meeting of Shareholders Requirement Set Forth in Exchange Rule 14.10(f)

December 2, 2025.

On May 20, 2025, Cboe BZX Exchange, Inc. (''BZX'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Exchange Act'')[1] and Rule 19b–4 thereunder,[2] a proposed rule change to exempt closed-end management investment companies registered under the Investment Company Act of 1940 (''1940 Act'')[3] that are listed as of or after May 20, 2025 from the annual meeting of shareholders requirement set forth in Exchange Rule 14.10(f). The proposed rule change was published for comment in the **Federal Register** on June 6, 2025.[4]

On July 14, 2025, pursuant to Section 19(b)(2) of the Exchange Act,[5] the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change.[6] On September 2, 2025, the Commission instituted proceedings under Section 19(b)(2)(B) of the Act[7] to determine whether to approve or disapprove the proposed rule change.[8]

Section 19(b)(2) of the Act[9] provides that, after instituting proceedings, the Commission shall issue an order approving or disapproving the proposed rule change no later than 180 days after the date of publication of notice of filing of the proposed rule change. The Commission may extend the period for issuing an order approving or disapproving the proposed rule change, however, by not more than 60 days if the Commission determines that a longer period is appropriate and publishes reasons for such determination. The proposed rule was published for comment in the **Federal Register** on June 6, 2025. The 180th day after publication of the proposed rule change is December 3, 2025. The Commission is extending the time period for approving or disapproving the proposed rule change for an additional 60 days.

The Commission finds that it is appropriate to designate a longer period within which to issue an order approving or disapproving the proposed rule change so that it has sufficient time to consider the proposed rule change and the issues raised therein. Accordingly, the Commission, pursuant to Section 19(b)(2) of the Act,[10] designates February 1, 2026, as the date by which the Commission shall either approve or disapprove the proposed rule change (File No. SR–CboeBZX–2025–072).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[11]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21982 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104293; File No. SR–NASDAQ–2025–095]

Self-Regulatory Organizations; The Nasdaq Stock Market LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Modify the Fee for Nasdaq WorkX

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 26, 2025, The Nasdaq Stock Market LLC (''Nasdaq'' or ''Exchange'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes amend the Exchange's fee at Equity 7, Section 115 to: (i) raise the fee for Nasdaq WorkX (''WorkX''); and (ii) clarify that this fee is calculated per user, per MPID,[3] per month, as described further below.[4]

While these amendments are effective upon filing, the Exchange has designated the proposed amendments to be operative on December 1, 2025.

The text of the proposed rule change is available on the Exchange's website at *https://listingcenter.nasdaq.com/rulebook/nasdaq/rulefilings,* and at the principal office of the Exchange.

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[18] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 80a–1 *et seq.*

[4] *See* Securities Exchange Act Release No. 103166 (June 2, 2025), 90 FR 24172 (''Notice''). Comments on the proposed rule change are available at: *https://www.sec.gov/comments/sr-cboebzx-2025-072/srcboebzx2025072.htm.*

[5] 15 U.S.C. 78s(b)(2).

[6] *See* Securities Exchange Act Release No. 103452, 90 FR 33449 (July 17, 2025). The Commission designated September 4, 2025, as the date by which the Commission shall approve or disapprove, or institute proceedings to determine whether to disapprove, the proposed rule change.

[7] 15 U.S.C. 78s(b)(2)(B).

[8] *See* Securities Exchange Act Release No. 103824, 90 FR 42991 (Sept. 5, 2025).

[9] 15 U.S.C. 78s(b)(2).

[10] *Id.*

[11] 17 CFR 200.30–3(a)(57).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] MPID stands for ''market participant identifier,'' which is a unique four-letter mnemonic assigned to each participant in the Exchange. A participant may have one or more than one MPID. Equity 1, Section 1(a)(11).

[4] On November 19, 2025, the Exchange filed SR–NASDAQ–2025–090. On November 24, 2025, the Exchange withdrew SR–NASDAQ–2025–090 and filed SR–NASDAQ–2025–092. On November 26, 2025, the Exchange withdrew SR–NASDAQ–2025–092 and filed this proposal.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of the proposed rule change is to amend the Exchange's pricing schedule at Equity 7, Section 115, to increase the fee for WorkX and to clarify that the fee is charged on a per user,[5] per MPID, per month basis.[6] The current fee is $625 per user, per MPID, per month, while the new fee will be $725 per user, per MPID, per month.

WorkX is a web-based application that facilitates trade reporting, compliance monitoring, and workflow on the FINRA/Nasdaq TRF,[7] as well as both pre-trade and post-trade risk management on the Nasdaq equity exchanges and on the FINRA/Nasdaq TRF.[8] A subscription to WorkX is not required to report transactions to the FINRA/Nasdaq TRF, nor is it required to trade on the Nasdaq equity exchanges.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[9] in general, and furthers the objectives of Sections 6(b)(4) and 6(b)(5) of the Act,[10] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among members and issuers and other persons using any facility, and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

The Exchange's proposed change to its fee for WorkX is reasonable in several respects. As a threshold matter, the Exchange is subject to significant competitive forces in the market for trade compliance products, which constrain the Exchange's pricing determinations in that market. The Commission and the courts have repeatedly expressed their preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. In Regulation NMS, while adopting a series of steps to improve the current market model, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [11]

Currently, WorkX subscribers are assessed a fee of $625 per user, per MPID, per month; under the proposal, the fee will be $725 per user, per MPID, per month. The Exchange believes that the new fee for WorkX, including the clarification that the fee is also assessed per MPID, is an equitable allocation and is not unfairly discriminatory because the Exchange will apply the same fee to all similarly situated WorkX subscribers.

Furthermore, the increase in the fee for WorkX is reasonable because this fee has not changed since February 2022,[12] while Nasdaq has continued to improve the product. In the ensuing 3.5 years, Nasdaq has invested in enhancing the WorkX functionality and its user interface, often in response to requests from the users. Additionally, since the fee was last raised in 2022, Nasdaq has invested in enhancements to WorkX in response to mandatory regulatory changes, such as supporting FINRA's upcoming requirement to report equity transactions in fractional shares [13] and the SEC's requirement to shorten the securities transaction settlement cycle to T+1.[14]

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The new fee, and the clarification that the fee is calculated on a per user, per MPID, per month basis, will apply to all subscribers equally. The higher fee is necessary for the Exchange to support its continued investment in improving the WorkX product and in keeping it up to date with the latest FINRA and SEC regulatory requirements. The Exchange notes that the use of WorkX is voluntary. The Exchange operates in a highly competitive market in which market participants can readily favor competing providers of third-party products if they deem Nasdaq's products to be insufficient, or if they find products available from other vendors to be more favorable.[15] The proposed fee for WorkX is reflective of this competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act.[16]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is: (i) necessary or appropriate in the public interest; (ii) for the protection of investors; or (iii) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings

[5] Equity 7, Section 115 refers to the WorkX fee being assessed on a ''logon/month'' basis. ''Logon'' is shorthand for ''username/password logon'' and it is used in Equity 7 as a substitute for the term ''user.'' *See, e.g.,* Equity 7, Section 139(b)(1) (establishing that a distributor of certain Nasdaq products may select a ''per user'' model when it restricts and tracks access to the product using a ''username/password logon or comparable method of regulating access'').

[6] Nasdaq has always charged this fee on a per user, per MPID, per month basis.

[7] FINRA/Nasdaq Trade Reporting Facility Carteret and FINRA/Nasdaq Trade Reporting Facility Chicago (collectively, the ''FINRA/Nasdaq TRF'') is a facility of the Financial Industry Regulatory Authority (''FINRA'') that is operated by Nasdaq, Inc. *See https://www.nasdaqtrader.com/trader.aspx?id=act.*

[8] *See https://www.nasdaq.com/solutions/workx.*

[9] 15 U.S.C. 78f(b).

[10] 15 U.S.C. 78f(b)(4) and (5).

[11] Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (Regulation NMS Adopting Release).

[12] *See* Securities Exchange Act Release No. 94226 (Feb. 11, 2022), 87 FR 9096 (Feb. 17, 2022) (File No. SR–NASDAQ–2022–012).

[13] *See https://www.finra.org/filing-reporting/technical-notices/update-fractional-shares-reporting-20250328.*

[14] *See https://www.sec.gov/investment/settlement-cycle-small-entity-compliance-guide-15c6-1-15c6-2-204-2.*

[15] WorkX is one of two alternative means of connecting to the FINRA/Nasdaq TRF. The other alternative is the TRF FIX port, which accounts for the vast majority of trade reporting to the FINRA/Nasdaq TRF. In terms of trade surveillance, regulatory reporting, and supervisory controls, there are other commercially available products from entities not affiliated with Nasdaq that compete with WorkX. Furthermore, there is nothing preventing service providers not affiliated with Nasdaq from developing other competing products.

[16] 15 U.S.C. 78s(b)(3)(A)(ii).

to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–NASDAQ–2025–095 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–NASDAQ–2025–095. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–NASDAQ–2025–095 and should be submitted on or before December 26, 2025. For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[17]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21989 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

[17] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104295; File No. SR–NYSEAMER–2025–68]

Self-Regulatory Organizations; NYSE American LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Modify the NYSE American Options Fee Schedule To Exempt Floor Brokers From the Routing Surcharge

December 2, 2025.

Pursuant to Section 19(b)(1)[1] of the Securities Exchange Act of 1934 (''Act'')[2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on November 26, 2025, NYSE American LLC (''NYSE American'' or the ''Exchange'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to modify the NYSE American Options Fee Schedule (''Fee Schedule'') to exempt Floor Brokers from routing fees. The Exchange also proposes to make a technical change to an existing incentive program. The Exchange proposes to implement the fee change effective November 26, 2025.[4] The proposed rule change is available on the Exchange's website at *www.nyse.com* and at the principal office of the Exchange.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of this filing is to modify the Fee Schedule to exempt Floor Brokers from routing fees and to make a technical change to an existing incentive program.

Routing Surcharge Change

The Exchange currently assesses market participants a Routing Surcharge on orders routed and executed on another exchange.[5] The Exchange proposes to modify the Fee Schedule to exempt Floor Brokers from Routing Surcharges that they might incur when required to route orders away from the Exchange to honor away market interest, in order to incentivize them to increase (or maintain) their activity in open outcry on the Exchange. To the extent that this incentive operates as intended it will increase liquidity on the Trading Floor, which benefits all market participants.

Technical Change to FB Prepay Program, QCC Billable Bonus Rebate

The Exchange offers a Floor Broker Fixed Cost Prepayment Incentive Program (the ''FB Prepay Program''), which is an incentive program that allows Floor Brokers that prepay certain of their annual Eligible Fixed Costs to be eligible for the Rebate Program.[6] Participating Floor Brokers may be eligible for rebates based on their monthly executions of manual billable sides as well as on combined manual billable and QCC contracts (the ''QCC Bonus Rebate'').

The Exchange proposes to make following technical changes to the table—particularly the column setting forth the Bonus Level(s)—for the QCC Bonus Rebate (new text is italicized and to-be-deleted text is bracketed). The below non-substantive formatting changes are being made to add clarity and transparency to the Fee Schedule, making it easier to navigate and comprehend. The Exchange is not proposing any changes to any qualifying criteria or rebate amounts.

[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] The Exchange originally filed to amend the Fee Schedule on September 30, 2025 (SR–NYSEAMER–2025–61), for October 1, 2025 effectiveness, then withdrew such filing and amended the Fee Schedule on November 24, 2025 (SR–NYSEAMER–2025–66), which latter filing the Exchange withdrew on November 26, 2025.

[5] 17 CFR 240.19b–4.

[6] *See* Fee Schedule, Section I, L. (Routing Surcharge).

Base and bonus level*(s)*	QCC billable bonus rebate qualification	Additional rebate on single billable side QCC contract	Additional rebate on two billable side QCC contract
[1]*Base*	Execute 500,000 QCC billable contracts	($0.02)	($0.04)
[2]*1*	Execute 4 million QCC billable contracts	(0.04)	(0.06)
[3]*2*	Execute combined manual billable and QCC billable contracts equal to at least 200% of Bonus Level 2, plus an additional 500,000 combined manual billable and QCC billable contracts.	(0.04)	(0.06)

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,[7] in general, and furthers the objectives of Sections 6(b)(4) and (5) of the Act,[8] in particular, because it provides for the equitable allocation of reasonable dues, fees, and other charges among its members, issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers.

The proposed change is reasonable, equitable, and not unfairly discriminatory. As a threshold matter, the Exchange is subject to significant competitive forces in the market for options securities transaction services that constrain its pricing determinations in that market. The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. In Regulation NMS, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system ''has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.'' [9]

There are currently 18 registered options exchanges competing for order flow. Based on publicly-available information, and excluding index-based options, no single exchange has more than 16% of the market share of executed volume of multiply-listed equity and ETF options trades.[10] Therefore, currently no exchange possesses significant pricing power in the execution of multiply-listed equity and ETF options order flow. More specifically, in August 2025, the Exchange had 8.53% market share of executed volume of multiply-listed equity and ETF options trades.[11] In such a low-concentrated and highly competitive market, no single options exchange possesses significant pricing power in the execution of option order flow. Within this environment, market participants can freely and often do shift their order flow among the Exchange and competing venues in response to changes in their respective pricing schedules.

Routing Change

The Exchange believe the proposal to exempt Floor Brokers from Routing Surcharge is reasonable, equitable, and not unfairly discriminatory because the Exchange believes that this change will incentivize Floor Brokers to increase (or maintain) their activity in open outcry. The proposed change would exempt Floor Brokers from fees that they otherwise would incur when required to route orders away from the Exchange to honor away market interest, thereby encouraging them to continue to participate in open outcry trading without having to account for such fees. To the extent that this incentive operates as intended it will increase liquidity on the Trading Floor, which benefits all market participants.

The Exchange believes the proposed rule change is an equitable allocation of its fees and is not unfairly discriminatory, as it applies equally to all similarly-situated market participants on an equal and non-discriminatory basis. The Exchange notes that Floor Brokers play a unique and important role in ensuring liquidity is executed on the Trading Floor, which the Exchange believes justifies exempting them from fees assessed to other market participants.

Technical Change to QCC Bonus Rebate

The Exchange believes the proposed technical change to modify the table setting forth the QCC Bonus Rebate—particularly the column setting forth the Bonus Level(s)—is reasonable, equitable, and not unfairly discriminatory because the changes are non-substantive formatting changes intended only to add clarity and transparency to the Fee Schedule, making it easier to navigate and comprehend.

B. Self-Regulatory Organization's Statement on Burden on Competition

In accordance with Section 6(b)(8) of the Act, the Exchange does not believe that the proposed rule change would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. Instead, as discussed above, the Exchange believes that the proposed changes would continue to encourage the submission of additional liquidity to a public exchange, thereby promoting market depth, price discovery and transparency and enhancing order execution opportunities for all market participants. As a result, the Exchange believes that the proposed changes further the Commission's goal in adopting Regulation NMS of fostering integrated competition among orders, which promotes ''more efficient pricing of individual stocks for all types of orders, large and small.'' [12]

Intramarket Competition. The proposed change to exempt Floor Brokers from the Routing Surcharge would not unduly impact intramarket because the change applies equally to all similarly-situated market participants on an equal and non-discriminatory basis. The Exchange notes that Floor Brokers play a unique and important role in ensuring liquidity is executed on the Trading Floor, which the Exchange believes justifies exempting Floor Brokers from fees assessed to other market participants.

The Exchange's proposed non-substantive formatting changes to modify the table setting forth the QCC Bonus Rebate—particularly the column setting forth the Bonus Level(s)—is not intended to address any competitive issues but to instead add clarity and

[7] 15 U.S.C. 78f(b).

[8] 15 U.S.C. 78f(b)(4) and (5).

[9] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (S7–10–04) (''Reg NMS Adopting Release'').

[10] The OCC publishes options and futures volume in a variety of formats, including daily and monthly volume by exchange, available here: *https://www.theocc.com/Market-Data/Market-Data-Reports/Volume-and-Open-Interest/Monthly-Weekly-Volume-Statistics.*

[11] Based on a compilation of OCC data for monthly volume of equity-based options and monthly volume of ETF-based options, *see id.,* the Exchange's market share in multiply-listed equity and ETF options increased from 7.29% in August 2024 to 8.53% for the month of August 2025.

[12] *See* Reg NMS Adopting Release, *supra* note 8, at 37499.

transparency to the Fee Schedule making it easier to navigate and comprehend.

Intermarket Competition. The Exchange operates in a highly competitive market in which market participants can readily favor one of the 17 other competing option exchanges if they deem fee levels at a particular venue to be excessive. Based on publicly-available information, and excluding index-based options, no single exchange has more than 16% of the market share of executed volume of multiply-listed equity and ETF options trades.[13] Therefore, currently no exchange possesses significant pricing power in the execution of multiply-listed equity and ETF options order flow. More specifically, in August 2025, the Exchange had 8.53% market share of executed volume of multiply-listed equity and ETF options trades.[14]

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A)[15] of the Act and subparagraph (f)(2) of Rule 19b–4[16] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[17] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–NYSEAMER–2025–68 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–NYSEAMER–2025–68. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–NYSEAMER–2025–68 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21991 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

[13] The OCC publishes options and futures volume in a variety of formats, including daily and monthly volume by exchange, available here: *https://www.theocc.com/Market-Data/Market-Data-Reports/Volume-and-Open-Interest/Monthly-Weekly-Volume-Statistics.*

[14] Based on a compilation of OCC data for monthly volume of equity-based options and monthly volume of ETF-based options, *see id.,* the Exchange's market share in multiply-listed equity and ETF options increased from 7.29% in August 2024 to 8.53% for the month of August 2025.

[15] 15 U.S.C. 78s(b)(3)(A).

[16] 17 CFR 240.19b–4(f)(2).

[17] 15 U.S.C. 78s(b)(2)(B).

[18] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104290; File No. 4–698]

Joint Industry Plan; Notice of Filing of Amendment No. 2 to the National Market System Plan Governing the Consolidated Audit Trail, as Modified by Amendment No. 1, Regarding the Customer and Account Information System

December 2, 2025.

I. Introduction

On March 7, 2025, the Consolidated Audit Trail, LLC (''CAT LLC''), on behalf of the following parties to the National Market System Plan Governing the Consolidated Audit Trail (the ''CAT NMS Plan'' or ''Plan''):[1] BOX Exchange LLC, Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe C2 Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe Exchange, Inc., Financial Industry Regulatory Authority, Inc., Investors Exchange LLC, Long-Term Stock Exchange, Inc., MEMX, LLC, Miami International Securities Exchange LLC, MIAX Emerald, LLC, MIAX PEARL, LLC, MIAX Sapphire, LLC, Nasdaq BX, Inc., Nasdaq GEMX, LLC, Nasdaq ISE, LLC, Nasdaq MRX, LLC, Nasdaq PHLX LLC, The NASDAQ Stock Market LLC, New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE National, Inc., and NYSE Texas, Inc. (collectively, the ''Participants''[2]) filed with the Securities and Exchange Commission (''Commission'') pursuant to Section 11A(a)(3) of the Securities Exchange Act of 1934 (''Exchange Act''),[3] and Rule 608 thereunder,[4] a proposed amendment to the CAT NMS Plan to reduce the amount of Customer[5]

[1] In July 2012, the Commission adopted Rule 613 of Regulation NMS, which required the Participants to jointly develop and submit to the Commission a national market system plan to create, implement, and maintain a consolidated audit trail (the ''CAT''). *See* Securities Exchange Act Release No. 67457 (July 18, 2012), 77 FR 45722 (Aug. 1, 2012); 17 CFR 242.613 (''Rule 613''). On November 15, 2016, the Commission approved the CAT NMS Plan. *See* Securities Exchange Act Release No. 78318, 81 FR 84696 (Nov. 23, 2016) (''CAT NMS Plan Approval Order''). The CAT NMS Plan is Exhibit A to the CAT NMS Plan Approval Order. *See* CAT NMS Plan Approval Order, at 84943–85034.

[2] On August 6, 2025, 24X National Exchange LLC became a Participant. *See* Securities Exchange Act Release No. 103702 (Aug. 13, 2025), 90 FR 40092 (Aug. 18, 2025).

[3] 15 U.S.C 78k–1(a)(3).

[4] 17 CFR 242.608.

[5] A ''Customer'' means ''the account holder(s) of the account at a registered broker-dealer originating the order; and any person from whom the broker-dealer is authorized to accept trading instructions for such account, if different from the account

information in the CAT Customer and Account Information System (''CAIS'') (the ''Proposed Amendment'').[6] The Proposed Amendment was published for comment in the **Federal Register** on March 19, 2025 (''Notice'').[7]

On May 28, 2025, the Participants filed Amendment No. 1 to the Proposed Amendment (''Amendment No. 1'').[8] On June 17, 2025, the Commission noticed Amendment No. 1 for comment and instituted proceedings to determine whether to approve or disapprove the Proposed Amendment, as modified by Amendment No. 1, with any changes or subject to any conditions the Commission deems necessary or appropriate after considering public comment (the ''OIP'').[9]

On September 11, 2025, to provide sufficient time to consider the changes set forth in Amendment No. 1 and any comments received on Amendment No. 1, the Commission designated a longer period within which to conclude proceedings.[10] On November 14, 2025, the Commission extended the period within which to conclude proceedings regarding the Proposed Amendment, as modified by Amendment No. 1, to January 13, 2026.[11]

On December 1, 2025, the Participants filed Amendment No. 2 to the Proposed Amendment (''Amendment No. 2''),[12] to clarify changes in the Proposed Amendment, as modified by Amendment No. 1. Amendment No. 2 is set forth in Item II, as prepared by the Participants. *Exhibit A* sets forth the cumulative changes proposed to be made to the existing CAT NMS Plan under the Proposed Amendment, as modified by Amendment Nos. 1 and 2. *Exhibit B* sets forth the proposed additional changes to the Proposed Amendment, as modified by Amendment No. 2. The Commission is publishing this notice to solicit comments on Amendment No. 2 from interested persons.

II. Notice of Amendment No. 2

During meetings with the Staff subsequent to publication of the Proposed Amendment, CAT LLC agreed to provide additional information responsive to questions received from the Staff regarding (1) the effect of the Proposed Amendment on certain defined terms related to the Financial Accountability Milestones (''FAMs''); (2) how access to the Reference Database would be monitored and documented under the Proposed Amendment; (3) the effect of the Proposed Amendment (if any) on FDID validations; and (4) the process for documenting and reviewing deletions of Name, Address, and YOB [13] data under the Proposed Amendment. CAT LLC is also proposing certain clarifying changes to the Proposed Amendment in light of the Staff's questions.

A. Effect of the Proposed Amendment on FAM-Related Defined Terms

First, the Staff asked CAT LLC to provide additional detail explaining the meaning of the following footnotes, which CAT LLC proposes adding to the Article I definition of ''Full Availability and Regulatory Utilization of Transactional Database Functionality'' in the Proposed Amendment:

> Effective [DATE], ''Customer Account Information'' as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term and has been superseded by the new defined term ''Account Reference Data''.
>
> Effective [DATE], ''Customer Identifying Information'' as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term and has been superseded by the new defined term ''Customer Reference Data''.

Specifically, the Staff noted that the defined term ''Full Availability and Regulatory Utilization of Transactional Database Functionality'' represents one of the FAMs and asked for confirmation regarding whether CAT LLC intends to change the meaning of that term in any way through the addition of the above footnotes.

CAT LLC does not intend to change the meaning of the defined term ''Full Availability and Regulatory Utilization of Transactional Database Functionality'' in any way. As described in the Response Letter, CAT LLC proposes to remove the defined terms ''Customer Identifying Information'' and ''Customer Account Information'' from the Plan and to replace those terms in all instances with the new defined terms ''Customer Reference Data'' and ''Account Reference Data'' to more accurately reflect the nature of the information that would remain in the Reference Database as a result of implementing the Proposed Amendment. However, CAT LLC recognizes that doing so in the definition of ''Full Availability and Regulatory Utilization of Transactional Database Functionality'' would retroactively change the meaning of that defined term because the terms ''Customer Reference Data'' and ''Account Reference Data'' refer to a narrower scope of customer-and-account-related information than do the terms ''Customer Identifying Information'' and ''Customer Account Information.'' To avoid retroactively changing the meaning of a FAM-related defined term, CAT LLC proposed adding the footnotes described above where the terms ''Customer Identifying Information'' and ''Customer Account Information'' appear in the definition of ''Full Availability and Regulatory Utilization of Transactional Database Functionality'' in Article I of the Plan to make clear that—even after the implementation of the Proposed Amendment—the terms ''Customer Identifying Information'' and ''Customer Account Information'' will continue to be defined as set forth in Securities Exchange Act Release No. 88890 (May 15, 2020) solely for purposes of the FAMs.

To add clarity in light of the Staff's question, and to prevent any potential misinterpretation, CAT LLC proposes removing the phrase ''. . . and has been superseded by the new defined term 'Account Reference Data''' from the first footnote described above. Similarly, CAT LLC proposes removing the phrase ''. . . and has been superseded by the new defined term 'Customer Reference Data''' from the second footnote described above. As revised, the two footnotes would read as follows:

> Effective [DATE], ''Customer Account Information'' as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting;

holder(s).'' *See* CAT NMS Plan, *supra* note 1, at Section 1.1.

[6] *See* Letter from Brandon Becker, CAT NMS Plan Operating Committee Chair, dated Mar. 7, 2025.

[7] *See* Securities Exchange Act Release No. 102665 (Mar. 13, 2025), 90 FR 12845. Comments received in response to the Notice can be found on the Commission's website at *https://www.sec.gov/comments/4-698/4-698-f.htm.*

[8] *See* Letter from Brandon Becker, CAT NMS Plan Operating Committee Chair, dated May 28, 2025 (''CAT LLC Response Letter'').

[9] *See* Securities Exchange Act Release No. 103288, 90 FR 26637 (June 23, 2025). Comments received in response to Amendment No. 1 can be found on the Commission's website at *https://www.sec.gov/comments/4-698/4-698-f.htm.*

[10] *See* Securities Exchange Act Release No. 103946, 90 FR 44734 (Sept. 16, 2025).

[11] *See* Securities Exchange Act Release No. 104179, 90 FR 51801 (Nov. 18, 2025).

[12] *See* Letter from Robert Walley, CAT NMS Plan Operating Committee Chair, dated Dec. 1, 2025.

[13] As described in the Proposed Amendment, the term ''Name, Address, and YOB'' includes Customer names, Customer addresses, account names, account addresses, years of birth, and authorized trader names.

Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term.

Effective [DATE], ''Customer Identifying Information'' as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term.

B. Process for Monitoring and Documenting Access to the Reference Database

Second, the Staff noted CAT LLC's proposal to delete the following language from Section 4.1.6 of Appendix D and asked whether there would still be an audit trail or other record or report of persons that have accessed the Reference Database under the Proposed Amendment:

The Chief Compliance Officer and the Chief Information Security Officer shall have access to daily PII reports that list all users who are entitled for PII access, as well as the audit trail of all PII access that has occurred for the day being reported on.

CAT LLC confirms that following the implementation of the Proposed Amendment, the Plan Processor will record all access to, and all queries of, data stored in the Reference Database in a series of logs that can be used to generate periodic reports in the same way that the Plan Processor currently records and tracks access to the broader CAT System.

To clarify in light of the Staff's question, CAT LLC proposes amending the Proposed Amendment to add the following sentence at the end of Section 4.1.4 of Appendix D:

The Plan Processor must record all access to, and all queries of, data stored in the Reference Database and generate periodic reports of all access to, and all queries of, data stored in the Reference Database.

C. Effect of the Proposed Amendment on FDID Validations

Third, the Staff noted CAT LLC's proposal to remove language from Section 9.1 of Appendix D stating that the Plan Processor ''will design and implement a robust data validation process for submitted Firm Designated ID, Customer Account Information and Customer Identifying Information, and must continue to process orders while investigating Customer information mismatches.'' The Staff asked whether the deletion of this language means that FDID validations would change under the Proposed Amendment.

CAT LLC confirms that FDID validations would not change as a result of implementing the Proposed Amendment. The Plan Processor would continue to perform the same consistency checks that it currently performs today to confirm that all FDIDs reported to the transaction database exist in the Reference Database and were active on the relevant transaction date. These validations are described in more detail in Section 2.4.2.1 of the CAT Reporting Technical Specifications for Industry Members.[14]

To clarify in light of the Staff's question, CAT LLC proposes amending the language from Section 9.1 of Appendix D cited above to state that the Plan Processor:

will design and implement a robust data validation process for submitted Firm Designated IDs and must continue to process orders while investigating Firm Designated ID mismatches.

D. Process for Documenting and Reviewing Deletions of Name, Address, and YOB Data

Fourth, the Staff noted CAT LLC's proposed addition of Section 9.5 to Appendix D, which requires CAT LLC to direct the Plan Processor to delete all categories of Customer information currently stored in the Reference Database that would be eliminated from Reference Database reporting as a result of implementing the Proposed Amendment. The Staff asked CAT LLC whether there would be a process for documenting and reviewing deletions of Customer information from the Reference Database under the Proposed Amendment.

CAT LLC confirms that the Plan Processor will keep a log documenting all deletions of Customer information from the Reference Database. Those logs will include both the time of and reason for each deletion, and the Plan Processor will provide periodic reports to the Operating Committee for visibility and oversight.

To clarify in light of the Staff's question, CAT LLC proposes adding a sentence to the end of proposed Section 9.5 of Appendix D stating that ''CAT LLC shall direct the Plan Processor to document all deletions of Customer information from the Reference Database and provide periodic reports of all such deletions to the Operating Committee.''

Separately, proposed Section 9.5 of Appendix D includes a sentence stating that ''[f]or the avoidance of doubt, such data attributes do not constitute records that must be retained under Exchange Act Rule 17a–1.'' CAT LLC proposes making a technical revision to make clear that the data attributes listed in proposed Section 9.5 of Appendix D do not constitute records that must be retained ''by CAT LLC'' under Exchange Act Rule 17a–1.

As revised, proposed Section 9.5 of Appendix D would read as follows:

9.5 Deletion From CAIS of Certain Reported Customer Data

Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or the Exchange Act, CAT LLC shall direct the Plan Processor to develop and implement a mechanism to delete from CAIS, or otherwise make inaccessible to regulatory users, the following data attributes: Customer name, Customer address, account name, account address, authorized trader names list, account number, day of birth, month of birth, year of birth, and ITIN/SSN. For the avoidance of doubt, such data attributes do not constitute records that must be retained by CAT LLC under Exchange Act Rule 17a–1. CAT LLC or the Plan Processor shall be permitted to delete any such information that has been improperly reported by an Industry Member to the extent that either becomes aware of such improper reporting through self-reporting or otherwise. CAT LLC shall direct the Plan Processor to document all deletions of Customer information from the Reference Database and provide periodic reports of all such deletions to the Operating Committee.

III. Solicitation of Comments on Amendment No. 2

Interested persons are invited to submit written data, views, and arguments regarding whether the Proposed Amendment, as modified by Amendment No. 2, should be approved or disapproved by December 26, 2025. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number 4–698 (CAT CAIS Amendment) on the subject line.

Paper Comments

- Send paper comments in triplicate to: Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number 4–698 (CAT CAIS Amendment). This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one

[14] CAT Reporting Technical Specifications for Industry Members at 11 (July 31, 2025), *https://www.catnmsplan.com/sites/default/files/2025-07/07.31.25_CAT_Reporting_Technical_Specifications_for_Industry_Members_v4.1.0r9_CLEAN.pdf.*

method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the Participants' principal offices. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to File Number 4–698 (CAT CAIS Amendment) and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[15]

Sherry R. Haywood,

Assistant Secretary.

EXHIBIT A

Cumulative Proposed Revisions to CAT NMS Plan

Additions *italicized;* deletions [bracketed]

* * * * *

ARTICLE I

Definitions

* * * * *

Section 1.1. Definitions.

* * * * *

''[Customer] Account *Reference Data* [Information]'' shall include, but not be limited to, [account number,] account type, [customer type,] date account opened, and large trader identifier (if applicable) (*excluding, for the avoidance of doubt, account number*); except, however, that (a) in those circumstances in which an Industry Member has established a trading relationship with an institution but has not established an account with that institution, the Industry Member will (i) provide the Account Effective Date in lieu of the ''date account opened''; [(ii) provide the relationship identifier in lieu of the ''account number'';]and (ii[i]) identify the ''account type'' as a ''relationship''; (b) in those circumstances in which the relevant account was established prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), and no ''date account opened'' is available for the account, the Industry Member will provide the Account Effective Date in the following circumstances: (i) where an Industry Member changes back office providers or clearing firms and the date account opened is changed to the date the account was opened on the new back office/clearing firm system; (ii) where an Industry Member acquires another Industry Member and the date account opened is changed to the date the account was opened on the post-merger back office/clearing firm system; (iii) where there are multiple dates associated with an account in an Industry Member's system, and the parameters of each date are determined by the individual Industry Member; and (iv) where the relevant account is an Industry Member proprietary account. *For the avoidance of doubt, Industry Members are required to provide a Firm Designated ID in accordance with this Agreement.*

* * * * *

''*CCID Subsystem*'' *means the subsystem of the Reference Database that exists solely to transform input TID values into CCID values.*

* * * * *

''Customer-ID'' *or* ''*CAT Customer-ID*'' *or* ''*CCID*'' has the same meaning provided in SEC Rule 613(j)(5).

''Customer *Reference Data*[Identifying Information]'' means information [of sufficient detail to identify]*attributed to* a Customer, including, but not limited to, (a) with respect to individuals: [name, address, date of birth, individual tax payer identification number (''ITIN'')/social security number (''SSN''),] *TID, customer type, and the* individual's role in the account (*e.g.,* primary holder, joint holder, guardian, trustee, person with the power of attorney); and (b) with respect to legal entities: [name, address,]*customer type and* [Employer Identification Number (''EIN'')/]Legal Entity Identifier (''LEI'') or other comparable common entity identifier, if applicable; provided, however, that an Industry Member that has an LEI for a Customer must submit the Customer's LEI[in addition to other information of sufficient detail to identify a Customer].

* * * * *

''*Full Availability and Regulatory Utilization of Transactional Database Functionality*'' means the point at which: (a) reporting to the Order Audit Trail System (''OATS'') is no longer required for new orders; (b) Industry Member reporting for equities transactions and simple electronic options transactions, excluding Customer Account Information,* Customer-ID, and Customer Identifying Information,* with sufficient intra-firm linkage, inter-firm linkage, national securities exchange linkage, trade reporting facilities linkage, and representative order linkages (including any equities allocation information provided in an Allocation Report) to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, is developed, tested, and implemented at a 5% Error Rate or less; (c) Industry Member reporting for manual options transactions and complex options transactions, excluding Customer Account Information, Customer-ID, and Customer Identifying Information, with all required linkages to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, including any options allocation information provided in an Allocation Report, is developed, tested, and fully implemented; (d) the query tool functionality required by Section 6.10(c)(i)(A) and Appendix D, Sections 8.1.1–8.1.3, Section 8.2.1, and Section 8.5 incorporates the data described in conditions (b)–(c) and is available to the Participants and to the Commission; and (e) the requirements of Section 6.10(a) are met. This Financial Accountability Milestone shall be considered complete as of the date identified in a Quarterly Progress Report meeting the requirements of Section 6.6(c).

* * * * *

[''PII'' means personally identifiable information, including a social security number or tax identifier number or similar information; Customer Identifying Information and Customer Account Information.]

* * * * *

''*Reference Data*'' *shall mean the data elements in Account Reference Data and Customer Reference Data.*

''*Reference Database*'' *means the information system of the CAT containing Reference Data.*

* * * * *

''*Transformed Identifier*'' *or* ''*TID*'' *means the transformed version of the input used to identify unique Customers, including, but not limited to individual tax payer identification number (*''*ITIN*''*) or social security number (*''*SSN*''*) submitted by Industry Members in place of an ITIN or SSN.*

* * * * *

ARTICLE VI

Functions and Activities of CAT System

* * * * *

Section 6.2. Chief Compliance Officer and Chief Information Security Officer

* * * * *

(a) *Chief Compliance Officer.*

* * * * *

(v) The Chief Compliance Officer shall:

* * * * *

(C) in collaboration with the Chief Information Security Officer, and consistent with Appendix D, Data Security, and any other applicable requirements related to data security[,] *and Reference Data*[Customer Account Information and Customer Identifying Information], identify and assist the Company in retaining an appropriately qualified independent auditor (based on specialized technical expertise, which may be the Independent Auditor or subject to the approval of the Operating Company by Supermajority Vote, another appropriately qualified independent auditor), and in

[15] 17 CFR 200.30–3(a)(85).

* *Effective [DATE],* ''*Customer Account Information*'' *as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term.*

* *Effective [DATE],* ''*Customer Identifying Information*'' *as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term.*

collaboration with such independent auditor, create and implement an annual audit plan (subject to the approval of the Operating Committee), which shall at a minimum include a review of all Plan Processor policies, procedures and control structures, and real time tools that monitor and address data security issues for the Plan Processor and the Central Repository;

* * * * *

(b) *Chief Information Security Officer.*

* * * * *

(v) Consistent with Appendices C and D, the Chief Information Security Officer shall be responsible for creating and enforcing appropriate policies, procedures, and control structures to monitor and address data security issues for the Plan Processor and the Central Repository including:

* * * * *

(F) [PII data requirements, including the standards set forth in Appendix D, PII Data Requirements] *[Reserved];*

* * * * *

Section 6.4. Data Reporting and Recording by Industry Members

* * * * *

(d) *Required Industry Member Data.*

* * * * *

(ii) Subject to Section 6.4(c) and Section 6.4(d)(iii) with respect to Options Market Makers, and consistent with Appendix D, Reporting and Linkage Requirements, and the Technical Specifications, each Participant shall, through its Compliance Rule, require its Industry Members to record and report to the Central Repository the following, as applicable (''*Received Industry Member Data*'' and collectively with the information referred to in Section 6.4(d)(i) ''*Industry Member Data*''):

* * * * *

(C) for original receipt or origination of an order, the Firm Designated ID for the relevant Customer, and in accordance with Section 6.4(d)(iv), *Reference Data*[Customer Account Information and Customer Identifying Information] for the relevant Customer; and

* * * * *

Section 6.10. Surveillance

* * * * *

(c) *Use of CAT Data by Regulators.*

* * * * *

(ii) Extraction of CAT Data shall be consistent with all permission rights granted by the Plan Processor. All CAT Data returned shall be encrypted[, and PII data shall be masked unless users have permission to view the CAT Data that has been requested].

* * * * *

APPENDIX D

CAT NMS Plan Processor Requirements

* * * * *

4. Data Security

4.1 Overview

* * * * *

The Plan Processor must provide to the Operating Committee a comprehensive security plan that covers all components of the CAT System, including physical assets and personnel, and the training of all persons who have access to the Central Repository consistent with Article VI, Section 6.1(m). The security plan must be updated annually. The security plan must include an overview of the Plan Processor's network security controls, processes and procedures pertaining to the CAT Systems. Details of the security plan must document how the Plan Processor will protect, monitor and patch the environment; assess it for vulnerabilities as part of a managed process, as well as the process for response to security incidents and reporting of such incidents. The security plan must address physical security controls for corporate, data center, and leased facilities where Central Repository data is transmitted or stored. The Plan Processor must have documented ''hardening baselines'' for systems that will store, process, or transmit CAT Data [or PII data].

* * * * *

4.1.2 Data Encryption

All CAT Data must be encrypted at rest and in flight using industry standard best practices (*e.g.,* SSL/TLS) including archival data storage methods such as tape backup. Symmetric key encryption must use a minimum key size of 128 bits or greater (*e.g.,* AES–128), larger keys are preferable. Asymmetric key encryption (*e.g.,* PGP) for exchanging data between Data Submitters and the Central Repository is desirable.

[Storage of unencrypted PII data is not permissible. PII encryption methodology must include a secure documented key management strategy such as the use of HSM(s). The Plan Processor must describe how PII encryption is performed and the key management strategy (*e.g.,* AES–256, 3DES).]

If public cloud managed services are used that would inherently have access to the data (*e.g.,* BigQuery, S3, Redshift), then the key management surrounding the encryption of that data must be documented (particularly whether the cloud provider manages the keys, or if the Plan Processor maintains that control). Auditing and real-time monitoring of the service for when cloud provider personnel are able to access/decrypt CAT Data must be documented, as well as a response plan to address instances where unauthorized access to CAT Data is detected. Key management/rotation/revocation strategies and key chain of custody must also be documented in detail.

* * * * *

4.1.4 Data Access

The Plan Processor must provide an overview of how access to [PII and other] CAT Data by Plan Processor employees and administrators is restricted. This overview must include items such as, but not limited to, how the Plan Processor will manage access to the systems, internal segmentation, multi-factor authentication, separation of duties, entitlement management, background checks, etc.

* * * * *

Any login to the system [that is able to access PII data must follow non-PII password rules and] must be [further] secured via multi-factor authentication (''MFA''). The implementation of MFA must be documented by the Plan Processor. MFA authentication capability for all logins is required to be implemented by the Plan Processor.

The Plan Processor must record all access to, and all queries of, data stored in the Reference Database and generate periodic reports of all access to, and all queries of, data stored in the Reference Database.

* * * * *

4.1.6 [PII Data Requirements] *[Reserved]*

[PII data must not be included in the result set(s) from online or direct query tools, reports or bulk data extraction. Instead, results will display existing non-PII unique identifiers (*e.g.,* Customer-ID or Firm Designated ID). The PII corresponding to these identifiers can be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements. By default, users entitled to query CAT Data are not authorized for PII access. The process by which someone becomes entitled for PII access, and how they then go about accessing PII data, must be documented by the Plan Processor. The chief regulatory officer, or other such designated officer or employee at each Participant must, at least annually, review and certify that people with PII access have the appropriate level of access for their role.

Using the RBAC model described above, access to PII data shall be configured at the PII attribute level, following the ''least privileged'' practice of limiting access as much as possible.

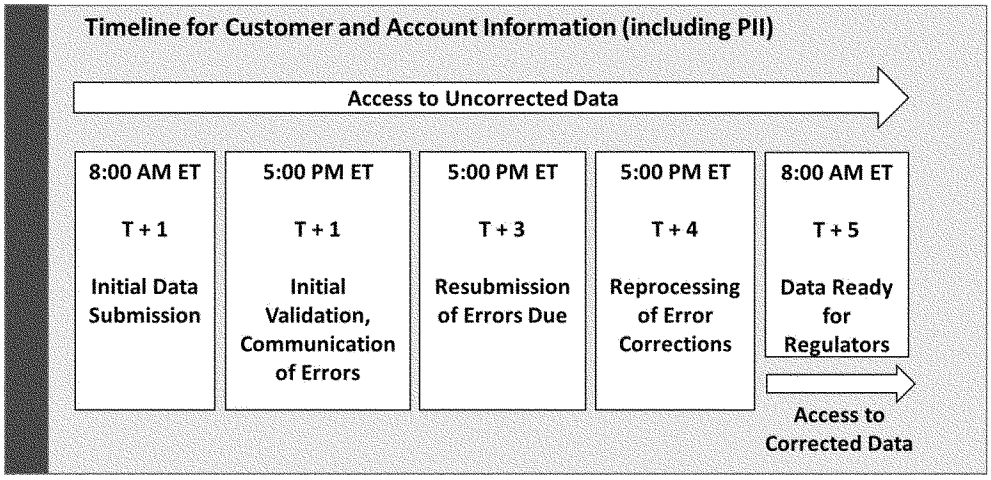
PII data must be stored separately from other CAT Data. It cannot be stored with the transactional CAT Data, and it must not be accessible from public internet connectivity. A full audit trail of PII access (who accessed what data, and when) must be maintained. The Chief Compliance Officer and the Chief Information Security Officer shall have access to daily PII reports that list all users who are entitled for PII access, as well as the audit trail of all PII access that has occurred for the day being reported on.]

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6.2 Data Availability Requirements

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Figure B: [Customer and Account Information (Including PII)] Reference Data



{changes to the title of the chart: Timeline for *Reference Data*[Customer and Account Information (including PII)]}

CAT [PII]*Reference Data* data must be processed within established timeframes to ensure data can be made available to Participants' regulatory staff and the SEC in a timely manner. Industry Members submitting new or modified Customer information must provide it to the Central Repository no later than 8:00 a.m. Eastern Time on T+1. The Central Repository must validate the data and generate error reports no later than 5:00 p.m. Eastern Time on T+1. The Central Repository must process the resubmitted data no later than 5:00 p.m. Eastern Time on T+4. Corrected data must be resubmitted no later than 5:00 p.m. Eastern Time on T+3. The Central Repository must process the resubmitted data no later than 5:00 p.m. Eastern Time on T+4. Corrected data must be available to regulators no later than 8:00 a.m. Eastern Time on T+5.

[Customer information that includes PII]*Reference* [d]*D*ata must be available to regulators immediately upon receipt of initial data and corrected data, pursuant to security policies for retrieving [PII]*Reference Data.*

* * * * *

8. Functionality of the CAT System

8.1 Regulator Access

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8.1.1 Online Targeted Query Tool

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The tool must provide a record count of the result set, the date and time the query request is submitted, and the date and time the result set is provided to the users. In addition, the tool must indicate in the search results whether the retrieved data was linked or unlinked (*e.g.,* using a flag). [In addition, the online targeted query tool must not display any PII data. Instead, it will display existing non-PII unique identifiers (*e.g.,* Customer-ID or Firm Designated ID). The PII corresponding to these identifiers can be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements.] The Plan Processor must define the maximum number of records that can be viewed in the online tool as well as the maximum number of records that can be downloaded. Users must have the ability to download the results to .csv, .txt, and other formats, as applicable. These files will also need to be available in a compressed format (*e.g.,* .zip, .gz). Result sets that exceed the maximum viewable or download limits must return to users a message informing them of the size of the result set and the option to choose to have the result set returned via an alternate method.

* * * * *

8.1.3 Online Targeted Query Tool Access and Administration

Access to CAT Data is limited to authorized regulatory users from the Participants and the SEC. Authorized regulators from the Participants and the SEC may access all CAT Data[, with the exception of PII data. A subset of the authorized regulators from the Participants and the SEC will have permission to access and view PII data]. The Plan Processor must work with the Participants and SEC to implement an administrative and authorization process to provide regulator access. The Plan Processor must have procedures and a process in place to verify the list of active users on a regular basis.

A two-factor authentication is required for access to CAT Data. [PII data must not be available via the online targeted query tool or the user-defined direct query interface.]

8.2 User-Defined Direct Queries and Bulk Extraction of Data

The Central Repository must provide for direct queries, bulk extraction, and download of data for all regulatory users. Both the user-defined direct queries and bulk extracts will be used by regulators to deliver large sets of data that can then be used in internal surveillance or market analysis applications. The data extracts must use common industry formats.

[Direct queries must not return or display PII data. Instead, they will return existing non-PII unique identifiers (*e.g.,* Customer-ID or Firm Designated ID). The PII corresponding to these identifiers can be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements.]

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8.2.2 Bulk Extract Performance Requirements

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Extraction of data must be consistently in line with all permissioning rights granted by the Plan Processor. Data returned must be encrypted, password protected and sent via secure methods of transmission. [In addition, PII data must be masked unless users have permission to view the data that has been requested.]

* * * * *

9. CAT *Reference Data*[Customer and Customer Account Information]

9.1 [Customer and Customer Account Information]*Reference Data* Storage

The CAT must capture and store *Reference Data*[Customer and Customer Account Information] in a secure database physically separated from the transactional database. The Plan Processor will maintain *certain* information [of sufficient detail to uniquely and consistently identify] *attributed to* each Customer across all CAT Reporters, and associated accounts from each CAT Reporter. [The following attributes, a]*A*t a minimum, *the CAT* must *capture Transformed Identifiers.*[be captured:]

[Social security number (SSN) or Individual Taxpayer Identification Number (ITIN);]
[Date of birth;]
[Current name;]
[Current address;]
[Previous name; and]
[Previous address.]

For legal entities, the CAT must capture *Legal Entity Identifiers (LEIs) (if available).*[the following attributes:]

- [Legal Entity Identifier (LEI) (if available);]
- [Tax identifier;]
- [Full legal name; and]
- [Address.]

The Plan Processor must maintain valid *Reference Data*[Customer and Customer Account Information] for each trading day and provide a method for Participants' regulatory staff and the SEC to easily obtain historical changes to that information[(*e.g.,* name changes, address changes, etc.)].

The Plan Processor will design and implement a robust data validation process for submitted Firm Designated ID*s*[,

Customer Account Information and Customer Identifying Information,] and must continue to process orders while investigating *Firm Designated ID*[Customer information] mismatches. [Validations should:

Confirm the number of digits on a SSN,
Confirm date of birth, and
Accommodate the situation where a single SSN is used by more than one individual.]

The Plan Processor will use the [Customer information] *Transformed Identifier* submitted by all broker-dealer CAT Reporters to *the CCID Subsystem to* assign a unique Customer-ID for each Customer. The Customer-ID must be consistent across all broker-dealers that have an account associated with that Customer. This unique CAT-Customer-ID will not be returned to CAT Reporters and will only be used internally by the CAT.

Broker-Dealers will initially submit full account lists for all active accounts to the Plan Processor and subsequently submit updates and changes on a daily basis. In addition, the Plan Processor must have a process to periodically receive full account lists to ensure the completeness and accuracy of the account database. The Central Repository must support account structures that have multiple account owners and associated Customer information (joint accounts, managed accounts, etc.), and must be able to link accounts that move from one CAT Reporter to another (*e.g.,* due to mergers and acquisitions, divestitures, etc.).

* * * * *

9.2 Required Data Attributes for Customer Information Data Submitted by Industry Members

At a minimum, the following Customer information data attributes must be accepted by the Central Repository:

[Account Owner Name;]

[Account Owner Mailing Address;]

[Account Tax Identifier (SSN, TIN, ITN)] *Transformed Identifier*;

Market Identifiers (Larger Trader ID, LEI);

Type of Account;

Firm [Identifier Number] *Designated ID*;

○ The number that the CAT Reporter will supply on all orders generated for the Account;

Prime Broker ID;

Bank Depository ID; and

• Clearing Broker.

* * * * *

9.3 Customer-ID Tracking

The Plan Processor will assign a CAT-Customer-ID for each unique Customer. The Plan Processor will [determine] *generate and assign* a unique *CAT*-Customer-*ID* [using information such as SSN and DOB for natural persons or entity identifiers for Customers that are not natural persons and will resolve discrepancies] *for each Transformed Identifier submitted by broker-dealer CAT Reporters to the CCID Subsystem.* Once a CAT-Customer-ID is assigned, it will be added to each linked (or unlinked) order record for that Customer.

Participants and the SEC must be able to use the unique CAT-Customer-ID to track orders from any Customer or group of Customers, regardless of what brokerage account was used to enter the order.

* * * * *

9.4 Error Resolution for Customer Data

[The Plan Processor must design and implement procedures and mechanisms to handle both minor and material inconsistencies in Customer information. The Central Repository needs to be able to accommodate minor data discrepancies such as variations in road name abbreviations in searches. Material inconsistencies such as two different people with the same SSN must be communicated to the submitting CAT Reporters and resolved within the established error correction timeframe as detailed in Section 8.]

The Central Repository must have an audit trail showing the resolution of all errors. The audit trail must, at a minimum, include the:

CAT Reporter submitting the data;

Initial submission date and time;

Data in question or the ID of the record in question;

Reason identified as the source of the issue[, such as:]*;*

○ [duplicate SSN, significantly different Name;]

○ [duplicate SSN, different DOB;]

○ [discrepancies in LTID; or]

○ [others as determined by the Plan Processor;]

Date and time the issue was transmitted to the CAT Reporter, included each time the issue was re-transmitted, if more than once;

Corrected submission date and time, including each corrected submission if more than one, or the record ID(s) of the corrected data or a flag indicating that the issue was resolved and corrected data was not required; and

Corrected data, the record ID, or a link to the corrected data.

* * * * *

9.5 Deletion from CAIS of Certain Reported Customer Data

Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or the Exchange Act, CAT LLC shall direct the Plan Processor to develop and implement a mechanism to delete from CAIS, or otherwise make inaccessible to regulatory users, the following data attributes: Customer name, Customer address, account name, account address, authorized trader names list, account number, day of birth, month of birth, year of birth, and ITIN/SSN. For the avoidance of doubt, such data attributes do not constitute records that must be retained by CAT LLC under Exchange Act Rule 17a-1. CAT LLC or the Plan Processor shall be permitted to delete any such information that has been improperly reported by an Industry Member to the extent that either becomes aware of such improper reporting through self-reporting or otherwise. CAT LLC shall direct the Plan Processor to document all deletions of Customer information from the Reference Database and provide periodic reports of all such deletions to the Operating Committee.

* * * * *

10. User Support

10.1 CAT Reporter Support

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The Plan Processor must develop tools to allow each CAT Reporter to:

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• Manage *Reference Data*[Customer and Customer Account Information];

* * * * *

10.3 CAT Help Desk

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CAT Help Desk support functions must include:

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• Supporting CAT Reporters with data submissions and data corrections, including submission of *Reference Data*[Customer and Customer Account Information];

* * * * *

EXHIBIT B

Proposed Additional Revisions to Changes in Proposed Amendment

Additions *italicized;* deletions [bracketed]

* * * * *

ARTICLE I

Definitions

* * * * *

Section 1.1. Definitions.

* * * * *

''*Full Availability and Regulatory Utilization of Transactional Database Functionality*'' means the point at which: (a) reporting to the Order Audit Trail System (''OATS'') is no longer required for new orders; (b) Industry Member reporting for equities transactions and simple electronic options transactions, excluding Customer Account Information,* Customer-ID, and Customer Identifying Information,* with sufficient intra-firm linkage, inter-firm linkage, national securities exchange linkage, trade reporting facilities linkage, and representative order linkages (including any equities allocation information provided in an Allocation Report) to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, is developed, tested, and implemented at a 5% Error Rate or less; (c)

* Effective [DATE], ''Customer Account Information'' as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term[and has been superseded by the new defined term ''Account Reference Data'']*.*

* Effective [DATE], ''Customer Identifying Information'' as used in the Financial Accountability Milestones (Initial Industry Member Core Equity Reporting; Full Implementation of Core Equity Reporting; Full Availability and Regulatory Utilization of Transactional Database Functionality; and Full Implementation of CAT NMS Plan Requirements) is no longer a defined term[and has been superseded by the new defined term ''Customer Reference Data'']*.*

Industry Member reporting for manual options transactions and complex options transactions, excluding Customer Account Information, Customer-ID, and Customer Identifying Information, with all required linkages to permit the Participants and the Commission to analyze the full lifecycle of an order across the national market system, from order origination through order execution or order cancellation, including any options allocation information provided in an Allocation Report, is developed, tested, and fully implemented; (d) the query tool functionality required by Section 6.10(c)(i)(A) and Appendix D, Sections 8.1.1–8.1.3, Section 8.2.1, and Section 8.5 incorporates the data described in conditions (b)–(c) and is available to the Participants and to the Commission; and (e) the requirements of Section 6.10(a) are met. This Financial Accountability Milestone shall be considered complete as of the date identified in a Quarterly Progress Report meeting the requirements of Section 6.6(c).

* * * * *

APPENDIX D

CAT NMS Plan Processor Requirements

* * * * *

4. Data Security

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4.1.4 Data Access

The Plan Processor must provide an overview of how access to CAT Data by Plan Processor employees and administrators is restricted. This overview must include items such as, but not limited to, how the Plan Processor will manage access to the systems, internal segmentation, multi-factor authentication, separation of duties, entitlement management, background checks, etc.

* * * * *

Any login to the system must be secured via multi-factor authentication (''MFA''). The implementation of MFA must be documented by the Plan Processor. MFA authentication capability for all logins is required to be implemented by the Plan Processor.

The Plan Processor must record all access to, and all queries of, data stored in the Reference Database and generate periodic reports of all access to, and all queries of, data stored in the Reference Database.

* * * * *

9. CAT Reference Data

9.1 Reference Data Storage

The CAT must capture and store Reference Data in a secure database physically separated from the transactional database. The Plan Processor will maintain certain information attributed to each Customer across all CAT Reporters, and associated accounts from each CAT Reporter. At a minimum, the CAT must capture Transformed Identifiers.

For legal entities, the CAT must capture Legal Entity Identifiers (LEIs) (if available).

The Plan Processor must maintain valid Reference Data for each trading day and provide a method for Participants' regulatory staff and the SEC to easily obtain historical changes to that information.

The Plan Processor will design and implement a robust data validation process for submitted Firm Designated IDs and must continue to process orders while investigating Firm Designated ID mismatches.

The Plan Processor will use the Transformed Identifier submitted by all broker-dealer CAT Reporters to the CCID Subsystem to assign a unique Customer-ID for each Customer. The Customer-ID must be consistent across all broker-dealers that have an account associated with that Customer. This unique CAT-Customer-ID will not be returned to CAT Reporters and will only be used internally by the CAT.

Broker-Dealers will initially submit full account lists for all active accounts to the Plan Processor and subsequently submit updates and changes on a daily basis. In addition, the Plan Processor must have a process to periodically receive full account lists to ensure the completeness and accuracy of the account database. The Central Repository must support account structures that have multiple account owners and associated Customer information (joint accounts, managed accounts, etc.), and must be able to link accounts that move from one CAT Reporter to another (*e.g.,* due to mergers and acquisitions, divestitures, etc.).

* * * * *

9.5 Deletion From CAIS of Certain Reported Customer Data

Notwithstanding any other provision of the CAT NMS Plan, this Appendix D, or the Exchange Act, CAT LLC shall direct the Plan Processor to develop and implement a mechanism to delete from CAIS, or otherwise make inaccessible to regulatory users, the following data attributes: Customer name, Customer address, account name, account address, authorized trader names list, account number, day of birth, month of birth, year of birth, and ITIN/SSN. For the avoidance of doubt, such data attributes do not constitute records that must be retained by *CAT LLC* under Exchange Act Rule 17a-1. CAT LLC or the Plan Processor shall be permitted to delete any such information that has been improperly reported by an Industry Member to the extent that either becomes aware of such improper reporting through self-reporting or otherwise. *CAT LLC shall direct the Plan Processor to document all deletions of Customer information from the Reference Database and provide periodic reports of all such deletions to the Operating Committee.*

[FR Doc. 2025–21986 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104284; File No. SR–BOX–2025–29]

Self-Regulatory Organizations; BOX Exchange LLC; Notice of Filing of Proposed Rule Change To Amend BOX Rule 5055 (FLEX Equity Options) To Permit FLEX Equity Options on the iShares Bitcoin Trust ETF

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 17, 2025, BOX Exchange LLC (''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend BOX Rule 5055 (FLEX Equity Options) to permit FLEX Equity Options on the iShares Bitcoin Trust ETF (''IBIT''). The text of the proposed rule change is available from the principal office of the Exchange, at the Commission's Public Reference Room and also on the Exchange's internet website at *https://rules.boxexchange.com/rulefilings.*

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend BOX Rule 5055 (FLEX Equity Options)

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

to permit FLEX Equity Options on the iShares Bitcoin Trust ETF (''IBIT''). This is a competitive filing that is based on a proposal recently submitted by Nasdaq PHLX LLC (''Nasdaq PHLX'') and approved by the Commission.[3]

IBIT is an Exchange-Traded Fund (''ETF'') that holds bitcoin and is listed on The Nasdaq Stock Market LLC (''Nasdaq'').[4] On September 20, 2024, Nasdaq ISE, LLC (''ISE'') was the first exchange to receive approval to list options on IBIT.[5] On November 27, 2024, the Exchange began listing and trading IBIT options.[6] The position and exercise limits for IBIT options are determined pursuant to Rules 3120 and 3140.[7] Today, pursuant to Rule 5055(e), IBIT options are not approved for FLEX trading.[8] Today, FLEX Equity Options, other than cash-settled options and those that expire on a third Friday-of-the-month, have no position limits pursuant to Rule 5055(i).[9] Therefore, the position limit determined pursuant to Rule 3120 and exercise limit determined pursuant to Rule 3140 for IBIT options currently apply to non-FLEX IBIT options.

At this time, the Exchange proposes to permit IBIT options to transact as FLEX Equity Options and would require the aggregation of any FLEX and non-FLEX positions in the same underlying ETF for purposes of calculating position and exercise limits on such ETF. Thus, for example, assuming a 250,000-contract position limit for options on IBIT, the Exchange would restrict a market participant from holding positions that could result in the receipt of more than 250,000,000 shares (if that market participant exercised all its IBIT options). The share creation and redemption process available to each ETF is designed to ensure that an ETF's price closely tracks the value of its underlying asset. For example, if a market participant exercised a long call position for 25,000 contracts and purchased 2,500,000 shares of IBIT and this purchase resulted in the value of IBIT shares to trade at a premium to the value of the (underlying) bitcoin held by IBIT, the Exchange believes that other market participants would attempt to arbitrage this price difference by selling short IBIT shares while concurrently purchasing bitcoin. Those market participants (arbitrageurs) would then deliver cash to IBIT and receive shares of IBIT, which would be used to close out any previously established short position in IBIT. Thus, this creation and redemptions process would significantly reduce the potential risk of price dislocation between the value of IBIT shares and the value of bitcoin holdings.

The Exchange understands that FLEX options on ETFs are currently traded in the over-the-counter (''OTC'') market by a variety of market participants, *e.g.,* hedge funds, proprietary trading firms, and pension funds. The Exchange believes there is room for significant growth if a comparable FLEX product were introduced for trading on a regulated market. The Exchange expects that users of these OTC products would be among the primary users of FLEX IBIT options. The Exchange also believes that the trading of FLEX IBIT options would allow these same market participants to better manage the risk associated with the volatility of IBIT (the underlying ETF) positions given the enhanced liquidity that an exchange-traded product would bring.

Additionally, the Exchange believes that FLEX IBIT options traded on the Exchange would have three important advantages over the contracts that are traded in the OTC market. First, as a result of greater standardization of contract terms, exchange-traded contracts should develop more liquidity. Second, counterparty credit risk would be mitigated by the fact that the exchange-traded contracts are issued and guaranteed by The Options Clearing Corporation (''OCC''). Finally, the price discovery and dissemination provided by the Exchange and its participant organizations would lead to more transparent markets. The Exchange believes that its ability to offer FLEX IBIT options would aid it in competing with the OTC market and at the same time expand the universe of products available to interested market participants. The Exchange believes that an exchange-traded alternative may provide a useful risk management and trading vehicle for market participants and their customers.

The Exchange has analyzed its capacity and represents that it and The Options Price Reporting Authority (''OPRA'') have the necessary systems capacity to handle the additional traffic associated with the listing of FLEX IBIT options. The Exchange believes any additional traffic that would be generated from the trading of FLEX IBIT options would be manageable. The Exchange believes Participants will not have a capacity issue as a result of this proposed rule change. The Exchange will monitor the trading volume associated with the additional options series listed as a result of this proposed rule change and the effect (if any) of these additional series on the capacity of the Exchange's automated systems.

The Exchange represents that the same surveillance procedures applicable to the Exchange's other options products listed and traded on the Exchange, including non-FLEX IBIT options, will apply to FLEX IBIT options, and that it has the necessary systems capacity to support such options. FLEX options products (and their respective symbols) are integrated into the Exchange's existing surveillance system architecture and are thus subject to the relevant surveillance processes.[10] Today, the Exchange has an adequate surveillance program in place for options. The Exchange intends to apply those same program procedures to options on the Trust that it applies to the Exchange's other options products.[11] The Exchange would review activity in the underlying Trust when conducting surveillances for market abuse or manipulation in the options on the Trust. The Exchange does not believe that allowing FLEX IBIT options would render the marketplace for non-FLEX IBIT options, or equity options in general, more susceptible to manipulative practices.

The Exchange represents that its existing trading surveillances are adequate to monitor the trading in IBIT

[3] *See* Securities Exchange Act Release No. 103565 (July 29, 2025), 90 FR 36233 (August 1, 2025) (SR–Phlx–2024–72) (Order Approving a Proposed Rule Change to Permit the Trading of FLEX Options on Shares of the iShares Bitcoin Trust ETF).

[4] Nasdaq received approval to list and trade Bitcoin-Based Commodity-Based Trust Shares in IBIT pursuant to Rule 5711(d) of Nasdaq. *See* Securities Exchange Act Release No. 99306 (January 10, 2024), 89 FR 3008 (January 17, 2024) (SR–NASDAQ–2023–016) (Order Granting Accelerated Approval of Proposed Rule Changes, as Modified by Amendments Thereto, To List and Trade Bitcoin-Based Commodity-Based Trust Shares and Trust Units).

[5] *See* Securities Exchange Act Release No. 101128 (September 20, 2024), 89 FR 78942 (September 26, 2024) (SR–ISE–2024–03) (Notice of Filing of Amendment Nos. 4 and 5 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment Nos. 1, 4, and 5, To Permit the Listing and Trading of Options on the iShares Bitcoin Trust) (''IBIT Approval Order'').

[6] *See* Notice 2024–062, dated November 26, 2024 (Bitcoin ETP Options), available at: *https://boxexchange.com/assets/Notice-2024-062-Bitcoin-ETF-Options-Notice1.pdf.*

[7] Per Rule 3140, the exercise limit for IBIT options is the same as the position limit for IBIT options as determined by Rule 3120.

[8] BOX Rule 5055(e) also does not permit FLEX trading on options on Fidelity Wise Origin Bitcoin Fund, ARK 21Shares Bitcoin ETF, Grayscale Bitcoin Trust (BTC), Grayscale Bitcoin Mini Trust BTC, and Bitwise Bitcoin ETF.

[9] BOX offers FLEX Equity Options which are customized options that allow investors to tailor contract terms for exchange-listed options on its trading floor. *See* BOX Rule 7605.

[10] BOX FLEX trading occurs on the Trading Floor, in an open outcry environment. Surveillance staff monitors FLEX trading in open outcry.

[11] The surveillance program includes real-time patterns for price and volume movements and post-trade surveillance patterns (*e.g.,* spoofing, marking the close, phishing).

(as well as FLEX IBIT) on the Exchange. Additionally, the Exchange is a member of the Intermarket Surveillance Group (''ISG'') under the Intermarket Surveillance Group Agreement. ISG members work together to coordinate surveillance and investigative information sharing in the stock, options, and futures markets. For surveillance purposes, the Exchange would therefore have access to information regarding trading activity in the pertinent underlying securities. In addition, the Exchange has a regulatory services agreement with the Financial Industry Regulatory Authority (''FINRA''), pursuant to which FINRA conducts certain surveillances on behalf of the Exchange. Further, pursuant to a multi-party 17d–2 joint plan, all options exchanges allocate regulatory responsibilities to FINRA to conduct certain options-related market surveillances.[12] The Exchange will implement any additional surveillance procedures it deems necessary to effectively monitor the trading of IBIT options.

The proposed rule change is designed to allow investors seeking to trade options on IBIT to utilize FLEX IBIT options. The Exchange believes that offering innovative products flows to the benefit of the investing public. A robust and competitive market requires that exchanges respond to Participants' evolving needs by constantly improving their offerings. Such efforts would be stymied if exchanges were prohibited from offering innovative products such as the proposed FLEX IBIT options. The Exchange believes that introducing FLEX IBIT options would further broaden the base of investors that use FLEX Equity Options (and options on IBIT in general) to manage their trading and investment risk, including investors that currently trade in the OTC market for customized options. The proposed rule change is also designed to encourage market makers to shift liquidity from the OTC market to the Exchange, which, it believes, will enhance the process of price discovery conducted on the Exchange through increased order flow.

2. Statutory Basis

The Exchange believes that the proposal is consistent with the requirements of Section 6(b) of the Securities Exchange Act of 1934 (the ''Act''),[13] in general, and Section 6(b)(5) of the Act,[14] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest. Specifically, the Exchange believes that introducing FLEX IBIT options will increase order flow to the Exchange, increase the variety of options products available for trading, and provide a valuable tool for investors to manage risk. The proposed rule change is designed to allow investors seeking to trade options on IBIT to utilize FLEX IBIT options.

The Exchange believes that the proposal to permit FLEX IBIT options would remove impediments to and perfect the mechanism of a free and open market. The Exchange believes that offering FLEX IBIT options will benefit investors by providing them with an additional, relatively lower cost investing tool to gain exposure to the price of bitcoin and provide a hedging vehicle to meet their investment needs in connection with a bitcoin-related product. Moreover, the proposal would broaden the base of investors that use FLEX Equity Options to manage their trading and investment risk, including investors that currently trade in the OTC market for customized options. By trading a product in an exchange-traded environment (that is currently being used in the OTC market), the Exchange would be able to compete more effectively with the OTC market. The Exchange believes the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that it would lead to the migration of options currently trading in the OTC market to trading to the Exchange. Also, any migration to the Exchange from the OTC market would result in increased market transparency and enhance the process of price discovery conducted on the Exchange through increased order flow. The Exchange also believes that offering FLEX IBIT options may open up the market for options on IBIT to more retail investors. Additionally, offering FLEX IBIT options would serve two primary client types in the capital markets by permitting ETF and structured return issuers to more precisely tailor their settlement style and allow other investors to align their contract durations for calls and puts, as well as settlement-style.

Additionally, the Exchange believes the proposed rule change is designed to remove impediments to and to perfect the mechanism for a free and open market and a national market system, and, in general, to protect investors and the public interest in that it should create greater trading and hedging opportunities and flexibility. The proposed rule change should also result in enhanced efficiency in initiating and closing out positions and heightened contra-party creditworthiness due to the role of OCC as issuer and guarantor of FLEX IBIT options. Further, the proposed rule change would result in increased competition by permitting the Exchange to offer products that are currently used in the OTC market.

The Exchange believes that offering innovative products flows to the benefit of the investing public. A robust and competitive market requires that exchanges respond to evolving needs in the market by constantly improving their offerings. Such efforts would be stymied if exchanges were prohibited from offering innovative products such as the proposed FLEX IBIT options. The Exchange does not believe that allowing FLEX IBIT options would render the marketplace for equity options more susceptible to manipulative practices.

Finally, the Exchange represents that it has an adequate surveillance program in place to detect manipulative trading in FLEX IBIT options. Regarding the proposed FLEX IBIT options, the Exchange would use the same surveillance procedures currently utilized for FLEX Equity Options listed on the Exchange (as well as for non-FLEX IBIT options). The Exchange would review activity in the underlying Trust when conducting surveillances for market abuse or manipulation in the options on the Trust. In light of surveillance measures related to both options and IBIT (the underlying ETF),[15] the Exchange believes that

[12] Section 19(g)(1) of the Act, among other things, requires every SRO registered as a national securities exchange or national securities association to comply with the Act, the rules, and regulations thereunder, and the SRO's own rules, and, absent reasonable justification or excuse enforce compliance by its members and persons associated with its members. *See* 15 U.S.C. 78q(d)(1) and 17 CFR 240.17d–2. Section 17(d)(1) of the Act allows the Commission to relieve an SRO of certain responsibilities with respect to members of the SRO who are also members of another SRO. Specifically, Section 17(d)(1) allows the Commission to relieve an SRO of its responsibilities to: (i) receive regulatory reports from such members; (ii) examine such members for compliance with the Act and the rules and regulations thereunder, and the rules of the SRO; or (iii) carry out other specified regulatory responsibilities with respect to such members.

[13] 15 U.S.C. 78f(b).

[14] 15 U.S.C. 78f(b)(5).

[15] *See* Securities Exchange Act Release No. 99295 (January 8, 2024), 89 FR 2321, 2334–35 (January 12, 2024) (SR–NASDAQ–2023–016) (Notice of Filing of Amendment No. 1 to a Proposed Rule Change To

Continued

existing surveillance procedures are designed to deter and detect possible manipulative behavior which might potentially arise from listing and trading the proposed FLEX IBIT options.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. In this regard and as indicated above, the Exchange notes that the rule change is being proposed as a competitive response to a filing submitted by Nasdaq PHLX that was recently approved by the Commission.[16]

The Exchange does not believe that its proposed rule change will impose any burden on intra-market competition as all market participants would have the option of utilizing the FLEX IBIT options. The proposed rule change is designed to allow investors seeking option exposure to bitcoin to trade FLEX IBIT options. Moreover, the Exchange believes that the proposal to permit FLEX IBIT options would broaden the base of investors that use FLEX Equity Options to manage their trading and investment risk, including investors that currently trade in the OTC market for customized options.

The Exchange does not believe that its proposed rule change will impose any burden on intermarket competition as all market participants would have the option of utilizing the FLEX IBIT options. The Exchange notes that it operates in a highly competitive market in which market participants can readily direct order flow to competing venues. The proposed rule change would support that intermarket competition by allowing the Exchange to offer additional functionality to Participants. The Exchange believes that the proposed FLEX IBIT options will increase the variety of options products available for trading in general and bitcoin-related products in particular and, as such, will provide a valuable tool for investors to manage risk.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has neither solicited nor received comments on the proposed rule change.

List and Trade Shares of the iShares Bitcoin Trust Under Nasdaq Rule 5711(d)).

[16] *See supra* note 3.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Pursuant to Section 19(b)(3)(A) of the Act [17] and Rule 19b–4(f)(6) [18] thereunder, the Exchange has designated this proposal as one that effects a change that: (i) does not significantly affect the protection of investors or the public interest; (ii) does not impose any significant burden on competition; and (iii) by its terms, does not become operative for 30 days after the date of the filing, or such shorter time as the Commission may designate if consistent with the protection of investors and the public interest.

The Exchange has requested that the Commission waive the 30-day operative delay period. The Exchange stated that waiver of the operative delay is consistent with the protection of investors and the public interest because it will ensure fair competition among the exchanges by allowing the Exchange to offer FLEX trading on IBIT options, without delay, to investors seeking a customized option.

The Commission believes that waiving the 30-day operative delay is consistent with the protection of investors and the public interest because the proposal does not raise any novel regulatory issues and waiver will allow the Exchange to offer FLEX trading on IBIT options, without delay, to investors seeking a customized option. Therefore, the Commission hereby waives the 30-day operative delay and designates the proposed rule change to be operative upon filing.[19]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

[17] 15 U.S.C. 78s(b)(3)(A).

[18] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6)(iii) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[19] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–BOX–2025–29 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–BOX–2025–29. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–BOX–2025–29 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[20]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21981 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

[20] 17 CFR 200.30–3(a)(12), (59).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104294; File No. SR–SAPPHIRE–2025–32]

Self-Regulatory Organizations; MIAX Sapphire, LLC; Notice of Filing of Amendment No. 1 and Order Instituting Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change, as Modified by Amendment No. 1, To Amend Exchange Rule 527

December 2, 2025.

On August 15, 2025, MIAX Sapphire, LLC (''MIAX Sapphire'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'' or ''Exchange Act'') [1] and Rule 19b–4 thereunder,[2] a proposed rule change to amend Exchange Rule 527, Exchange Liability, to provide a one-time accommodation payment to Members for claims arising from the systems difficulties that the Exchange experienced on June 3, 2025 as a result of an operational error. The proposed rule change was published for comment in the **Federal Register** on September 3, 2025.[3] The Commission has received no comment letters on the proposed rule change.

On September 25, 2025, pursuant to Section 19(b)(2) of the Act,[4] the Commission designated a longer period within which to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change.[5] On September 26, 2025, the Exchange filed Amendment No. 1 to the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. Amendment No. 1 amended and replaced the proposed rule change as originally filed and superseded such filing in its entirety. The Commission is publishing this notice and order to solicit comments on the proposed rule change, as modified by Amendment No. 1, from interested persons and to institute proceedings under Section 19(b)(2)(B) of the Act [6] to determine whether to approve or disapprove the proposed rule change, as modified by Amendment No. 1.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend Exchange Rule 527, Exchange Liability, to provide a one-time payment to Members [7] for claims arising from the system difficulties that the Exchange experienced on June 3, 2025 as a result of an operational error (referred to herein as the ''Operational Error''). Upon approval of this proposal by the U.S. Securities and Exchange Commission (the ''Commission''), the Exchange will implement the payment process described in proposed subparagraph (e) to Exchange Rule 527 and expects to fully compensate all Members that incurred a loss validated by the Exchange as a result of the Operational Error (described in more detail below). The Exchange initially submitted this rule filing (SR–SAPPHIRE–2025–32) to the Commission on August 15, 2025 (the ''Initial Rule Filing''). This Amendment No. 1 supersedes the Initial Rule Filing and replaces it in its entirety.

The text of the proposed rule change is available on the Exchange's website at *https://www.miaxglobal.com/markets/us-options/miax-sapphire/rule-filings* and at the Exchange's principal office.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

On June 3, 2025, the Exchange experienced system difficulties as a result of the Operational Error, which caused the Exchange's simulation/testing environment to connect to the MIAX Sapphire production ports and inject data into the MIAX Sapphire matching engines in the live trading environment. Upon discovery of this issue, trading in all symbols on the Exchange was halted at 11:49 a.m.[8] and the Exchange published a Trading Alert at 11:53 a.m. to announce the trading halt. In the interest of ensuring fair and orderly markets and for the protection of investors, the Exchange determined that it would cancel all trades that occurred between approximately 11:18 a.m. and 11:33 a.m. (the ''Timeframe'').[9] Members were notified at 1:07 p.m. that all trades during that time period would be canceled. By 1:54 p.m., the Exchange provided all impacted Members with specific trade details relating to their canceled trades. The Exchange fully remediated the issue and all trading systems began operating normally that same day. The Exchange issued several alerts throughout this period, including alerts to announce the halt, that the Exchange would cancel all trades, the time when the Exchange would resume trading, the time for Members to submit claims for losses, and a post mortem of the Operational Error.[10]

Since the June 3, 2025 Operational Error, Members compiled their trade data showing losses as a result of the Operational Error and the Exchange canceling all trades during the Timeframe. The Exchange reviewed the events of June 3, 2025 with the goal of proposing a fair and equitable payment policy that is consistent with the Exchange Act and MIAX Sapphire's

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities and Exchange Act Release No. 103795 (Aug. 28, 2025), 90 FR 42651.

[4] 15 U.S.C. 78s(b)(2).

[5] *See* Securities Exchange Act Release No. 104050, 90 FR 47008 (Sept. 30, 2025). The Commission designated December 2, 2025, as the date by which the Commission shall approve or disapprove, or institute proceedings to determine whether to disapprove, the proposed rule change.

[6] 15 U.S.C. 78s(b)(2)(B).

[7] The term ''Member'' means an individual or organization that is registered with the Exchange pursuant to Chapter II of the Exchange's Rules for purposes of trading on the Exchange as an ''Electronic Exchange Member'' or ''Market Maker.'' Members are deemed ''members'' under the Exchange Act. *See* Exchange Rule 100.

[8] All times referenced in this filing are in Eastern Standard Time.

[9] The Exchange canceled these trades under the authority provided by Exchange Rule 523, Authority to Take Action Under Emergency Conditions. *See* Exchange Rule 523(a) (providing that the ''Chairman of the Board . . . shall have the power to halt or suspend trading . . . for the maintenance of a fair and orderly market or the protection of investors . . . due to emergency conditions . . . such as (1) . . . loss or interruption of facilities utilized by the Exchange . . .'').

[10] *See* Regulatory, Technical and Trading Alerts issued by the Exchange on June 3, 2025 and June 4, 2025, *available at https://miaxglobal.com/alert/2025/06/03/miax-sapphire-options-exchange-halted-all-symbols-114929-am; https://www.miaxglobal.com/alert/2025/06/03/miax-sapphire-options-exchange-busting-all-trades-between-111828506201536; https://www.miaxglobal.com/alert/2025/06/03/miax-sapphire-options-exchange-will-resume-trading-230-pm; https://www.miaxglobal.com/alert/2025/06/03/miax-sapphire-options-exchange-all-trades-busted-between-111828506201536; https://www.miaxglobal.com/alert/2025/06/03/miax-sapphire-options-claims-related-issue-today-sapphire-options;* and *https://www.miaxglobal.com/alert/2025/06/04/miax-sapphire-options-exchange-post-mortem.*

self-regulatory obligations. The Exchange believes this proposal reflects MIAX Sapphire's effort to: (i) identify the categories of investors and Members that the Operational Error caused objective, discernible harm, and the type and scope of such harm; and (ii) propose an objectively reasonable and balanced payment plan for paying Members and their investor customers for such harm by providing a payment in excess of the Exchange's current rules regarding limitation of liability. MIAX Sapphire has undertaken this effort notwithstanding the liability protections afforded by its contractual limitations of liability and Exchange Rule 527—the rule that MIAX Sapphire proposes to modify.

The Exchange's current limitation of liability rules, described in detail below, limit the maximum amount of compensation Members are able to receive from the Exchange arising out of a system issue that impacts the use or enjoyment of the facilities or services afforded by the Exchange, such as the Operational Error. In the interest of protecting Members and their investor customers,[11] the Exchange proposes to amend Exchange Rule 527 to provide a one-time voluntary payment for claims arising from the June 3, 2025 Operational Error.

This type of payment plan is not without precedent. In 2012, the Nasdaq Stock Market LLC (''Nasdaq'') experienced system difficulties in the Nasdaq halt and imbalance cross process in connection with the initial public offering (''IPO'') of Facebook, Inc. (''Facebook''). In response, Nasdaq filed with the Commission a proposal to establish a payment policy providing compensation for impacted investors in excess of Nasdaq's then-applicable limitation of liability rules, which proposal was approved by the Commission.[12]

[11] The majority of claims are from customers of Member firms who utilize a Member firm as their introducing broker to access and submit orders to the Exchange for execution.

[12] *See* Securities Exchange Act Release No. 69216 (March 22, 2013), 78 FR 19040 (March 28, 2013) (SR–NASDAQ–2012–090); *see also* Nasdaq Rules, Equity 2, Section 17. The Exchange's proposal differs from the Nasdaq payment filing in several minor respects but ultimately provides a substantively similar payment plan for Members impacted by the Operational Error to be compensated in excess of the Exchange's current limitation of liability limits. Nasdaq also undertook a two-step process to compensate its members and customers by first proposing the payment policy and then filing a separate rule proposal with the Commission to implement the payment policy. *See* Securities Exchange Act Release No. 71098 (December 17, 2023), 78 FR 77540 (December 23, 2013) (SR–NASDAQ–2013–152). The Exchange proposes a single-step process since the Exchange has already received and validated all claims from Members that were impacted by the Operational Error; brought the proposed payment plan and total value of eligible claims to its Board of Directors for approval; and is ready to promptly compensate Members for their validated claims upon approval of this proposal by the Commission.

Current Limitation of Liability Provisions

Exchange Rule 527(a) describes the general limitations on liability of the Exchange, its directors, officers, committee members, limited liability company members, employees or agents. Exchange Rule 527(a) provides, in relevant part, that except as provided in paragraph (b) of Exchange Rule 527 or otherwise expressly provided in the Exchange's rules, neither the Exchange nor its directors, officers, committee members, limited liability company members, employees or agents shall be liable to Members or persons associated therewith for any loss, expense, damages, or other claims arising out of the use or enjoyment of the facilities or services afforded by the Exchange, including the interruption in or failure or unavailability of such facilities or services, or any action taken or omitted in respect to the business of the Exchange. Exchange Rule 527(a) provides limited exceptions to these limitations in connection with Exchange employee acts where the extent of such loss, expense, damages or claims are attributable to the willful misconduct, gross negligence, bad faith or fraudulent or criminal acts of the Exchange or its officers, employees or agents acting within the scope of their authority.

Exchange Rule 527(b) further describes exceptions to the Exchange's general limitation of liability rule that allows for the payment of compensation to Members for Exchange System [13] issues, subject to certain conditions, which limit the maximum amount of Exchange liability. The exceptions under Exchange Rule 527(b) apply whenever custody of an unexecuted order [14] or quote [15] is transmitted by a Member to or through the Exchange's System or to any other automated facility of the Exchange whereby the Exchange assumes responsibility for the transmission or execution of the order or quote, provided that the Exchange has acknowledged receipt of such order or quote.

Subparagraphs (b)(1) through (b)(3) of Exchange Rule 527 set forth the limits for claims made by Members, individually and in the aggregate, related to Exchange System issues that impact the use or enjoyment of the facilities of the Exchange. The liability limits provided for in Exchange Rules 527(b)(1)–(3) are as follows: (1) as to any one or more claims made by a single Member growing out of the use or enjoyment of the facilities afforded by the Exchange on a single trading day, the Exchange shall not be liable in excess of the larger of $100,000 or the amount of any recovery obtained by the Exchange under any applicable insurance maintained by the Exchange; (2) as to the aggregate of all claims made by all Members growing out of the use or enjoyment of the facilities afforded by the Exchange on a single trading day, the Exchange shall not be liable in excess of the larger of $250,000 or the amount of the recovery obtained by the Exchange under any applicable insurance maintained by the Exchange; and (3) as to the aggregate of all claims made by all Members growing out of the use or enjoyment of the facilities afforded by the Exchange during a single calendar month, the Exchange shall not be liable in excess of the larger of $500,000 or the amount of the recovery obtained by the Exchange under any applicable insurance maintained by the Exchange.

Exchange Rule 527(c) provides that if all of the claims arising out of the use or enjoyment of the facilities afforded by the Exchange cannot be fully satisfied because, in the aggregate, they exceed the applicable maximum amount of liability provided for in subparagraph (b) of Exchange Rule 527, then such maximum amount shall be allocated among all such claims arising on a single trading day or during a single calendar month, as applicable, based upon the proportion that each claim bears to the sum of all claims. Subparagraph (c) further provides that in order for claims to be included in this allocation, Members must submit written notice of their claim to the Exchange no later than the opening of trading on the next business day following the day on which the use or enjoyment of Exchange facilities giving rise to the claim occurred.

Background of the Operational Error and Calculation of Losses

As described above, due to the Operational Error on June 3, 2025, the Exchange determined to cancel all trades executed on MIAX Sapphire

[13] The term ''System'' means the automated trading system used by the Exchange for the trading of securities. *See* Exchange Rule 100.

[14] The term ''order'' means a firm commitment to buy or sell option contracts. *See* Exchange Rule 100.

[15] The term ''quote'' or ''quotation'' means a bid or offer entered by a Market Maker as a firm order that updates the Market Maker's previous bid or offer, if any. When the term order is used in these Rules and a bid or offer is entered by the Market Maker in the option series to which such Market Maker is registered, such order shall, as applicable, constitute a quote or quotation for purposes of these Rules. *See* Exchange Rule 100.

between 11:18 a.m. and 11:33 a.m. Upon learning of the Operational Error, members of the Exchange's Regulatory Operations Department contacted all Members to discuss the Operational Error, the Exchange's proposed method of remedying trades based on erroneous simulation/testing environment data, and the manner in which Members should submit claims for compensation. Members were advised to immediately contact their customers and to compile execution reports for trades made during the Timeframe of the Operational Error as well as execution reports for ''replacement trades'' [16] made following the Timeframe of the Operational Error to fulfill the original terms of the trades that the Exchange canceled. In some instances, Members executed new valid trades at away-exchanges. Some Members executed the new valid trade several days following the Operational Error as some of their customers did not learn of the cancelations until they logged back into their brokerage accounts.[17] Members summed the difference between the execution price of the canceled trade on MIAX Sapphire and the execution price for the replacement trade made on MIAX Sapphire or at an away-exchange and then provided such information to the Exchange. This information included the following for each original trade that was cancelled by the Exchange that took place during the Timeframe of the Operational Error and each replacement trade: (A) trade date; (B) execution time; (C) symbol; (D) strike price; (E) expiration date; (F) side (buy or sell); (G) quantity; (H) venue (on MIAX Sapphire or an away-exchange); (I) notional value; and (J) claimed loss amount.

After receipt of all Members' claims over the course of several weeks, Exchange officials reviewed each claimed loss by validating the canceled trade execution prices reported during the Timeframe of the Operational Error and the execution prices of the subsequent replacement trades. For trading losses that resulted from a Member executing the replacement trade on MIAX Sapphire, the Exchange: (A) first validated that the canceled trade took place on MIAX Sapphire during the Timeframe of the Operational Error based on the Member's MPID; [18] (B) validated the execution price of the canceled trade; (C) validated that the replacement trade took place on MIAX Sapphire; and (D) validated the execution price of the replacement trade. The measure of loss was calculated based on the difference between the execution price of the canceled trade and the execution price of the replacement trade.

For trading losses that resulted from a Member executing the replacement trade on an away-exchange, the Exchange: (A) first validated that the canceled trade took place on MIAX Sapphire during the Timeframe of the Operational Error based on the Member's MPID; (B) validated the execution price of the canceled trade; and (C) validated the execution price of the replacement trade by comparing such price against the closing or opening price of the option, depending on the time of execution, as well as the size of the replacement trade in comparison to the original trade that was canceled. The measure of loss was calculated based on the difference between the execution price of the canceled trade and the execution price of the replacement trade.

The Exchange determined to use the closing or opening price of the option for replacement trades executed on away-exchanges as an initial check to determine whether the claimed replacement trade execution price was within a reasonable range for that particular option. As described above, the Exchange issued an alert to inform all Members that it would cancel all trades during the Timeframe of the Operational Error on June 3, 2025 at 1:07 p.m. At 1:54 p.m., the Exchange notified Members of the specific trade details for their canceled trades. As a result, the Exchange believes that customers of Members may not have been aware of the Operational Error until a day or two (or longer) following the Operational Error, thereby not executing the replacement trade until that time.[19] Exchange officials utilized closing and opening options trade prices between June 3, 2025 and June 6, 2025,[20] depending on the date when Members executed the replacement trades, as a reasonable baseline to compare against replacement values supplied by the Members to validate the claimed losses. In particular, if the replacement trade took place a day or more after the Operational Error, Exchange officials were able to utilize the Cboe Exchange, Inc. LiveVol® analytics platform to filter options executions by price and day to determine if the claimed replacement trade execution price and size aligned with trade executions in the same option series and size at the later date and, if so, the new execution price. The Exchange did not unilaterally adjust any individual claim submitted by a Member. During the review and validation process by Exchange officials, if it was determined a claim amount could not be independently validated in an objective manner, an Exchange official contacted the Member to obtain the necessary information to make such validation. The Exchange did not make any subjective determination regarding each Member's claim. The Exchange's Regulatory Operations Department followed up with all Members and received all claims from Members, including the total value of such claims, all of which were validated by Exchange officials using the methodology described above. In total, the Exchange's Regulatory Operations Department reviewed and validated over 2,200 claims that occurred during the Operational Error, all of which are eligible to be compensated.

Proposal

The Exchange now proposes to amend Exchange Rule 527 to provide a one-time payment for Members with claims arising from the Operational Error that the Exchange experienced on June 3, 2025 that exceed the limitations provided for in Exchange Rule 527(b)(1)–(3), including the amount of compensation on a per-Member basis. The modifications proposed in this rule change are not intended to and do not affect the limitations of liability set forth in the Exchange's agreements or Commission-sanctioned rules, or those limitations or immunities that bar claims for damages against MIAX Sapphire as a matter of law. Rather, as noted above, they reflect the Exchange's determination to adopt a fair and equitable payment policy that takes into account the impacts of the Exchange's Operational Error on Members and their investor customers.

The Exchange proposes to establish new paragraph (e), which will state that notwithstanding paragraphs (b)(1)–(3)

[16] For the purposes of this filing and the proposed new rule text, unless stated otherwise, the term ''replacement trade'' shall be construed to mean the new trade executed by a Member on MIAX Sapphire or at an away-exchange that was executed to replace the original trade that was canceled by MIAX Sapphire during the Timeframe of the Operational Error. *See* proposed Exchange Rule 527(e)(1)(iii).

[17] For example, the Exchange was made aware that certain retail customers that send orders to an Exchange Member for execution do not routinely check their brokerage accounts and only learned of the canceled trade due to the Operational Error days after originally placing the trade.

[18] The term ''MPID'' means unique market participant identifier. *See* Exchange Rule 100.

[19] *See supra* note 17.

[20] Based on records provided by Members with claimed losses, June 6, 2025 was the latest date that a Member executed a valid replacement trade.

and paragraph (c)[21] of Exchange Rule 527 for the single trading of June 3, 2025 and the full calendar month of June 2025, for the aggregate of all claims alleged by all market participants related to the system difficulties as a result of the Operational Error on June 3, 2025, where the Exchange's simulation/testing environment connected to the production ports (the ''Operational Error''), the total amount of the Exchange's liability shall not exceed $525,000. Further, eligibility of all claims for payment shall be determined in accordance with proposed Exchange Rule 527(e) and only applies to claims previously filed with and validated by the Exchange and no new additional claims will be accepted. As noted above, the Exchange received all claims related to the Operational Error and expects that, subject to Commission approval of this proposal, all Members will be fully compensated for their claims as a result of the Operational Error.

Proposed subparagraph (e)(1) of Exchange Rule 527 will provide that all claims for compensation under this paragraph (e) shall arise solely from realized trading losses from executions that occurred on the Exchange on June 3, 2025 between 11:18 a.m. and 11:33 a.m. Eastern Time that the Exchange subsequently canceled pursuant to Exchange Rule 523, causing Members to execute a new trade on the Exchange or at an away-exchange to replace the canceled trade. The measure of loss was determined by the Exchange pursuant to the methods set forth in proposed subparagraphs (e)(1)(i)–(ii), described below.

Proposed subparagraph (e)(1)(i) of Exchange Rule 527 will provide that for trading losses that resulted from a Member executing the replacement trade on MIAX Sapphire, the Exchange: (A) first validated that the canceled trade took place on MIAX Sapphire during the Timeframe of the Operational Error based on the Member's MPID; (B) validated the execution price of the canceled trade; (C) validated that the replacement trade took place on MIAX Sapphire; and (D) validated the execution price of the replacement trade. The measure of loss was calculated based on the difference between the execution price of the canceled trade and the replacement trade.

Proposed subparagraph (e)(1)(ii) of Exchange Rule 527 will provide that for trading losses that resulted from a Member executing the replacement trade on an away-exchange, the Exchange: (A) first validated that the canceled trade took place on MIAX Sapphire during the Timeframe of the Operational Error based on the Member's MPID; (B) validated the execution price of the canceled trade; and (C) validated the execution price of the replacement trade by comparing such price against the closing or opening price of the option, depending on the time of execution, as well as the size of the replacement trade in comparison to the original trade that was canceled. The measure of loss was calculated based on the difference between the execution price of the canceled trade and the replacement trade.

Proposed subparagraph (e)(1)(iii) of Exchange Rule 527 will provide a definition for the term ''replacement trade,'' as described above.[22]

Proposed subparagraph (e)(2) of Exchange Rule 527 will state that in no event shall the Exchange make any payments on claims pursuant to proposed paragraph (e) until the rule proposal filed with the Commission setting forth the aggregate amount of eligible claims becomes effective and final. The Exchange proposes to make all payments for approved claims in cash.

Proposed subparagraph (e)(3) of Exchange Rule 527 will provide that payments to Members under proposed paragraph (e) are contingent upon the submission to the Exchange of an attestation within 14 calendar days after the effective date of the rule proposal described in proposed paragraph (e)(2), detailing the following for each original trade that was cancelled by the Exchange that took place during the Timeframe of the Operational Error and each replacement trade: (A) trade date; (B) execution time; (C) symbol; (D) strike price; (E) expiration date; (F) side (buy or sell); (G) quantity; (H) venue (on MIAX Sapphire or an away-exchange); (I) notional value; and (J) claimed loss amount. Proposed subparagraph (e)(3) of Exchange Rule 527 will also state that failure to provide the required attestation will void the Member's eligibility to receive a payment pursuant to proposed paragraph (e) of Exchange Rule 527. The Exchange will also require each Member to maintain books and records that detail the nature and amount of these losses.[23]

Proposed subparagraph (e)(4) of Exchange Rule 527 will provide that all payments to Members under proposed paragraph (e) will be contingent upon the execution and delivery to the Exchange of a release by the Member of all claims by it or its affiliates[24] against the Exchange or its affiliates for losses that arise out of, are associated with, or relate in any way to the Operational Error or to any actions or omissions related in any way to the Operational Error. Failure to provide the required release within 14 calendar days after the effective date of the rule proposal described in proposed subparagraph (e)(2) will void the Member's eligibility to receive a payment pursuant to this proposed paragraph (e). The purpose of imposing the release requirement notwithstanding the limitations of liability and immunities, which apply in any event pursuant to the Exchange's rules and agreements and/or otherwise as a matter of law, are to avoid the disruption and expense of unnecessary litigation in connection with the June 3, 2025 Operational Error and to ensure equal treatment of all claimants.[25]

The proposed payment policy proposed herein is a voluntary step taken by the Exchange to provide a substantial and rare payment to its Members and their customers, and participation in the program is likewise voluntary on the part of Members. The Exchange believes this type of occurrence warrants the establishment of a payment plan because, prior to the Operational Error, neither the Exchange nor any of its affiliates experienced a systems issue similar to that of the Operational Error. The Exchange believes that it would be inequitable to approve the Exchange's voluntary program without also allowing it to

[21] As mentioned above, subparagraph (c) of Exchange Rule 527 provides that ''[i]f all of the claims arising out of the use or enjoyment of the facilities afforded by the Exchange cannot be fully satisfied because in the aggregate they exceed the applicable maximum amount of liability provided for in paragraph (b) . . . then such maximum amount shall be allocated among all such claims arising on a single trading day or during a single calendar month, as applicable, *written notice of which has been given to the Exchange no later than the opening of trading on the next business day following the day on which the use or enjoyment of Exchange facilities giving rise to the claim occurred,* based upon the proportion that each such claim bears to the sum of all such claims'' (emphasis added). *See* Exchange Rule 527(c). Accordingly, the Exchange proposes that the notice requirement of Exchange Rule 527(c) will not apply to claims submitted under proposed paragraph (e) to Exchange Rule 527.

[22] *See supra* note 16.

[23] Nasdaq included similar requirements in its payment policy and rule text related to the Facebook IPO system issues. *See* Nasdaq Rules, Equity 2, Section 17(b)(3)(I)(i).

[24] The term ''affiliate'' of or person ''affiliated with'' another person means a person who, directly, or indirectly, controls, is controlled by, or is under common control with, such other person. *See* Exchange Rule 100.

[25] Nasdaq also included a similar release requirement in its payment policy and rule text related to the Facebook IPO system issues. *See* Nasdaq Rules, Equity 2, Section 17(b)(3)(H).

establish conditions that promote certainty and finality.[26]

The Exchange notes that it has received all claims that apply to the Operational Error and that no new additional claims will be accepted. As described above, immediately following the June 3, 2025 Operational Error, the Exchange's Regulatory Operations Department spoke to each Member to discuss the Operational Error, the Exchange's proposed method of remedying trades based on erroneous simulation/testing environment data and the manner in which Members should submit claims for compensation. The Exchange independently verified each Member's claim and confirmed the loss amount with each Member prior to submitting this rule filing. The Exchange believes its proposal is designed to implement a fair and equitable payment policy that takes into account the impacts of the Operational Error on the investing public and Exchange Members.

The total claims received by the Exchange and validated equal approximately $500,000.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,[27] in general, and furthers the objectives of Section 6(b)(5) of the Act,[28] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, promote just and equitable principles of trade, foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, protect investors and the public interest. The Exchange also believes the proposed rule change is consistent with the Section 6(b)(5)[29] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

The Exchange believes that the proposal to expand its limitation of liability payment policy in this unique set of circumstances will balance several important goals in keeping with the foregoing statutory objectives. First, the Exchange acknowledges that the June 3, 2025 Operational Error had an impact on certain of its Members and their customers. As a result, the Exchange believes that the public interest would be served by a payment policy that quantifies and provides compensation for customer losses that were directly attributable to those system issues in an objectively discernible manner. Specifically, the Exchange believes that the public interest would be served by the Exchange making payments in excess of its limitation of liability rules to fully compensate Members that provided details regarding their claimed losses as a result of the Operational Error in an objectively discernible manner. The Exchange further believes that the public interest would be served by the Exchange providing as a payment the loss differential for the trade execution canceled by MIAX Sapphire and the replacement trade—that is the difference between the price that was expected upon execution on MIAX Sapphire during the Timeframe of the Operational Error and the subsequent execution price for the replacement trade that was actually obtained on the Exchange or at an away-exchange.

Second, the Exchange believes that it is important to recognize the regulatory policy objectives underlying Exchange Rule 527 and ensure that they are not compromised. Hundreds of billions of dollars (or more) of securities transactions are matched through the systems of the Exchange and other exchanges every day. Through the operation of those systems, exchanges provide invaluable services in support of capital formation, price discovery, and investor protection. If exchanges could be called upon to bear all costs associated with system malfunctions and the varying reactions of market participants taken in their wake, the potential would exist for a single catastrophic event to bankrupt one or multiple exchanges, with attendant consequences for investor confidence and macroeconomic stability. Alternatively, the cost of providing exchange services would have to rise dramatically for all investors to cover this material and new risk.[30] In addition, exchanges would be less inclined to implement innovative systems[31] consistent with the goals of Section 6(b)(5) of the Act.[32] Accordingly, the Commission has recognized that it is consistent with the purposes of the Act for a self-regulatory organization to limit its liability with respect to the use of such facilities by its members through rules such as Exchange Rule 527.[33]

Moreover, if the potential for such catastrophic losses existed, as noted above, it would need to be reflected in the fees charged by exchanges to market participants in a manner that is not currently the case, making trading more expensive for all investors all the time. Rather, as the Commission has recognized, provisions such as Exchange Rule 527 reflect the view that risks associated with system malfunctions should be allocated among all exchange members, rather than being borne solely by the exchange. Indeed, this view is consistently reflected in the limitation of liability rules common among United States exchanges.[34] This view is also reflected in the Exchange's proposal to condition any payment on

[26] *See* Securities Exchange Act Release No. 69216 (March 22, 2013), 78 FR 19040 (March 28, 2013) (SR–NASDAQ–2012–090). In the approval order for the payment plan that Nasdaq proposed for its systems issues related to the Facebook IPO, the Commission approved similar conditions as proposed herein in order for Nasdaq members to be compensated for their claims.

[27] 15 U.S.C. 78f(b).

[28] 15 U.S.C. 78f(b)(5).

[29] *Id.*

[30] *See* Securities Exchange Act Release No. 67507 (July 26, 2012), 77 FR 45706 (August 1, 2012) (SR–NASDAQ–2012–090) (Notice of Filing of Proposed Rule Change to Amend Rule 4626—Limitation of Liability). Nasdaq stated in their filing that trading costs in the United States are among the lowest in the world, and thus a contributor to economic growth. *Id.* The Nasdaq filing cites the following sources as examples for this assertion: Michael S. Pagano, *Which Factors Influence Trading Costs in Global Equity Markets?,* THE J. OF TRADING, Winter 2009, at 7; Ian Domowitz et al., *Liquidity, Volatility, and Equity Trading Costs Across Countries and Over Time,* 4 INT'L FIN. 221 (Summer 2001); Asli Demirgüç-Kunt & Ross Levine, *Bank-based and Market-based Financial Systems: Cross-country Comparisons* 51 (The World Bank Working Paper No. 2143, July 1999). *Id.*

[31] *See* Securities Exchange Act Release No. 14777 (May 17, 1978) (SR–CBOE–78–14) (in proposing a limitation on liability, the Cboe Exchange, Inc. explained that an exchange ''cannot proceed with innovative systems and procedures for the execution, clearance, and settlement of Exchange transactions . . . unless it is protected against losses which might be incurred by members as a result of their use of such systems,'' and further that ''[t]o the extent [a limitation of liability rule] enables the Exchange to proceed with innovative systems, competition should be enhanced''); *see also* Securities Exchange Act Release No. 58137 (July 10, 2008), 73 FR 41145 (July 17, 2008) (SR–NYSE–2008–55) (explaining that exchange's limitation of liability rule encourages vendors to provide services to the exchange, which results in faster and more innovative products for order entry, execution, and dissemination of market information).

[32] 15 U.S.C. 78f(b)(5) (requiring that an exchange's rules be ''designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest; and not [be] designed to permit unfair discrimination between customers, issuers, brokers, or dealers, or to regulate by virtue of any authority conferred by this chapter matters not related to the purposes of this chapter or the administration of the exchange'').

[33] *See, e.g.,* Cboe Rule 1.10; Cboe EDGX Rule 11.14; Cboe BZX Rule 11.16; BOX Rule 7230; Nasdaq Rules, Equity 2, Section 17.

[34] *Id.*

the execution of a release of claims against MIAX Sapphire for the Operational Error experienced on June 3, 2025, because this condition is aimed at avoiding unnecessary litigation and ensuring equal treatment of all claimants.

The Exchange further believes that, consistent with Section 6(b)(5) of the Act,[35] its proposal will promote just and equitable principles of trade and protect investors and the public interest by establishing a fair process through which affected Members may be compensated for the claims they submitted, which losses will be fully covered by the proposed payment policy. The Exchange believes that this filing will enhance the transparency of the process to compensate Members for their losses. The Exchange further believes that its proposed process for distributing payments will benefit investors and promote the public interest by providing incentives for Members to use funds for the benefit of investors. Specifically, the Exchange believes that its proposal will benefit investors and promote the public interest by requiring a claimant to submit to the Exchange an attestation detailing the compensation the Member has provided or will provide to its customers, and detailing the extent to which the Member incurred the losses covered by the proposed payment when trading for its own account.

As described above, this type of proposal is not without precedent and is based on the payment plan implemented by Nasdaq in 2012 for system difficulties in the Nasdaq halt and imbalance cross process in connection with the IPO of Facebook.[36]

B. Self-Regulatory Organization's Statement on Burden on Competition

The proposed rule change would not impose any burden on competition. The proposed rule change is designed to promote fairness in the marketplace by providing compensation to Members and their customers that experienced a loss as a result of the June 3, 2025 Operational Error. The Exchange believes that the proposed rule change will not burden intra-market competition because all Members would be subject to the same standards and requirements to receive payments as set forth in proposed Exchange Rule 527(e). The Exchange believes that the proposed rule change will not burden inter-market competition because the proposed rule change is not designed to address any competitive issues.

[35] 15 U.S.C. 78f(b)(5).

[36] *See supra* note 12.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Proceedings To Determine Whether To Approve or Disapprove SR–SAPPHIRE–2025–32, as Modified by Amendment No. 1, and Grounds for Disapproval Under Consideration

The Commission is instituting proceedings pursuant to Section 19(b)(2)(B) of the Act[37] to determine whether the proposed rule change, as modified by Amendment No. 1, should be approved or disapproved. Institution of proceedings is appropriate at this time in view of the legal and policy issues raised by the proposal. Institution of proceedings does not indicate that the Commission has reached any conclusions with respect to any of the issues involved. Rather, the Commission seeks and encourages interested persons to provide comments on the proposal to inform the Commission's analysis of whether to approve or disapprove the proposed rule change, as modified by Amendment No.1.

Pursuant to Section 19(b)(2) of the Act,[38] the Commission is providing notice of the grounds for disapproval under consideration. The Commission is instituting proceedings to allow for additional analysis of the proposed rule change's consistency with Section 6(b)(5) of the Act,[39] which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest, and not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.[40]

The Commission asks that commenters address the sufficiency of the Exchange's statements in support of the proposal, in addition to any other comments they may wish to submit regarding the proposal, as modified by Amendment No. 1. In particular, the Commission seeks comment on whether the proposal to amend Exchange Rule 527 to provide a one-time accommodation payment to Members for claims arising from an operation error on June 3, 2025, in excess of the liability limits set forth in Exchange Rule 527 for claims made by Members, is consistent with the requirements of Section 6(b)(5) of the Act.

[37] 15 U.S.C. 78s(b)(2)(B).

[38] 15 U.S.C. 78s(b)(2)(B).

[39] 15 U.S.C. 78f(b)(5).

[40] *Id.*

IV. Procedure: Request for Written Comments

The Commission requests that interested persons provide written submissions of their views, data, and arguments with respect to the issues identified above, as well as any other concerns they may have with the proposal, as modified by Amendment No. 1. In particular, the Commission invites the written views of interested persons concerning whether the proposed rule change is consistent with Section 6(b)(5) of the Act[41] or any other provision of the Act, or the rules and regulations thereunder. Although there do not appear to be any issues relevant to approval or disapproval that would be facilitated by an oral presentation of data, views, and arguments, the Commission will consider, pursuant to Rule 19b–4 under the Act,[42] any request for an opportunity to make an oral presentation.[43]

Interested persons are invited to submit written data, views, and arguments regarding whether the proposed rule change, as modified by Amendment No. 1, should be approved or disapproved by December 26, 2025. Any person who wishes to file a rebuttal to any other person's submission must file that rebuttal by January 9, 2026.

Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–SAPPHIRE–2025–32 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange

[41] 15 U.S.C. 78f(b)(5).

[42] 17 CFR 240.19b–4.

[43] Section 19(b)(2) of the Exchange Act, as amended by the Securities Acts Amendments of 1975, Public Law 94–29 (June 4, 1975), grants to the Commission flexibility to determine what type of proceeding—either oral or notice and opportunity for written comments—is appropriate for consideration of a particular proposal by a self-regulatory organization. *See* Securities Acts Amendments of 1975, Senate Comm. on Banking, Housing & Urban Affairs, S. Rep. No. 75, 94th Cong., 1st Sess. 30 (1975).

Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–SAPPHIRE–2025–32. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–SAPPHIRE–2025–32 and should be submitted on or before December 26, 2025. Rebuttal comments should be submitted by January 9, 2026.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[44]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21990 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104283; File No. SR–BOX–2025–30]

Self-Regulatory Organizations; BOX Exchange LLC; Notice of Filing of Proposed Rule Change To Amend BOX Rule 5055 (FLEX Equity Options) To Permit FLEX Equity Options on the Grayscale Bitcoin Trust, the Grayscale Bitcoin Mini Trust, and the Bitwise Bitcoin ETF

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 17, 2025, BOX Exchange LLC (''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend BOX Rule 5055 (FLEX Equity Options) to permit FLEX Equity Options on the Grayscale Bitcoin Trust, the Grayscale Bitcoin Mini Trust, and the Bitwise Bitcoin ETF. The text of the proposed rule change is available from the principal office of the Exchange, at the Commission's Public Reference Room and also on the Exchange's internet website at *https://rules.boxexchange.com/rulefilings.*

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend BOX Rule 5055 (FLEX Equity Options) to permit the Grayscale Bitcoin Trust (''GBTC''), the Grayscale Bitcoin Mini Trust ETF (''BTC''), and the Bitwise Bitcoin ETF (''BITB'') (each a ''Fund'' and, collectively, the ''Funds'') to trade as FLEX Equity Options and to require the aggregation of any FLEX and non-FLEX positions on the same underlying ETF for purposes of calculating position and exercise limits as set forth in Rules 3120 and 3140.[3] This is a competitive filing that is based on a proposal recently submitted by NYSE American LLC (''NYSE American'') and approved by the Commission.[4]

Background

Each Fund is an ETF that holds bitcoin and is listed on NYSE Arca, Inc. (''NYSE Arca'').[5] Recently, the Commission approved options trading on the Funds.[6] For each Fund, the position and exercise limits are determined pursuant to Rules 3120 and 3140.[7] FLEX Equity Options are not generally subject to position or exercise limits.[8] Today, pursuant to Rule 5055(e), Fund options are not approved for FLEX trading.[9] Therefore, the position and exercise limits applicable to options on each Fund currently apply solely to non-FLEX Fund options.

Proposal

The Exchange proposes to permit options on each Fund to trade as FLEX Equity Options and would require the aggregation of any FLEX and non-FLEX positions in the same underlying Fund for purposes of calculating the position and exercise limits applicable to each Fund.[10] Thus, for example, assuming a 250,000-contract position limit for options on BTC, the Exchange would restrict a market participant from holding positions that could result in the receipt of more than 250,000,000 shares (if that market participant exercised all its BTC options). Further, the Exchange believes that the share creation and redemption process unique to ETFs would mitigate any potential risk of manipulation in FLEX Fund Options. The creation and redemption process available to each ETF is designed to ensure that an ETF's price closely tracks the value of its underlying asset(s). For example, if a market participant exercised a long call position for 25,000 contracts and

[44] 17 CFR 200.30–3(a)(12); 17 CFR 200.30–3(a)(57).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] FLEX Equity Options are customized equity contracts that allow investors to tailor contract terms for exchange-listed equity options. *See generally* BOX Rule 5055 (FLEX Equity Options).

[4] *See* Securities Exchange Act Release No. 103566 (July 29, 2025), 90 FR 36250 (August 1, 2025) (SR–NYSEAMER–2024–78) (Order Approving a Proposed Rule Change, as Modified by Amendment No. 1, to Permit the Trading of FLEX Options on Shares of the Grayscale Bitcoin Trust, the Grayscale Bitcoin Mini Trust ETF, and the Bitwise Bitcoin ETF).

[5] NYSE Arca received approval to list and trade Bitcoin-Based Commodity-Based Trust Shares in GBTC, BTC, and BITB pursuant to NYSE Arca Rule 8.201–E(c)(1). *See* Securities Exchange Act Release Nos. 99306 (January 10, 2024) (Order Granting Accelerated Approval of Proposed Rule Changes, as Modified by Amendments Thereto, to list and trade options in GBTC and BITB), 89 FR 3008 (January 17, 2024) (SR–NYSEARCA–2021–90); 100610 (July 26, 2024) (Order Granting Approval of Proposed Rule Changes, as Modified by Amendment No. 1, to permit the listing and trading of options on BTC), 89 FR 62821 (August 1, 2024) (SR–NYSEARCA–2023–45) [sic].

[6] *See* Securities Exchange Act Release No. 101386 (October 18, 2024), 89 FR 84960 (October 24, 2024) (SR–NYSEAMER–2024–49) (Order approving the listing and trading of options on GBTC, BTC, and BITB, pursuant to Rule 915, Commentary .10(a) (the ''Fund Options Approval Order'').

[7] Per Rule 3140, the exercise limit for options on each Fund is the same as the position limit for that Fund as determined by Rule 3120. *See* BOX Rules 3120 and 3140.

[8] *See* BOX Rule 5055(i).

[9] Rule 5055(e) also does not permit FLEX trading on options on FBTC and ARKB.

[10] *See* proposed Rules 5055(e) and (i).

purchased 2,500,000 shares of GBTC and this purchase resulted in the value of GBTC shares to trade at a premium to the value of the (underlying) bitcoin held by GBTC, the Exchange believes that other market participants would attempt to arbitrage this price difference by selling short GBTC shares while concurrently purchasing bitcoin. Those market participants (arbitrageurs) would then deliver cash to GBTC and receive shares of GBTC, which would be used to close out any previously established short position in GBTC. Thus, this creation and redemptions process would significantly reduce the potential risk of price dislocation between the value of shares in each Fund and the value of bitcoin holdings.

The Exchange understands that FLEX options on ETFs are currently traded in the over-the-counter (''OTC'') market by a variety of market participants, *e.g.,* hedge funds, proprietary trading firms, and pension funds, to name a few. The Exchange believes there is room for significant growth if a comparable product were introduced for trading on a regulated market. The Exchange expects that users of these OTC products would be among the primary users of FLEX Fund Options. The Exchange also believes that the trading of FLEX Fund Options would allow these same market participants to better manage the risk associated with the volatility of positions in the underlying ETF (*i.e.,* GBTC, BTC, or BITB) given the enhanced liquidity that an exchange-traded product would bring. Additionally, the Exchange believes that FLEX Fund Options traded on the Exchange would have three important advantages over the contracts that are traded in the OTC market. First, as a result of greater standardization of contract terms, exchange-traded contracts should develop more liquidity. Second, counter-party credit risk would be mitigated by the fact that the contracts are issued and guaranteed by The Options Clearing Corporation (''OCC''). Finally, the price discovery and dissemination provided by the Exchange and its members would lead to more transparent markets. The Exchange believes that its ability to offer FLEX Fund Options would aid it in competing with the OTC market and at the same time expand the universe of products available to interested market participants. The Exchange believes that an exchange-traded alternative may provide a useful risk management and trading vehicle for market participants and their customers.

The Exchange has analyzed its capacity and represents that it and The Options Price Reporting Authority (''OPRA'') have the necessary systems capacity to handle the additional traffic associated with the listing of FLEX Fund Options. The Exchange believes any additional traffic that would be generated from the trading of FLEX Fund Options would be manageable. The Exchange believes Participants will not have a capacity issue as a result of this proposed rule change. The Exchange will monitor the trading volume associated with the additional options series listed as a result of this proposed rule change and the effect (if any) of these additional series on the capacity of the Exchange's automated systems.

The Exchange represents that the same surveillance procedures applicable to the Exchange's other options products listed and traded on the Exchange, including non-FLEX options in each Fund, will apply to FLEX Fund Options, and that it has the necessary systems capacity to support such options. The Exchange believes that its surveillance procedures are adequate to properly monitor the trading of options on the Funds and to deter and detect violations of Exchange rules. FLEX options products (and their respective symbols) are integrated into the Exchange's existing surveillance system architecture and are thus subject to the relevant surveillance processes. The Exchange does not believe that allowing FLEX Fund Options would render the marketplace for non-FLEX options in any of the Funds, or equity options in general, more susceptible to manipulative practices.

The Exchange represents that its existing trading surveillances are adequate to monitor the trading in GBTC, BTC, and BITB, as well as any subsequent trading of FLEX Fund Options on the Exchange. Additionally, the Exchange is a member of the Intermarket Surveillance Group (''ISG'') under the ISG Agreement. ISG members work together to coordinate surveillance and investigative information sharing in the stock, options, and futures markets. For surveillance purposes, the Exchange would therefore have access to information regarding trading activity in GBTC, BTC, and BITB and in other pertinent underlying securities on other exchanges through ISG. In addition, the Exchange has a regulatory services agreement with the Financial Industry Regulatory Authority (''FINRA''), pursuant to which FINRA conducts certain surveillances on behalf of the Exchange. Further, pursuant to a multi-party 17d–2 joint plan, all options exchanges allocate regulatory responsibilities to FINRA to conduct certain options-related market surveillances.[11] The Exchange will implement any additional surveillance procedures it deems necessary to effectively monitor the trading of FLEX Fund Options.

The proposed rule change is designed to allow investors seeking to trade options on the Funds to utilize FLEX Fund Options. The Exchange believes that offering innovative products flows to the benefit of the investing public. A robust and competitive market requires that exchanges respond to participants' evolving needs by constantly improving their offerings. Such efforts would be stymied if exchanges were prohibited from offering innovative products such as the proposed FLEX Fund Options. The Exchange believes that introducing FLEX Fund Options would further broaden the base of investors that use FLEX Equity Options (and options on the Funds in general) to manage their trading and investment risk, including investors that currently trade in the OTC market for customized options. The proposed rule change is also designed to encourage market makers to shift liquidity from the OTC market to the Exchange, which, it believes, will enhance the process of price discovery conducted on the Exchange through increased order flow.

2. Statutory Basis

The Exchange believes that the proposal is consistent with the requirements of Section 6(b) of the Securities Exchange Act of 1934 (the ''Act''),[12] in general, and Section 6(b)(5) of the Act,[13] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in

[11] Section 19(g)(1) of the Act, among other things, requires every SRO registered as a national securities exchange or national securities association to comply with the Act, the rules and regulations thereunder, and the SRO's own rules, and, absent reasonable justification or excuse, enforce compliance by its members and persons associated with its members. *See* 15 U.S.C. 78q(d)(1) and 17 CFR 240.17d–2. Section 17(d)(1) of the Act allows the Commission to relieve an SRO of certain responsibilities with respect to members of the SRO who are also members of another SRO. Specifically, Section 17(d)(1) allows the Commission to relieve an SRO of its responsibilities to: (i) receive regulatory reports from such members; (ii) examine such members for compliance with the Act and the rules and regulations thereunder, and the rules of the SRO; or (iii) carry out other specified regulatory responsibilities with respect to such members.

[12] 15 U.S.C. 78f(b).

[13] 15 U.S.C. 78f(b)(5).

general to protect investors and the public interest. Specifically, the Exchange believes that introducing FLEX Fund Options will increase order flow to the Exchange, increase the variety of options products available for trading, and provide a valuable tool for investors to manage risk. The proposed rule change is designed to allow investors seeking to trade options on any of the Funds to utilize FLEX Fund Options. The Exchange believes that the proposal to permit FLEX Fund Options would remove impediments to and perfect the mechanism of a free and open market. The Exchange believes that offering FLEX Fund Options and to require aggregation of any FLEX and non-FLEX positions in the same underlying ETF for the Funds for the purposes of calculating position and exercise limits will benefit investors by providing them with an additional, relatively lower cost investing tool to gain exposure to the price of bitcoin and provide a hedging vehicle to meet their investment needs in connection with a bitcoin-related product. Moreover, the proposal would broaden the base of investors that use FLEX Equity Options to manage their trading and investment risk, including investors that currently trade in the OTC market for customized options. By trading a product in an exchange-traded environment (that is currently being used in the OTC market), the Exchange would be able to compete more effectively with the OTC market. The Exchange believes the proposed rule change is designed to prevent fraudulent and manipulative acts and practices in that it would lead to the migration of options currently trading in the OTC market to trading on the Exchange. Also, any migration to the Exchange from the OTC market would result in increased market transparency and enhance the process of price discovery conducted on the Exchange through increased order flow. The Exchange also believes that offering FLEX Fund Options may appeal to retail investors interested in options trading (both FLEX and non-FLEX) on GBTC, BTC, and BITB.

Additionally, the Exchange believes the proposed rule change is designed to remove impediments to and to perfect the mechanism for a free and open market and a national market system, and, in general, to protect investors and the public interest in that it should create greater trading and hedging opportunities and flexibility. The proposed rule change should also result in enhanced efficiency in initiating and closing out positions and heightened contra-party creditworthiness due to the role of OCC as issuer and guarantor of FLEX Fund Options. Further, the proposed rule change would result in increased competition by permitting the Exchange to offer products that are currently used in the OTC market.

The Exchange believes that offering innovative products benefits the investing public. A robust and competitive market requires that exchanges respond to the evolving needs of their members by constantly improving their offerings. Such efforts would be stymied if exchanges were prohibited from offering innovative products such as the proposed FLEX Fund Options. The Exchange does not believe that allowing FLEX Fund Options would render the marketplace for equity options more susceptible to manipulative practices.

Finally, the Exchange represents that it has an adequate surveillance program in place to detect manipulative trading in FLEX Fund Options. Regarding the proposed FLEX Fund Options, the Exchange would use the same surveillance procedures utilized for FLEX Equity Options currently listed on the Exchange (as well as for non-FLEX options on each Fund). In light of surveillance measures related to both options and the underlying Funds,[14] the Exchange believes that existing surveillance procedures are designed to deter and detect possible manipulative behavior which might potentially arise from listing and trading the proposed FLEX Fund Options.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. In this regard and as indicated above, the Exchange notes that the rule change is being proposed as a competitive response to a filing submitted by NYSE American that was recently approved by the Commission.[15]

The Exchange does not believe that its proposed rule change will impose any burden on intra-market competition as all market participants would have the option of utilizing the FLEX Fund Options. The proposed rule change is designed to allow investors seeking option exposure to bitcoin to trade FLEX Fund Options. Moreover, the Exchange believes that the proposal to permit FLEX Fund Options would broaden the base of investors that use FLEX Equity Options to manage their trading and investment risk, including investors that currently trade in the OTC market for customized options.

The Exchange does not believe that its proposed rule change will impose any burden on intermarket competition as all market participants would have the option of utilizing the FLEX Fund Options. The Exchange notes that it operates in a highly competitive market in which market participants can readily direct order flow to competing venues. The proposed rule change would support that intermarket competition by allowing the Exchange to offer additional functionality to Participants. The Exchange believes that the proposed FLEX Fund Options will increase the variety of options products available for trading in general and bitcoin-related products in particular and, as such, will provide a valuable tool for investors to manage risk. As such, the Exchange believes that this proposal does not create an undue burden on intermarket competition. Rather, the Exchange believes that the proposed rule would bolster intermarket competition by promoting fair competition among individual markets. The Exchange notes that competing options exchanges are free to file similar proposals for FLEX Fund Options.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Pursuant to Section 19(b)(3)(A) of the Act[16] and Rule 19b–4(f)(6)[17] thereunder, the Exchange has designated this proposal as one that effects a change that: (i) does not

[14] *See* Securities Exchange Act Release No. 99306 (January 10, 2024), 89 FR 3008, 3009 (January 17, 2024) (File Nos. SR–NYSEArca–2021–90; SR–NYSEArca–2023–44; SR–NYSEArca–2023–58; SR–NASDAQ–2023–016; SR–NASDAQ–2023–019; SR–CboeBZX–2023–028; SR–CboeBZX–2023–038; SR–CboeBZX–2023–040; SR–CboeBZX–2023–042; SRCboeBZX–2023–044; and SR–CboeBZX–2023–072) (Order Granting Accelerated Approval of Proposed Rule Changes, as Modified by Amendments Thereto, to List and Trade Bitcoin-Based Commodity-Based Trust Shares and Trust Units).

[15] *See supra,* note 4.

[16] 15 U.S.C. 78s(b)(3)(A).

[17] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6)(iii) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

significantly affect the protection of investors or the public interest; (ii) does not impose any significant burden on competition; and (iii) by its terms, does not become operative for 30 days after the date of the filing, or such shorter time as the Commission may designate if consistent with the protection of investors and the public interest.

The Exchange has requested that the Commission waive the 30-day operative delay period. The Exchange stated that waiver of the operative delay is consistent with the protection of investors and the public interest because it will ensure fair competition among the exchanges by allowing the Exchange to offer FLEX Fund Options, without delay, to investors seeking customized options.

The Commission believes that waiving the 30-day operative delay is consistent with the protection of investors and the public interest because the proposal does not raise any novel regulatory issues and waiver will allow the Exchange to offer FLEX trading on GBTC, BTC, and BITB options, without delay, to investors seeking a customized option. Therefore, the Commission hereby waives the 30-day operative delay and designates the proposed rule change to be operative upon filing.[18]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include file number SR–BOX–2025–30 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–BOX–2025–30. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–BOX–2025–30 and should be submitted on or before December 26, 2025.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[19]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21980 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

[18] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[19] 17 CFR 200.30–3(a)(12), (59).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–104292; File No. SR–Phlx–2025–61]

Self-Regulatory Organizations; Nasdaq PHLX LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend Legging Orders

December 2, 2025.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 19, 2025, Nasdaq PHLX LLC (''Phlx'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend its Legging Order functionality at Options 3, Section 7(k).

The text of the proposed rule change is available on the Exchange's website at *https://listingcenter.nasdaq.com/rulebook/phlx/rulefilings,* and at the principal office of the Exchange.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange previously filed a rule proposal to align all Complex Order functionality on Phlx to Nasdaq ISE, LLC (''ISE'') and Nasdaq MRX, LLC (''MRX'') Complex Order functionality.[3] Specifically, the Exchange adopted Legging Order functionality identical to ISE and MRX Options 3, Section 7(k).[4]

On Phlx, if a Legging Order is created from a Complex Order with a lower priority (*i.e.,* Non-Customer Order) at the same price and, thereafter, a Complex Order with a higher priority arrives (*i.e.,* Customer), the prior lower priority Legging Order would be removed and replaced with the Legging Order for the Complex Order with a higher priority. This is consistent with Phlx's allocation methodology. On Phlx bids and offers at the same price on the Complex Order Book will be executed pro-rata based on size with Customer priority.[5] Phlx's allocation methodology

[3] *See* Securities Exchange Act Release No. 102862 (April 15, 2025), 90 FR 16731 (April 21, 2025) (SR–Phlx–2025–17) (Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Amend Phlx's Complex Order Functionality) (''Complex Order Filing''). SR–Phlx–2025–17 proposed the same operative date as this proposal as they are both part of the same technology migration.

[4] *See id.*

[5] Phlx Options 3, Section 14(d)(2) permits execution in time priority or pro-rata based on size. Phlx will utilize pro-rata based on size allocation

differs from ISE and MRX where bids and offers at the same price on the Complex Order Book are executed in time priority.[6]

Recently adopted rule text at Options 3, Section 7(k)(1)[7] provides that a Legging Order may be automatically generated for one or both leg(s) of a Complex Options Order resting on top of the Complex Order Book at a price: (i) that matches or improves upon the best displayed bid or offer on the single-leg limit order book; and (ii) at which the net price can be achieved when the other leg is executed against the best displayed bid or offer on the single-leg limit order book, excluding other Legging Orders. Further, recently adopted Options 3, Section 7(k)(4)[8] states, ''A Legging Order is automatically removed from the single-leg limit order book if: . . . (vii) a Legging Order is generated by a different Complex Order in the same leg at a better price or the same price for a participant with a higher price priority.'' However, recently adopted Options 3, Section 7(k)(2)[9] describes when Legging Orders will not be generated and states, among other things that, ''A Legging Order will not be generated: . . . (iv) if there is already a Legging Order in that options series on the same side of the market at the same price.'' The language in Options 3, Section 7(k)(2)(iv) does not currently align with the rule text in Options 3, Section 7(k)(1) or Options 3, Section 7(k)(4)(vii) given that Phlx's allocation methodology includes Customer priority. Accordingly, at this time the Exchange proposes to amend Options 3, Section 7(k)(2)(iv) to more accurately state a Legging Order will not be generated if there is already a Legging Order in that options series for a Complex Options Order with higher priority on the same side of the market at the same price. The proposed change to Options 3, Section 7(k)(2)(iv) will reflect Phlx's Customer priority allocation methodology and make Options 3, Section 7(k)(2)(iv) consistent with Options 3, Section 7(k)(4)(vii).

Implementation

The Exchange will implement this rule change at the same time as the Complex Order Filing.

with Customer priority when it implements the Complex Order Filing.

[6] ISE and MRX Options 3, Section 14(d)(2) permits execution in time priority or pro-rata based on size.

[7] *See supra* note 3.

[8] *See supra* note 3.

[9] *See supra* note 3.

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[10] in general, and furthers the objectives of Section 6(b)(5) of the Act,[11] in particular, in that it is designed to promote just and equitable principles of trade and to protect investors and the public interest for the reasons discussed below.

The Exchange's proposal to amend Options 3, Section 7(k)(2)(iv) to provide that a Legging Order will not be generated if there is already a Legging Order in that options series for a Complex Options Order with higher priority on the same side of the market at the same price is consistent with the Act. The proposed amendment to Options 3, Section 7(k)(2)(iv) accounts for Phlx's allocation methodology and removes any ambiguity in the rule as to the System's process of generating Legging Orders. Of note, ISE and MRX bids and offers at the same price on the Complex Order Book are executed in time priority.[12]

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

Phlx's proposal to amend Options 3, Section 7(k)(2)(iv) does not impose an undue burden on intra-market competition because the amended rule would be applied in a uniform manner to the generation of all Legging Orders by the System.

Phlx's proposal to amend Options 3, Section 7(k)(2)(iv) does not impose an undue burden on inter-market competition as other options exchanges may adopt Legging Orders and similar rules for the generation of such orders.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative prior to 30 days from the date on which it was filed, or such shorter time as the Commission may designate, if consistent with the protection of investors and the public interest, the proposed rule change has become effective pursuant to Section 19(b)(3)(A)(iii) of the Act[13] and Rule 19b–4(f)(6) thereunder.[14]

A proposed rule change filed under Rule 19b–4(f)(6)[15] normally does not become operative prior to 30 days after the date of the filing. However, pursuant to Rule 19b–4(f)(6)(iii),[16] the Commission may designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative at the same time as SR–Phlx–2025–17.[17] The Exchange states that waiver of the operative delay will allow the Exchange to amend its rules to make the Legging Order provision in Options 3, Section 7(k)(2)(iv) consistent with the Exchange's allocation methodology at the same time that the Exchange implements the new Legging Order functionality in SR–Phlx–2025–17. The Commission believes that waiver of the operative delay is consistent with the protection of investors and the public interest. Waiver of the operative delay will help to ensure that the Legging Order provision in Options 3, Section 7(k)(2)(iv) accurately reflects that the Exchange will not generate a Legging Order when there is already a Legging Order in the series at the same price on the same side of the market for a Complex Options Order with higher priority. The Exchange states that not generating a Legging Order in this circumstance is consistent with Exchange's allocation methodology, which includes Customer priority. In addition, the proposal does not raise new or novel regulatory issues. Accordingly, the Commission hereby waives the 30-day operative delay and

[10] 15 U.S.C. 78f(b).

[11] 15 U.S.C. 78f(b)(5).

[12] ISE and MRX Options 3, Section 14(d)(2) permits execution in time priority or pro-rata based on size.

[13] 15 U.S.C. 78s(b)(3)(A)(iii).

[14] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[15] 17 CFR 240.19b–4(f)(6).

[16] 17 CFR 240.19b–4(f)(6)(iii).

[17] *See supra* note 3 and accompanying text.

designates the proposal operative upon filing.[18]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[19] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include file number SR–Phlx–2025–61 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to file number SR–Phlx–2025–61. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (*https://www.sec.gov/rules/sro.shtml*). Copies of the filing will be available for inspection and copying at the principal office of the Exchange. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection. All submissions should refer to file number SR–Phlx–2025–61 and should be submitted on or before December 26, 2025.

[18] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[19] 15 U.S.C. 78s(b)(2)(B).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[20]

Sherry R. Haywood,

Assistant Secretary.

[FR Doc. 2025–21988 Filed 12–4–25; 8:45 am]

BILLING CODE 8011–01–P

SMALL BUSINESS ADMINISTRATION

Performance Review Board Members

AGENCY: U. S. Small Business Administration.

ACTION: Notice of Performance Review Board appointment.

SUMMARY: Federal law requires each agency to publish a notification of the appointment of individuals who will serve as members of that agency's Performance Review Board (PRB). The U.S. Small Business Administration (SBA) hereby provides notice that the membership of its PRB, previously published in the **Federal Register** on May 14, 2025, is no longer in effect.

SUPPLEMENTARY INFORMATION: The following individuals have been designated to serve on the PRB for the SBA.

Members

1. Robin Wright (Chair), Chief Operating Officer, Office of the Administrator
2. Benjamin Grayson, Deputy Chief of Staff, Office of the Administrator
3. Douglas Robertson, Deputy Chief Information Officer, Office of the Chief Information Officer
4. Susan Streich, Director of Credit Risk Management, Office of Capital Access
5. Thomas Morris, Director of Patient Capital Investments, Office of Investment and Innovation

Authority: 5 U.S.C. 4314(c)(4) and 5 CFR 430.311(a)(4).

Kelly Loeffler,

Administrator.

[FR Doc. 2025–22133 Filed 12–4–25; 8:45 am]

BILLING CODE 8026–09–P

SMALL BUSINESS ADMINISTRATION

Reporting and Recordkeeping Requirements Under OMB Review

AGENCY: U.S. Small Business Administration.

ACTION: 30-Day notice.

SUMMARY: The Small Business Administration (SBA) is seeking approval from the Office of Management and Budget (OMB) for the information collection described below. In accordance with the Paperwork Reduction Act and OMB procedures, SBA is publishing this notice to allow all interested members of the public an additional 30 days to provide comments on the proposed collection of information.

DATES: Submit comments on or before January 5, 2026.

ADDRESSES: Written comments and recommendations for this information collection request should be sent within 30 days of publication of this notice to *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection request by selecting ''Small Business Administration''; ''Currently Under Review,'' then select the ''Only Show ICR for Public Comment'' checkbox. This information collection can be identified by title and/or OMB Control Number.

FOR FURTHER INFORMATION CONTACT: You may obtain a copy of the information collection and supporting documents from the Interim Agency Clearance Officer at *Shaunice.Carter@sba.gov;* (202) 921–2198, or from *www.reginfo.gov/public/do/PRAMain.*

SUPPLEMENTARY INFORMATION: On August 7, 2025, President Donald J. Trump issued the Executive Order entitled: ''Guaranteeing Fair Banking for All Americans'' (the ''Fair Banking Executive Order'') instructing the SBA, along with federal banking regulators, to end the practice of politicized or unlawful debanking—the practice where banks and financial services providers, both independently and at the direction of federal regulators, freeze or close accounts, deny loans, and refuse services to politically disfavored people and businesses. This information collection is necessary to evidence SBA Lender compliance with this Executive Order.

Solicitation of Public Comments: Comments may be submitted on (a) whether the collection of information is necessary for the agency to properly perform its functions; (b) whether the burden estimates are accurate; (c) whether there are ways to minimize the burden, including through the use of automated techniques or other forms of information technology; and (d) whether there are ways to enhance the quality, utility, and clarity of the information.

OMB Control Number: To be assigned by OMB.

Title: Guaranteeing Fair Banking for All Americans Executive Order Reporting.

Description of Respondents: SBA Lenders.

[20] 17 CFR 200.30–3(a)(12) and (59).

Total Estimated Annual Responses: 5,000.

Total Estimated Annual Hour Burden: 3,875 hours.

Alethea Ten Eyck-Sanders,

Interim Agency Clearance Officer.

[FR Doc. 2025–22013 Filed 12–4–25; 8:45 am]

BILLING CODE 8026–09–P

DEPARTMENT OF STATE

[Public Notice: 12875]

Notice of Determinations; Culturally Significant Objects Being Imported for Exhibition—Determinations: ''New Humans: Memories of the Future'' Exhibition

SUMMARY: Notice is hereby given of the following determinations: I hereby determine that certain objects being imported from abroad pursuant to agreements with their foreign owners or custodians for temporary display in the exhibition ''New Humans: Memories of the Future'' at The New Museum of Contemporary Art, New York, New York, and at possible additional exhibitions or venues yet to be determined, are of cultural significance, and, further, that their temporary exhibition or display within the United States as aforementioned is in the national interest. I have ordered that Public Notice of these determinations be published in the **Federal Register**.

FOR FURTHER INFORMATION CONTACT: Reed Liriano, Program Coordinator, Office of the Legal Adviser, U.S. Department of State (telephone: 202–632–6471; email: *section2459@state.gov*). The mailing address is U.S. Department of State, L/PD, 2200 C Street NW (SA–5), Suite 5H03, Washington, DC 20522–0505.

SUPPLEMENTARY INFORMATION: The foregoing determinations were made pursuant to the authority vested in me by the Act of October 19, 1965 (79 Stat. 985; 22 U.S.C. 2459), Executive Order 12047 of March 27, 1978, the Foreign Affairs Reform and Restructuring Act of 1998 (112 Stat. 2681, *et seq.*; 22 U.S.C. 6501 note, *et seq.*), Delegation of Authority No. 234 of October 1, 1999, Delegation of Authority No. 236–3 of August 28, 2000, and Delegation of Authority No. 523 of December 22, 2021.

Stefanie E. Williams,

Deputy Assistant Secretary for Professional and Cultural Exchanges, Bureau of Educational and Cultural Affairs, Department of State.

[FR Doc. 2025–21996 Filed 12–4–25; 8:45 am]

BILLING CODE 4710–05–P

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

[Docket Number USTR–2025–0307]

Request for Comments Concerning the Operation of the United States-Mexico-Canada Agreement With Respect To Trade in Automotive Goods

AGENCY: Office of the United States Trade Representative (USTR).

ACTION: Request for comments.

SUMMARY: The U.S. Trade Representative must conduct a review of trade in automotive goods under the United States-Mexico-Canada Agreement (USMCA) and submit a report to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives no later than July 1, 2026. USTR invites comments concerning the operation of the USMCA with respect to automotive goods, including the implementation and enforcement of the USMCA rules of origin for automotive goods, as well as whether the automotive provisions of the USMCA are effective in light of technological and production advances.

DATES: January 7, 2026 at 11:59pm EST: Deadline for submission of written comments.

ADDRESSES: USTR strongly prefers electronic submissions made through the online USTR portal: *https://comments.ustr.gov/s/.* Follow the instructions for submitting written comments in Parts III and IV below, using docket number USTR–2025–0307.

FOR FURTHER INFORMATION CONTACT: Justin Hoffmann, Deputy Assistant U.S. Trade Representative for Market Access and Industrial Competitiveness at (202) 395–2990 or *Justin.D.Hoffmann@ustr.eop.gov.*

SUPPLEMENTARY INFORMATION:

I. USMCA Background

On January 29, 2020, the President signed into law the USMCA Implementation Act (Pub. L. 116–113), which implements the USMCA between the United States, the United Mexican States, and Canada attached as an Annex to the Protocol Replacing the North American Free Trade Agreement. The USMCA entered into force on July 1, 2020.

The USMCA includes new rules of origin to claim preferential treatment for automotive goods, including higher Regional Value Content (RVC) thresholds, mandatory requirements to produce core parts in the region, mandatory steel and aluminum purchasing requirements, and a Labor Value Content (LVC) requirement. The USMCA allows vehicle producers to request an alternative staging regime for these requirements that would permit a longer period of transition to help ensure that future production is able to meet the new rules. The standard staging regime is specified under the Automotive Appendix to Chapter 4 of the USMCA, with the exception of Article 8, which specifies provisions relating to the alternative staging regime.

The USMCA Implementation Act and Executive Order 13908 established the Interagency Committee on Trade in Automotive Goods (Committee) to advise the President and the U.S. Trade Representative on the implementation, enforcement and modification of the USMCA provisions related to automotive goods. In addition, the Committee reviews the operation of the USMCA with respect to trade in automotive goods, including the economic effects of the USMCA automotive rules of origin on the U.S. economy, workers and consumers, and the impact of new technology on such rules.

II. Report to Congress

Section 202A(g) of the USMCA Implementation Act requires the U.S. Trade Representative, in consultation with the Committee, to conduct a biennial review of the operation of the USMCA with respect to trade in automotive goods, including:

(a) To the extent practicable, a summary of actions taken by producers to demonstrate compliance with the automotive rules of origin, use of the alternative staging regime, enforcement of such rules of origin, and other relevant matters.

(b) Whether the automotive rules of origin are effective and relevant in light of new technology and changes in content, production processes and character of automotive goods.

USTR submitted its first and second reports to Congress on June 30, 2022 and July 1, 2024. No later than July 1, 2026, USTR will submit the results of the third biennial review to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives and post a public version of the report to its website at *https://www.ustr.gov.* The 2022 and 2024 reports are available on USTR's website at *https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/biennial-reports-congress-operation-united-states-mexico-canada-agreement-usmca-respect-trade.*

III. Request for Public Input

In accordance with the USMCA Implementation Act, USTR and the Committee seek views from producers of automotive goods, labor organizations and other interested parties regarding:

1. The overall operation of the USMCA with respect to automotive goods.
2. Actions taken by automotive and parts producers to demonstrate compliance with the USMCA automotive rules of origin, including:
   a. The applicable RVC requirements for passenger vehicles, light trucks, heavy trucks, other vehicles, and parts thereof.
   b. The North American steel and aluminum purchase requirements.
   c. The LVC requirements.
3. The use of alternative staging regimes by vehicle producers to meet the USMCA automotive rules of origin.
4. Enforcement of the USMCA automotive rules of origin, including the alternative staging regimes and the automotive certification process for steel and aluminum content, LVC, and RVC.
5. Whether the current USMCA automotive rules of origin are effective and relevant in light of new technology and changes in the content, production processes, and character of automotive goods.
6. Any other topics relevant to the trade in automotive goods under the USMCA.[1]

V. Procedures for Written Submissions

To be assured of consideration, submit written comments using the appropriate docket (USTR–2025–0307) on the portal at *https://comments.ustr.gov/s/* and as detailed in Part III. All submissions must be in English. You do not need to establish an account to submit comments. The first screen allows you to enter identification and contact information. Third party organizations such as law firms, trade associations, or customs brokers should identify the full legal name of the organization they represent and identify the primary point of contact for the submission. USTR may not consider a comment if insufficient information is provided.

You may upload documents and indicate whether USTR should treat the documents as business confidential or public information. Any page containing business confidential information (BCI) must be clearly marked ''BUSINESS CONFIDENTIAL'' on the top of that page and the submission should clearly indicate, via brackets, highlighting, or other means, the specific information that is BCI. If requesting confidential treatment, you must certify in writing that the information would not customarily be released to the public. Interested persons uploading attachments containing BCI also must submit a public version of their comments.

Sushan Demirjian,

Assistant U.S. Trade Representative for Small Business, Market Access, and Industrial Competitiveness, Office of the United States Trade Representative.

[FR Doc. 2025–22105 Filed 12–4–25; 8:45 am]

BILLING CODE 3390–F4–P

[1] With respect to any input recently provided to USTR in response to the September 17, 2025, *Request for Public Comments and Notice of Public Hearing Relating to the Operation of the Agreement Between the United States of America, the United Mexican States, and Canada* (90 FR 44869, September 17, 2025, Docket Number USTR–2025–0004), that you wish USTR and the Committee to consider for purposes of this report, please provide the relevant submission ID number along with any cross-references to that input.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent To Rule on a Land Release Request at Malden Regional Airport & Industrial Park (MAW), Malden, MO

AGENCY: Federal Aviation Administration (FAA), Department of Transportation.

ACTION: Notice of request to release airport land.

SUMMARY: The FAA proposes to rule and invites public comment on the request to release and sell a 0.52-acre parcel of federally obligated airport property at the Malden Regional Airport & Industrial Park (MAW), Malden, Missouri.

DATES: Comments must be received on or before January 5, 2026.

ADDRESSES: Comments on this application may be mailed or delivered to the FAA at the following address: Amy J. Walter, Airports Land Specialist, Federal Aviation Administration, Airports Division, ACE–620G, 901 Locust, Room 364, Kansas City, MO 64106.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to: David Blalock, Airport Manager, City of Malden Regional Airport & Industrial Park, 3077 Mitchell Drive, P.O. Box 411, Malden, MO 63863–0411, (573) 276–2279.

FOR FURTHER INFORMATION CONTACT: Amy J. Walter, Airports Land Specialist, Federal Aviation Administration, Airports Division, ACE–620G, 901 Locust, Room 364, Kansas City, MO 64106, (816) 329–2603, *amy.walter@faa.gov.* The request to release property may be reviewed, by appointment, in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA invites public comment on the request to release a 0.52-acre parcel of airport property at the Malden Regional Airport & Industrial Park (MAW) under the provisions of 49 U.S.C. 47107(h)(2). This is a Surplus Property Airport. The City of Malden requested a release from the FAA to sell the parcel to the current tenant, Lion of Judah. The FAA determined this request to release and sell property at the Malden Regional Airport & Industrial Park (MAW) submitted by the Sponsor meets the procedural requirements of the FAA and the release and sale of the property does not and will not impact future aviation needs at the airport. The FAA may approve the request, in whole or in part, no sooner than thirty days after the publication of this notice.

The following is a brief overview of the request:

The Malden Regional Airport & Industrial Park (MAW) is proposing the release and sale of a parcel of airport property containing 0.52 acres. The release of land is necessary to comply with Federal Aviation Administration Grant Assurances that do not allow federally acquired airport property to be used for non-aviation purposes. The sale of the subject property will result in the land at the Malden Regional Airport & Industrial Park (M) being changed from aeronautical to non-aeronautical use and release the lands from the conditions of the Airport Improvement Program Grant Agreement Grant Assurances in order to sell the land. In accordance with 49 U.S.C. 47107(c)(2)(B)(i) and (iii), the airport will receive fair market value for the property, which will be subsequently reinvested in another eligible airport improvement project for general aviation use.

Any person may inspect, by appointment, the request in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT**. In addition, any person may request an appointment to inspect the application, notice and other documents determined by the FAA to be related to the application in person at the Malden City Hall.

Issued in Kansas City, MO, on December 2, 2025.

Rodney N. Joel,

Director, FAA Central Region, Airports Division.

[FR Doc. 2025–22016 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Docket No. FAA–2013–0259]

Random Drug and Alcohol Testing Percentage Rates of Covered Aviation Employees for the Period of January 1, 2026, Through December 31, 2026

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice.

SUMMARY: The FAA has determined that the minimum random drug and alcohol testing percentage rates for the period January 1, 2026, through December 31, 2026, will remain at 25 percent of safety-sensitive employees for random drug testing and 10 percent of safety-sensitive employees for random alcohol testing.

FOR FURTHER INFORMATION CONTACT: Ms. Julia Brady, Federal Aviation Administration, Office of Aerospace Medicine, Drug Abatement Division, Program Policy Branch; Email *drugabatement@faa.gov;* Telephone (202) 267–8442.

SUPPLEMENTARY INFORMATION: If you have questions about how the annual random testing percentage rates are determined, please refer to the Code of Federal Regulations Title 14, section 120.109(b) (for drug testing), and 120.217(c) (for alcohol testing).

Discussion: Pursuant to 14 CFR 120.109(b), the FAA Administrator's decision on whether to change the minimum annual random drug testing rate is based on the reported random drug test positive rate for the entire aviation industry. If the reported random drug test positive rate is less than 1.00%, the Administrator may continue the minimum random drug testing rate at 25%. In 2024, the random drug test positive rate was 0.816%. Therefore, the minimum random drug testing rate will remain at 25% for calendar year 2026.

Similarly, 14 CFR 120.217(c), requires the decision on the minimum annual random alcohol testing rate to be based on the random alcohol test violation rate. If the violation rate remains less than 0.50%, the Administrator may continue the minimum random alcohol testing rate at 10%. In 2024, the random alcohol test violation rate was 0.131%. Therefore, the minimum random alcohol testing rate will remain at 10% for calendar year 2026.

Issued in Washington, DC.

Brett A. Wyrick,

Deputy Federal Air Surgeon.

[FR Doc. 2025–22036 Filed 12–4–25; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

[Docket No. FHWA–2025–0367]

Notice of Intent To Prepare an Environmental Impact Statement for a Proposed Highway Project; Milwaukee County, Wisconsin

AGENCY: Federal Highway Administration (FHWA), Department of Transportation (USDOT).

ACTION: Notice.

SUMMARY: FHWA, in coordination with the Wisconsin Department of Transportation (WisDOT), is issuing this Notice of Intent (NOI) to solicit comment and advise the public, agencies, and stakeholders that an Environmental Impact Statement (EIS) will be prepared to study potential improvements to Interstate 794 (I–794) in Milwaukee County, Wisconsin. The study corridor includes approximately 1.5 miles of I–794, including a service interchange referred to as the Lake Interchange, and extends generally from the I–794 and I–43/I–94 system interchange (Marquette Interchange) to the Daniel W. Hoan Bridge. The Study is not considering changes to the main span of the Daniel W. Hoan Bridge and will not impact the core function of the Marquette Interchange.

DATES: Comments on this NOI and the Supporting Information Documents must be received on or before January 5, 2026.

ADDRESSES: This NOI and the Supporting Information Documents are available in the docket referenced above at *https://www.regulations.gov/* and on the study website located at *https://www.794lakeinterchange.wisconsindot.gov/.* The NOI Supporting Information Documents also will be provided in hard copy upon request. Interested parties are invited to submit comments by any of the following methods:

Website: For access to the documents, go to the Federal Rulemaking Portal located at *https://www.regulations.gov/* or follow the online instructions on the Public Involvement page for submitting comments at *https://www.794lakeinterchange.wisconsindot.gov/.*

Mailing address or for hand delivery or courier: Federal Highway Administration Wisconsin Division, 525 Junction Road, Suite 8000, Madison, WI 53717.

Email address: bethaney.bacher-gresock@dot.gov

All submissions should include the agency name and the docket number that appears in the heading of this notice. All comments received will be posted without change to *https://www.regulations.gov/,* including any personal information provided. A summary of the comments received will be included in the Draft EIS.

FOR FURTHER INFORMATION CONTACT:

FHWA: Bethaney Bacher-Gresock, Environmental Specialist, Federal Highway Administration—Wisconsin Division, 525 Junction Road, Suite 8000, Madison, WI 53717; email: *bethaney.bacher-gresock@dot.gov;* 608–662–2119.

WisDOT: David Pittman, PE, Project Manager, Wisconsin Department of Transportation, 141 NW Barstow St, Waukesha, WI 53188, *david.pittman@dot.wi.gov,* 262–548–5601.

Persons interested in receiving study information can join the study contact list available from the study website located at *https://www.794lakeinterchange.wisconsindot.gov/.* Follow the online instructions to join the study contact list to receive updates.

SUPPLEMENTARY INFORMATION: FHWA, as the lead Federal agency, and WisDOT as joint lead agency, are preparing an EIS to evaluate transportation solutions for the Lake Interchange on I–794 in the city of Milwaukee, Milwaukee County, Wisconsin. The EIS will be prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, *et seq.*), 23 U.S.C. 139, FHWA regulations implementing NEPA (23 CFR 771), and applicable Federal, State, and local laws and regulations.

FHWA and WisDOT are committed to public involvement for this study. FHWA and WisDOT also request comments and suggestions on the identification of any relevant information, studies, or analyses of any kind concerning impacts to the quality of the human and natural environment. All public comments received in response to this NOI will be considered and potential revisions made to the information presented herein as appropriate.

Preliminary Purpose and Need for the Proposed Action

The purpose of the project is to address deteriorating infrastructure in a manner that improves safety and operations within the study corridor, while also striving to enhance community connectivity and compatibility with local plans and development. The Study is driven by the following project needs:

- *Bridge conditions.* There are 55 bridges throughout the study corridor, 28 of the 35 original bridges constructed in the 1970s and 1980s are continuous concrete bridges that are approaching the end of their service life.
- *Substandard roadway design and geometric features.* Several areas of the existing facility do not meet current roadway design standards including horizontal and vertical curvature, superelevation, cross section (*i.e.* shoulder widths), horizontal sightline offsets, and vertical clearances.
- *Safety conditions.* Safety concerns along the study corridor are related to substandard roadway design, confusing intersection configurations, and occasional congestion during peak periods and special events. The crash rate on the mainline in the study corridor exceeds the four-lane freeway statewide average crash rate.
- *Traffic operations.* Peak hour operations along the freeway in 2050 are projected to operate at or above Level of Service (LOS) D, meeting WisDOT acceptable criteria. Seven existing (2022) I–794 ramps/surface street intersections have complex configurations resulting in an unacceptable LOS E or F. By 2050, nine intersections are expected to operate at LOS E or F.
- *System linkages.* I–794 is part of the National Highway System (NHS), the Strategic Highway Network (STRAHNET), and connects directly to I–43 and I–94 at the Marquette Interchange. I–794 is part of the National Highway Freight Network (NHFN) and serves as a WisDOT Oversize-Overweight (OS/OW) truck route and a long truck route. I–794 also connects to Milwaukee's Intermodal Station with Amtrak and Greyhound intercity bus services, the Lake Express Ferry terminal, and General Mitchell International Airport.
- *Discontinuous bicycle and pedestrian accommodations.* The study corridor includes several gaps in the sidewalk and bicycle network along local streets which increases opportunity for conflicts between vehicles, bicyclists, and pedestrians.
- *Land use and community compatibility.* The elevated I–794 creates a concrete canopy over the local street system and various land use types adjacent to and under the freeway within Milwaukee's densely developed downtown area. Opportunities to enhance existing uses in the study area and opportunities for possible new development, activation of spaces, improved bicycle/pedestrian accommodations, or additional green or recreational spaces will be considered through alternative development and evaluation.

Additional detail on the preliminary purpose and need is included in the NOI's supplemental information documents. The purpose and need may be revised based on consideration of public and agency comments received during the comment period for this NOI and during the development of the Draft EIS.

Preliminary Description of Alternatives the Environmental Impact Statement Will Consider

FHWA and WisDOT are developing a range of alternatives for detailed study in the Draft EIS. The No Build alternative and several build alternatives will be considered. Capacity expansion is not anticipated.

The *No Build* alternative assumes no major rehabilitation improvements to or replacement of the 28 bridges and other structures nearing the end of their useful life would be undertaken. Only routine maintenance and repairs would be completed to maintain the safety of the traveling public. At some point, maintenance repairs would no longer be cost effective, and the deteriorating structural conditions could result in restrictions on vehicle weights or the closure of I–794 due to poor bridge conditions.

The *Replace in Kind* alternative would reconstruct the freeway and all existing service ramps in generally the same configuration. The 28 bridges that are nearing the end of their service life would be replaced. Some outdated design features would be addressed by the alternative including improvements to shoulder widths, stopping sight distances and superelevation. Substandard elements related to horizontal and vertical curvature and vertical clearance would remain. There may be potential for geometric improvements at select intersections as well as bicycle and pedestrian improvements at spot locations.

The *Freeway Improvement alternative with left-hand ramps at Jackson/Van Buren* would reconstruct I–794 and the Lake Interchange as an elevated four-lane freeway facility. The mainline would be reconstructed along a slightly modified alignment to enhance safety by improving substandard design features including shoulder widths, horizontal curvature, stopping sight distances, superelevation, and vertical clearance. The proposed alignment would shift the freeway structures slightly south while maintaining a gap between the eastbound and westbound mainlines.

Access to and from the west would be provided at Jackson Street and Van Buren Street. These ramps would be placed on the inside of the mainlines with left-hand service ramps similar to the current configuration. Northbound and southbound freeway access would remain at Lincoln Memorial Drive with new right-hand service ramp configurations that are shifted south to a new intersection at an extended St. Paul Avenue. The existing Broadway, Milwaukee Street, and two Lakefront ramps would be eliminated under this alternative.

New surface street connections and modifications would be required to accommodate the consolidation of freeway access within the Lake Interchange. New street connections include a bidirectional Clybourn Street from Plankinton Avenue to Lincoln Memorial Drive, a St. Paul Avenue extension to Lincoln Memorial Drive, and a ''Cass Street'' extension from Clybourn Street to Harbor Drive. A new unnamed surface street would connect the Jackson Street and Van Buren Street service ramps with Lincoln Memorial Drive. The surface street network improvements could provide new and improved pedestrian and bicycle accommodations on the surface street network.

The proposed *Freeway Improvement alternative with right-hand ramps at Jackson/Van Buren* would reconstruct I–794 and the Lake Interchange as an elevated four-lane freeway facility. The freeway mainline would be reconstructed along a slightly modified alignment to enhance safety by improving substandard design features including shoulder widths, horizontal curvature, stopping sight distances, superelevation, and vertical clearance. The proposed alignment would shift the freeway structures south and generally close the gap between the eastbound and westbound mainlines.

Access to and from the west would be provided at Jackson Street and Van Buren Street. These ramps would be placed on the outside of the mainlines with service ramps on the right-hand side of the freeway. Northbound and southbound access to I–794 would remain at Lincoln Memorial Drive with right-hand service ramp configurations that are shifted south to a new

intersection at St. Paul Avenue. The Broadway, Milwaukee Street, and the two Lakefront ramps would be eliminated under this alternative. The surface street network changes and the proposed bicycle and pedestrian accommodations for this alternative would be the same as the Freeway Improvement alternative with left-hand ramps at Jackson/Van Buren described above.

The proposed *Freeway Removal* alternative would remove the elevated I–794 between the Marquette Interchange and the Daniel W. Hoan Bridge. The alternative would replace the existing I–794 bridges with a new boulevard on Clybourn Street between 6th Street and Lincoln Memorial Drive. The new infrastructure would no longer be a federal Interstate, necessitating changes in roadway ownership, jurisdiction, and related administrative policies. The Freeway Removal alternative would not change the core function of the Marquette Interchange and would retain the main span of the Daniel W. Hoan Bridge. The removal of I–794 is expected to divert traffic to the remaining interstate system and surface street network adjacent to the study corridor and throughout Milwaukee County.

Regional freeway access would be on the west side of the study corridor at the Marquette Interchange. Eastbound and westbound freeway access would be from a new ramp connecting I–94 to Clybourn Street at 6th Street. Southbound and northbound freeway access would be from reconfigured I–43 and I–43/94 ramps that connect mid-block at 2nd Street. On the east side of the study corridor, reconfigured ramps from the Daniel W. Hoan Bridge would connect to a newly created intersection at Lincoln Memorial Drive near Buffalo Street.

The proposed Freeway Removal alternative would include new surface street connections and roadway modifications to disperse traffic throughout the surface street network. New connections include a divided bidirectional Clybourn Street from 6th Street to Lincoln Memorial Drive, a St. Paul Avenue extension to Lincoln Memorial Drive, and a ''Cass Street'' extension from Clybourn Street to Harbor Drive. A new moveable Clybourn Street bridge over the Milwaukee River would be required to accommodate the new roadway cross section and to maintain navigability on the river. The new ramp connection from I–94 would require the expansion of the Clybourn and 6th Street intersection and the closure of James Lovell Street at Clybourn Street. Vel R. Phillips Avenue would be reconstructed to accommodate the relocation of the sidetrack for The Hop Operations and Maintenance Facility. Second Street and Plankinton Avenue would be reconstructed, and a connecting road would be built between the two streets to facilitate freeway ramp access to and from I–43 at the surface street network. This would eliminate the 3rd Street connection between Clybourn Street and St. Paul Avenue. The surface street network improvements could provide new and improved pedestrian and bicycle accommodations on the surface street network.

Alternatives may be revised based on the consideration of public and agency comments. The range of reasonable alternatives will be finalized after consideration of comments received during the comment period on this notice and will be documented in the Draft EIS.

Summary of Expected Impacts

FHWA and WisDOT will seek input from the public and agencies during the EIS development process regarding the impacts of the project. The EIS will evaluate the reasonably foreseeable (beneficial or adverse) social, economic, and environmental impacts resulting from the implementation of the *No Build, Replace in Kind, Freeway Improvement, and Freeway Removal* alternatives as well as avoidance and mitigation measures for unavoidable adverse effects. WisDOT identified preliminary impacts in the supporting information documents for the NOI.

The following key resources and issues have been identified for evaluation in the EIS and supporting technical studies:

- *Right of Way Acquisitions and Relocations:* The Study's build alternatives are expected to acquire little to no new permanent right of way. Therefore, no business, institutional, or residential relocations are expected. Temporary construction easements may be required under each build alternative. During the environmental review phase, each alternative will be evaluated further for right of way needs and/or potential surplus properties.
- *Community Resources:* The *No Build* alternative could, over time, negatively impact the neighborhoods, community facilities, and residences adjacent to the study corridor as infrastructure would continue to deteriorate and access to these resources could be impacted if I–794 was closed due to poor bridge conditions.

The *Replace in Kind* alternative would not directly impact the neighborhoods, community facilities, and residences adjacent to the study corridor and it would retain existing freeway access and travel routes to community resources. It would also retain the regional freeway system connection to communities north and south of the study corridor in Milwaukee County. This alternative would not address public concerns related to the compatibility of I–794 infrastructure with adjacent neighborhoods, or bicycle and pedestrian connectivity within an improved surface street network.

The *Freeway Improvement* alternatives would improve community connectivity between adjacent neighborhoods by expanding the surface street grid and providing new pedestrian and bicycle accommodations. Consolidated service ramps would provide convenient freeway access to adjacent neighborhoods, community facilities, and residences. The elimination of five-leg intersections would encourage slower speeds and simplify interactions between vehicular and non-vehicular traffic. The Freeway Improvement alternatives also maintain I–794 linkages to the regional freeway system for downtown neighborhoods and Milwaukee County communities to the south and north.

The *Freeway Removal* alternative would establish a visual connection between downtown neighborhoods and improve neighborhood connectivity by expanding the surface street network and providing new pedestrian and bicycle accommodations. Freeway access would be consolidated at the west side of the study corridor resulting in changes to travel routes to and from neighborhoods, community facilities, and residences and increased utilization of the street grid. An expanded street grid would provide new route options for people to reach destinations, but travel along signal-controlled streets may increase travel times for some trips. The Freeway Removal alternative would not maintain the I–794 regional freeway system connection to communities to the south and north in Milwaukee County and would result in greater use of I–43 and other arterials from traffic diversion in Milwaukee County.

- *Business and Economic:* The *No Build* alternative could, over time, negatively impact businesses and business districts adjacent to the study corridor by not maintaining infrastructure in a state of good repair, impacting the movement of people and goods that rely on I–794 for connectivity to the regional freeway system.

The *Replace in Kind* alternative would continue to provide existing

levels of freeway access and connectivity for vehicles and trucks that utilize the regional freeway system to access downtown, Port Milwaukee, and the business areas in communities to the north and south in Milwaukee County. However, this alternative would not provide opportunities to improve connectivity between business districts in the downtown area as no new streets and/or bicycle and pedestrian accommodations would be provided. The continued presence of the I–794 infrastructure, similar to the existing configuration, would not expand potential economic activity in the study corridor.

The *Freeway Improvement* alternatives would continue to facilitate the movement of goods and people along I–794 to access downtown, Port of Milwaukee, and business areas in Milwaukee County communities to the south and north. The consolidated ramps would maintain freeway access to adjacent businesses and business districts. Once off the freeway, some routes to businesses may change slightly but new street connections and bicycle and pedestrian accommodations would overall improve connectivity to major employment areas in downtown, businesses in the Historic Third Ward, and the many tourist and entertainment destinations in the area. The potential surplus property associated with these alternatives could create opportunities for additional economic activity in the study corridor.

The *Freeway Removal* alternative would not maintain interstate designation through the corridor. This could impact the movement of goods and people along this corridor and vehicles and trucks utilizing the regional freeway system to access downtown, Port Milwaukee, and business areas in Milwaukee County communities to the south and north. The Freeway Removal alternative would change freeway access for businesses and business districts in the area and may increase travel times for some trips in the downtown area. Since there would be no fixed bridge route over the Milwaukee River, travel times to destinations and special events in the downtown and Lakefront areas could be impacted when the movable bridges are operating.

The Freeway Removal alternative could improve connectivity between business districts in downtown and the Historic Third Ward by expanding the surface street grid and providing improved bicycle and pedestrian accommodations. Eliminating the elevated freeway infrastructure to the east of the river could provide the most potential surplus property which could create opportunities for additional economic activity in the study corridor.

- *Land Use:* The *No Build* and *Replace in Kind* alternatives would retain the existing 2.7-acre vacant state-owned parcel in the southwest quadrant of the Lincoln Memorial Drive and Clybourn Street intersection for possible future development. No new surplus property would become available.

The *Freeway Improvement* alternatives would reduce the footprint of the freeway and may result in surplus property that is no longer needed for highway-related transportation purposes, creating opportunities for potential new development. The Freeway Improvement alternatives may provide up to 6 or 7 acres of surplus property that meets minimum development standards. Acres are subject to change.

The *Freeway Removal* alternative would remove much of the elevated freeway infrastructure in the study corridor which may result in surplus property that is no longer needed for highway-related transportation purposes, creating opportunities for potential new development. The Freeway Removal alternative may provide up to 16 acres of surplus property that meets minimum development standards. Acres are subject to change.

- *Section 106:* In accordance with Section 106 of the National Historic Preservation Act (NHPA) and NEPA, effects to historic properties will be evaluated in consultation with the Wisconsin State Historic Preservation Officer (SHPO), Native American Tribes, and other consulting parties for all build alternatives. Historic sites within and near the study corridor include two historic districts, the Historic Third Ward District and the East Side Commercial Historic District, and four properties listed on the National Register of Historic Places: the John Pritzlaff Hardware Co., Wisconsin Leather Co., Public Service Building, and the Gimbels Parking Pavilion. A review of archaeological literature confirmed the study area has been previously disturbed and nine previously identified sites are within the study area. Other potential resources may be present within and in the vicinity of the study corridor, but not yet inventoried in the databases.
- *Section 4(f) Properties:* The build alternatives may affect publicly owned parks and recreational areas, and public and private historical sites listed or eligible for listing on the National Register of Historic Places that are subject to protection under Section 4(f) of the Department of Transportation Act of 1966 (Section 4(f)). Section 4(f) protected public parks and recreational areas within and near the study corridor include the Milwaukee Riverwalk, Hank Aaron State Trail, and Oak Leaf Trail. Historic sites within and near the study corridor include two historic districts and four historic properties (named above). Potential uses of Section 4(f) properties will be evaluated, avoided, or minimized during development of the EIS and the Section 4(f) evaluation.
- *Waterways:* The build alternatives may result in the construction of a new bridge, the reconstruction or modification of an existing bridge, construction of a temporary bridge, or no changes to existing bridges across navigable waters of the U.S. under the jurisdiction of the U.S. Coast Guard. The Freeway Improvement alternative with right-hand ramps at Jackson/Van Buren may require reconstruction of the westbound I–794 bridge over the Milwaukee River. The Freeway Removal alternative may require removal of I–794 bridges over the Milwaukee River and reconstruction and widening of the moveable Clybourn Street bridge over the Milwaukee River. If the I–794 bridges over the Milwaukee River are removed, the steam facility infrastructure at the Milwaukee River may need to be reconstructed or relocated. Construction of bridges and facilities over the river must meet navigational clearance requirements as the Milwaukee River is a commercially navigable Water of the U.S.
- *Floodplains:* The Freeway Improvement alternative with right-hand ramps at Jackson/Van Buren and Freeway Removal alternative could impact bridges over the Milwaukee River. Proposed bridge work may alter bridge abutments and/or piers in the Milwaukee River, which may impact the floodway. Measures to avoid, minimize, and mitigate flood risks to the floodplain will be taken.
- *Threatened and Endangered Species:* Federal- and state-listed species may occur in the study corridor. FHWA and WisDOT will determine effects through alternatives refinement, United States Fish and Wildlife (USFWS) Section 7 consultation, and coordination with the WDNR under the WisDOT/WDNR Cooperative Agreement.
- *Noise:* Noise sensitive receptors, including residences, parks, schools, and churches are present throughout the study corridor. FHWA and WisDOT will identify impacts during the development of the EIS.
- *Construction:* The build alternatives would have temporary construction

impacts related to public safety, construction noise and dust, and inconveniences related to traffic detours and congestion during construction.

Supplemental information on the purpose and need statement, alternatives, and potential project environmental impacts is provided within the NOI supporting information documents available for review in the docket established for this Study and on the study website as noted in the **ADDRESSES** section. FHWA and WisDOT are inviting public input during the NOI comment period. The identification of impacts for analysis in the Draft EIS may be revised due to the consideration of public comments.

Anticipated Permits and Other Authorizations

Permits and authorizations anticipated for the project include a Section 401 water quality certification and a Section 404 permit under the Clean Water Act (33 U.S.C. 1344). Section 9 and Section 10 permits under the Rivers and Harbors Act are also anticipated. FHWA and WisDOT will prepare evaluations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. 138 and 49 U.S.C. 303) and Section 6(f) of the Land and Water Conservation Fund Act of 1965 (54 U.S.C. 200302), perform consultation under Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 300101–307108) concurrently with the NEPA environmental review process, and will consult with USFWS in accordance with Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*). FHWA and WisDOT will also work with Cooperating Agencies and Participating Agencies to determine if additional permits or authorizations are required under these or other authorities.

Schedule for the Decision-Making Process

After this NOI is issued, WisDOT will coordinate with the Cooperating and Participating Agencies to develop study documentation and the Draft EIS. The Draft EIS is anticipated to be issued in October 2026. The combined Final EIS and Record of Decision is anticipated to be issued in May 2027. Per 23 U.S.C. 139(d)(10), permits and authorizations should be completed by no later than 90 days after the issuance of the Record of Decision. However, for this project WisDOT has requested in accordance with 23 U.S.C. 139(d)(10)(C)(ii) that the 404 permit and 401 water quality certification follow a different timeline because the construction date is not expected until 2030 or later.

Description of Agency and Public Review and Scoping Process

Prior to the initiation of the EIS, WisDOT hosted a series of public meetings for the Study. The first public meetings were held on August 1 and 2, 2023, to provide an opportunity for the public to learn about the I–794 study process, draft purpose and need, and preliminary design concepts. A subsequent public meeting on May 29, 2025, presented the four build alternatives described above. WisDOT held the last public meetings prior to the initiation of the EIS on November 4 and 5, 2025, to present preliminary evaluation criteria and traffic analysis results to the public. FHWA and WisDOT hosted an early agency introductory meeting with potential Cooperating and Participating Agencies on August 21, 2025, to brief agencies on the anticipated NEPA milestone schedule, the Study's purpose and need, and alternatives anticipated to be evaluated during the NEPA process. The public and agency scoping process is continuing with the publication of this NOI.

Meetings with the public and Cooperating and Participating Agencies will be held throughout the environmental review process. The draft Coordination Plan for Agency and Public Involvement included within the supporting information documents for the NOI describes how the public and agencies will continue to be engaged during EIS development. The Draft EIS will be available for public and agency review and comment prior to the Public Hearing.

Request for Comments on the Identification of Potential Alternatives, Information, and Analyses Relevant to the Proposed Action

The supporting information documents for the NOI include the preliminary purpose and need statement, preliminary range of alternatives, draft Impact Analysis Methodology Report, and the draft Coordination Plan for Agency and Public Involvement, including the NEPA milestones and permit schedules. With this notice, FHWA and WisDOT request and encourage State, tribal, and local agencies, and the public to review the NOI and the supporting information and submit comments on any aspect of the Study. Specifically, agencies and the public are asked to identify and submit potential alternatives for consideration and any information, such as anticipated significant issues or environmental impacts and analyses relevant to the proposed study for consideration by the Lead, Cooperating, and Participating Agencies in developing the Draft EIS. Any information presented herein, including the purpose and need, alternatives, and anticipated impacts may be revised after consideration of the comments. Comments may be submitted according to the instructions in the **ADDRESSES** section of this notice. Comments must be received by January 5, 2026.

Any questions concerning this proposed action, including comments relevant to alternatives, information, and analyses, should be directed to FHWA or WisDOT at the physical addresses, email addresses, or phone numbers provided in the **FOR FURTHER INFORMATION CONTACT** section of this notice.

Authority: 42 U.S.C. 4321 *et seq.;* 23 U.S.C. 139; 23 CFR part 771.

Linda Swann,

Acting Division Administrator, FHWA Wisconsin Division, Madison, Wisconsin.

[FR Doc. 2025–22012 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–RY–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

[Docket No. FHWA–2025–0433]

Agency Information Collection Activities: Request for Comments for a New Information Collection

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice and request for comments.

SUMMARY: The FHWA has forwarded the information collection request described in this notice to the Office of Management and Budget (OMB) to approve a new information collection. We are required to publish this notice in the **Federal Register** by the Paperwork Reduction Act of 1995.

DATES: Please submit comments by January 5, 2026.

ADDRESSES: You may submit comments identified by DOT Docket ID Number 0433 by any of the following methods:

Website: For access to the docket to read background documents or comments received go to the Federal eRulemaking Portal: Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.

Fax: 1–202–493–2251.

Mail: Docket Management Facility, U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590–0001.

Hand Delivery or Courier: U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Bronwen Keiner, *bronwen.keiner@dot.gov,* or Edward Starks, *edward.starks@dot.gov,* (202) 366–4000, Office of Planning, Environment, and Realty, Federal Highway Administration, Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590. Office hours are from 7 a.m. to 4 p.m., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION: We published a **Federal Register** Notice with a 60-day public comment period on this information collection on September 19, 2025, at [90 FR 45306]. The notice received no comments.

Title: National Scenic Byway Program (NSBP).

Background: The Federal Highway Administration (FHWA) administers the NSBP. It was established by the Intermodal Surface Transportation Efficiency Act of 1991 in Section 162 of Title 23, United States Code (U.S.C.), and reauthorized and expanded significantly in 1998 under the Transportation Equity Act for the 21st Century and again under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users in 2005. The NSBP is a grass-roots collaborative effort established to help recognize, preserve, and enhance selected roads throughout the United States. Before 2019, Congress last authorized discretionary NSBP funds in 2012 under the Surface Transportation Extension Act of 2012. Between 1992 and 2012, FHWA awarded over $505 million in NSBP grants. In 2022, FHWA awarded approximately $21.8 million in grants to 33 projects.

Respondents: The Notice of Funding Opportunity (NOFO), announcing up to $26.95 million of Fiscal Year (FY) 2023 and 2024 funding for the National Scenic Byways Program (NSBP) competitive grants, was available for State DOTs and Federally Recognized Indian Tribes to respond on *grants.gov* from September 17, 2024 through December 16, 2024. FHWA will be publishing an Amendment No. 1 to this NOFO. FHWA is not soliciting new applications for FY 2023 and 2024 NSBP NOFO. Applicants who submitted an application in accordance with the FY 2023 and 2024 NSBP NOFO requirements prior to December 16, 2024, will be notified of this Amendment No. 1 and will be provided 21 calendar days, from the date of Amendment No. 1 to indicate they are retaining their existing application, submit an amended application, or request withdrawal of their application from consideration for NSBP grant funding. FHWA is expecting the 93 applicants who submitted their applications prior to the December 16, 2024 date to respond. If no response is received by the deadline date, FHWA will retain and consider the previously submitted application.

Frequency: NOFOs and grant solicitations will be published annually by FHWA but are subject to the availability of funds in appropriations, or any legislation signed into law authorizing funds.

Estimated Average Burden per Response: The average burden per response varies depending on the project stage. The application stage takes approximately 3 hours per respondent. The email attachment takes approximately 30 minutes to complete per respondent.

Estimated Total Annual Burden Hours: It is expected that the respondents will complete 93 applications for an estimated total of 326 annual burden hours.

Public Comments Invited: You are asked to comment on any aspect of this information collection, including: (1) Whether the proposed collection is necessary for the FHWA's performance; (2) the accuracy of the estimated burdens; (3) ways for the FHWA to enhance the quality, usefulness, and clarity of the collected information; and (4) ways that the burden could be minimized, including the use of electronic technology, without reducing the quality of the collected information. The agency will summarize and/or include your comments in the request for OMB's clearance of this information collection.

Authority: The Paperwork Reduction Act of 1995; 44 U.S.C. chapter 35, as amended; and 49 CFR 1.48.

Issued on: December 2, 2025.

Jazmyne Lewis,

Information Collection Officer.

[FR Doc. 2025–21969 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2008–0355; FMCSA–2011–0089; FMCSA–2014–0382; FMCSA–2015–0323; FMCSA–2018–0057; FMCSA–2019–0028; FMCSA–2020–0045; FMCSA–2021–0025; FMCSA–2023–0029; FMCSA–2023–0032; FMCSA–2023–0033]

Qualification of Drivers; Exemption Applications; Epilepsy and Seizure Disorders

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Notice of renewal of exemptions; request for comments.

SUMMARY: FMCSA announces its decision to renew exemptions for 13 individuals from the requirement in the Federal Motor Carrier Safety Regulations (FMCSRs) that interstate commercial motor vehicle (CMV) drivers have ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a CMV.'' The exemptions enable these individuals who have had one or more seizures and are taking anti-seizure medication to continue to operate CMVs in interstate commerce.

DATES: Each group of renewed exemptions were applicable on the dates stated in the discussions below and will expire on the dates provided below. Comments must be received on or before January 5, 2026.

ADDRESSES: You may submit comments identified by Docket No. FMCSA–2008–0355, FMCSA–2011–0089, FMCSA–2014–0382, FMCSA–2015–0323, FMCSA–2018–0057, FMCSA–2019–0028, FMCSA–2020–0045, FMCSA–2021–0025, FMCSA–2023–0029, FMCSA–2023–0032, or FMCSA–2023–0033 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *www.regulations.gov,* insert the docket number (FMCSA–2008–0355, FMCSA–2011–0089, FMCSA–2014–0382, FMCSA–2015–0323, FMCSA–2018–0057, FMCSA–2019–0028, FMCSA–2020–0045, FMCSA–2021–0025, FMCSA–2023–0029, FMCSA–2023–0032, or FMCSA–2023–0033) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click on the ''Comment'' button. Follow the online instructions for submitting comments.

• *Mail:* Dockets Operations; U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Washington, DC 20590–0001.

• *Hand Delivery:* West Building Ground Floor, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 between 9 a.m. and 5 p.m. ET Monday through Friday, except Federal Holidays.

• *Fax:* (202) 493–2251.

To avoid duplication, please use only one of these four methods. See the ''Public Participation'' portion of the **SUPPLEMENTARY INFORMATION** section for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: Ms. Christine A. Hydock, Chief, Medical Programs Division, FMCSA, DOT, 1200 New Jersey Avenue SE, Washington, DC 20590–0001; (202) 366–4001; *fmcsamedical@dot.gov.* Office hours are from 8:30 a.m. to 5 p.m. ET Monday through Friday, except Federal holidays. If you have questions regarding viewing or submitting material to the docket, contact Dockets Operations, (202) 366–9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation

A. Submitting Comments

If you submit a comment, please include the docket number for this notice (FMCSA–2008–0355, FMCSA–2011–0089, FMCSA–2014–0382, FMCSA–2015–0323, FMCSA–2018–0057, FMCSA–2019–0028, FMCSA–2020–0045, FMCSA–2021–0025, FMCSA–2023–0029, FMCSA–2023–0032, or FMCSA–2023–0033), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a mailing address, an email address, or a phone number in the body of your document so that FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to *www.regulations.gov,* insert the docket number (FMCSA–2008–0355, FMCSA–2011–0089, FMCSA–2014–0382, FMCSA–2015–0323, FMCSA–2018–0057, FMCSA–2019–0028, FMCSA–2020–0045, FMCSA–2021–0025, FMCSA–2023–0029, FMCSA–2023–0032, or FMCSA–2023–0033) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer–Older),'' choose the first notice listed, click the ''Comment'' button, and type your comment into the text box on the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. FMCSA will consider all comments and material received during the comment period.

B. Confidential Business Information (CBI)

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to the notice contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to the notice, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission that constitutes CBI as ''PROPIN'' to indicate it contains proprietary information. FMCSA will treat such marked submissions as confidential under the Freedom of Information Act, and they will not be placed in the public docket of the notice. Submissions containing CBI should be sent to Brian Dahlin, Chief, Regulatory Evaluation Division, Office of Policy, FMCSA, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 or via email at *brian.g.dahlin@dot.gov.* At this time, you need not send a duplicate hardcopy of your electronic CBI submissions to FMCSA headquarters. Any comments FMCSA receives not specifically designated as CBI will be placed in the public docket for this notice.

C. Viewing Comments

To view comments, go to *www.regulations.gov.* Insert the docket number (FMCSA–2008–0355, FMCSA–2011–0089, FMCSA–2014–0382, FMCSA–2015–0323, FMCSA–2018–0057, FMCSA–2019–0028, FMCSA–2020–0045, FMCSA–2021–0025, FMCSA–2023–0029, FMCSA–2023–0032, or FMCSA–2023–0033) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click ''Browse Comments.'' If you do not have access to the internet, you may view the docket online by visiting Dockets Operations on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590–0001, between 9 a.m. and 5 p.m. ET Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

D. Privacy Act

In accordance with 49 U.S.C. 31315(b)(6), DOT solicits comments from the public on the exemption request. DOT posts these comments, including any personal information the commenter provides, to *www.regulations.gov* as described in the system of records notice DOT/ALL–14 FDMS (Federal Docket Management System), which can be reviewed under the ''Department Wide System of Records Notices'' link at *https://www.transportation.gov/individuals/privacy/privacy-act-system-records-notices.* The comments are posted without edit and are searchable by the name of the submitter.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315(b) to grant exemptions from the Federal Motor Carrier Safety Regulations (FMCSRs). FMCSA must publish a notice of each exemption request in the **Federal Register** (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including the applicant's safety analysis. The Agency must provide an opportunity for public comment on the request.

The Agency reviews the application, safety analyses, and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved absent such exemption, pursuant to the standard set forth in 49 U.S.C. 31315(b)(1). The Agency must publish its decision in the **Federal Register** (49 CFR 381.315(b)). If granted, the notice will identify the regulatory provision from which the applicant will be exempt, the effective period, and all terms and conditions of the exemption (49 CFR 381.315(c)(1)). If the exemption is denied, the notice will explain the reason for the denial (49 CFR 381.315(c)(2)). The exemption may be renewed (49 CFR 381.300(b)).

III. Background

The physical qualification standard for drivers regarding seizures and loss of consciousness provides that a person is physically qualified to drive a CMV if that person has ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely

to cause the loss of consciousness or any loss of ability to control'' a CMV (49 CFR 391.41(b)(8)). To assist in applying this standard, FMCSA publishes guidance for medical examiners (MEs) in the form of medical advisory criteria in Appendix A to 49 CFR part 391.[1] In 2007, FMCSA published recommendations from a Medical Expert Panel (MEP) that FMCSA tasked to review the existing seizure disorder guidelines for MEs.[2] The MEP performed a comprehensive, systematic literature review, including evidence available at the time. The MEP issued recommended criteria to evaluate whether an individual with a history of epilepsy, a single unprovoked seizure, or a provoked seizure should be allowed to drive a CMV.

On January 15, 2013, FMCSA began granting exemptions, on a case-by-case basis, to individual drivers from the physical qualification standard regarding seizures and loss of consciousness in 49 CFR 391.41(b)(8) (78 FR 3069). The Agency considers the medical advisory criteria, the 2007 MEP recommendations, any public comments received, and each individual's medical information and driving record in deciding whether to grant the exemption.

The 13 individuals listed in this notice have requested renewal of their exemptions from the epilepsy and seizure disorders prohibition in § 391.41(b)(8), in accordance with FMCSA procedures. Accordingly, FMCSA has evaluated these applications for renewal on their merits and decided to extend each exemption for a renewable 2-year period.

IV. Request for Comments

Interested parties or organizations possessing information that would otherwise show that any, or all, of these drivers are not currently achieving the statutory level of safety should immediately notify FMCSA. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b), FMCSA will take immediate steps to revoke the exemption of a driver.

[1] Appendix A to Part 391, Title 49, available at *https://www.ecfr.gov/current/title-49/part-391/appendix-AppendixAtoPart391.*

[2] ''Expert Panel Recommendations, Seizure Disorders and Commercial Motor Vehicle Driver Safety,'' Medical Expert Panel (Oct. 15, 2007), available at *https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/Seizure-Disorders-MEP-Recommendations-v2-prot%2010152007.pdf.*

V. Basis for Renewing Exemptions

In accordance with 49 U.S.C. 31136(e) and 31315(b), each of the 13 applicants have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition. The 13 drivers in this notice remain in good standing with the Agency, have maintained their medical monitoring and have not exhibited any medical issues that would compromise their ability to safely operate a CMV during the previous 2-year exemption period. In addition, the Agency has reviewed each applicant's certified driving record from their State Driver's Licensing Agency (SDLA). The information obtained from each applicant's driving record provides the Agency with details regarding any moving violations or reported crash data, which demonstrates whether the driver has a safe driving history and is an indicator of future driving performance. If the driving record revealed a crash, FMCSA requested and reviewed the related police reports and other relevant documents, such as the citation and conviction information. These factors provide an adequate basis for predicting each driver's ability to continue to safely operate a CMV in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of 2 years is likely to achieve a level of safety equivalent to the level of safety that would be achieved without the exemption.

In accordance with 49 U.S.C. 31136(e) and 31315(b), the following groups of drivers received renewed exemptions in the month of July and are discussed below.

As of July 5, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following six individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Stephen Harmon (WV)
Brian Law (CO)
Jeb McCulla (LA)
Tammy Snyder (NC)
Caleb Stinson (MN)
Joel Vasquez (NY)

The drivers were included in docket number FMCSA–2015–0323, FMCSA–2020–0045, FMCSA–2023–0029, FMCSA–2023–0032, or FMCSA–2023–0033. Their exemptions were applicable as of July 5, 2025, and will expire on July 5, 2027.

As of July 12, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following six individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Prince Austin, Jr. (OH)
Frank Cekovic (PA)
Martin Ford (MS)
David Johnston (MN)
Enrico Mucci (PA)
Charles Skelton (AL)

The drivers were included in docket number FMCSA–2008–0355, FMCSA–2011–0089, FMCSA–2014–0382, FMCSA–2018–0057, FMCSA–2019–0028, or FMCSA–2019–0028. Their exemptions were applicable as of July 12, 2025, and will expire on July 12, 2027.

As of July 30, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), Charles Anthony (ND) has satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

This driver was included in docket number FMCSA–2021–0025. The exemption was applicable as of July 30, 2025, and will expire on July 30, 2027.

VI. Terms and Conditions

The exemptions are extended subject to the following conditions: each driver must (1) remain seizure-free, maintain a stable treatment, and report to FMCSA within 24 hours if they experience a seizure during the 2-year exemption period; (2) submit to FMCSA annual reports from their treating physicians attesting to the stability of treatment and that the driver has remained seizure-free; (3) undergo an annual medical examination by a certified medical examiner, as defined by § 390.5T; (4) provide a copy of the annual medical certification to the employer for retention in the driver's qualification file, or keep a copy in their driver's qualification file if they are self-employed; (5) report to FMCSA the date, time, and location of any crashes, as defined in § 390.5T, within 7 days of the crash; (6) report to FMCSA any citations and convictions for disqualifying offenses under 49 CFR parts 383 and 391 to FMCSA within 7 days of the citation and conviction; and (7) submit to FMCSA annual certified driving records from their SDLA. The driver must also have a copy of the exemption when driving, for presentation to a duly authorized Federal, State, or local enforcement official. In addition, the driver must meet all the applicable commercial driver's license testing requirements. Each exemption will be valid for 2 years unless rescinded earlier

by FMCSA. The exemption will be rescinded if: (1) the person fails to comply with the terms and conditions of the exemption, as set forth in the initial renewal notice (*see* 90 FR 13978) and incorporated herein; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b).

VII. Preemption

During the period the exemption is in effect, no State shall enforce any law or regulation that conflicts with this exemption with respect to a person operating under the exemption.

VIII. Conclusion

Based on its evaluation of the 13 exemption renewal applications, FMCSA renews the exemptions of the aforementioned drivers from the epilepsy and seizure disorders prohibition in § 391.41(b)(8). In accordance with 49 U.S.C. 31136(e) and 31315(b), and FMCSA's policy of issuing medical exemptions for a 2-year period to correspond with the medical certificate, each exemption will be valid for 2 years unless revoked earlier by FMCSA.

Larry W. Minor,

Associate Administrator for Policy.

[FR Doc. 2025–21974 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2014–0381; FMCSA–2019–0031; FMCSA–2023–0033; FMCSA–2023–0035]

Qualification of Drivers; Exemption Applications; Epilepsy and Seizure Disorders

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Notice of renewal of exemptions; request for comments.

SUMMARY: FMCSA announces its decision to renew exemptions for 11 individuals from the requirement in the Federal Motor Carrier Safety Regulations (FMCSRs) that interstate commercial motor vehicle (CMV) drivers have ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a CMV.'' The exemptions enable these individuals who have had one or more seizures and are taking anti-seizure medication to continue to operate CMVs in interstate commerce.

DATES: Each group of renewed exemptions were applicable on the dates stated in the discussions below and will expire on the dates provided below. Comments must be received on or before January 5, 2026.

ADDRESSES: You may submit comments identified by Docket No. FMCSA–2014–0381, FMCSA–2019–0031, FMCSA–2023–0033, or FMCSA–2023–0035 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *www.regulations.gov,* insert the docket number (FMCSA–2014–0381, FMCSA–2019–0031, FMCSA–2023–0033, or FMCSA–2023–0035) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click on the ''Comment'' button. Follow the online instructions for submitting comments.
- *Mail:* Dockets Operations; U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery:* West Building Ground Floor, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays.
- *Fax:* (202) 493–2251.

To avoid duplication, please use only one of these four methods. See the ''Public Participation'' portion of the **SUPPLEMENTARY INFORMATION** section for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: Ms. Christine A. Hydock, Chief, Medical Programs Division, FMCSA, DOT, 1200 New Jersey Avenue SE, Washington, DC 20590–0001; (202) 527–4750; *fmcsamedical@dot.gov.* Office hours are from 8:30 a.m. to 5 p.m. ET, Monday through Friday, except Federal holidays. If you have questions regarding viewing or submitting material to the docket, contact Dockets Operations, (202) 366–9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation

A. Submitting Comments

If you submit a comment, please include the docket number for this notice (FMCSA–2014–0381, FMCSA–2019–0031, FMCSA–2023–0033, or FMCSA–2023–0035), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a mailing address, an email address, or a phone number in the body of your document so that FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to *www.regulations.gov,* insert the docket number (FMCSA–2014–0381, FMCSA–2019–0031, FMCSA–2023–0033, or FMCSA–2023–0035) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, click the ''Comment'' button, and type your comment into the text box on the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. FMCSA will consider all comments and material received during the comment period.

B. Confidential Business Information (CBI)

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to the notice contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to the notice, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission that constitutes CBI as ''PROPIN'' to indicate it contains proprietary information. FMCSA will treat such marked submissions as confidential under the Freedom of Information Act, and they will not be placed in the public docket of the notice. Submissions containing CBI should be sent to Brian Dahlin, Chief, Regulatory Evaluation Division, Office of Policy, FMCSA, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 or via email at *brian.g.dahlin@dot.gov.* At this time, you need not send a duplicate hardcopy of your electronic CBI submissions to FMCSA headquarters. Any comments FMCSA receives not specifically designated as CBI will be placed in the public docket for this notice.

C. Viewing Comments

To view comments, go to *www.regulations.gov.* Insert the docket number (FMCSA–2014–0381, FMCSA–2019–0031, FMCSA–2023–0033, or FMCSA–2023–0035) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click ''Browse Comments.'' If you do not have access to the internet, you may view the docket online by visiting Dockets Operations on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590–0001, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

D. Privacy Act

In accordance with 49 U.S.C. 31315(b)(6), DOT solicits comments from the public on the exemption request. DOT posts these comments, including any personal information the commenter provides, to *www.regulations.gov* as described in the system of records notice DOT/ALL–14 FDMS (Federal Docket Management System), which can be reviewed under the ''Department Wide System of Records Notices'' link at *https://www.transportation.gov/individuals/privacy/privacy-act-system-records-notices.* The comments are posted without edit and are searchable by the name of the submitter.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315(b) to grant exemptions from the Federal Motor Carrier Safety Regulations (FMCSRs). FMCSA must publish a notice of each exemption request in the **Federal Register** (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including the applicant's safety analysis. The Agency must provide an opportunity for public comment on the request.

The Agency reviews the application, safety analyses, and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved absent such exemption, pursuant to the standard set forth in 49 U.S.C. 31315(b)(1). The Agency must publish its decision in the **Federal Register** (49 CFR 381.315(b)). If granted, the notice will identify the regulatory provision from which the applicant will be exempt, the effective period, and all terms and conditions of the exemption (49 CFR 381.315(c)(1)). If the exemption is denied, the notice will explain the reason for the denial (49 CFR 381.315(c)(2)). The exemption may be renewed (49 CFR 381.300(b)).

III. Background

The physical qualification standard for drivers regarding seizures and loss of consciousness provides that a person is physically qualified to drive a CMV if that person has ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause the loss of consciousness or any loss of ability to control'' a CMV (49 CFR 391.41(b)(8)). To assist in applying this standard, FMCSA publishes guidance for medical examiners (MEs) in the form of medical advisory criteria in Appendix A to 49 CFR part 391.[1] In 2007, FMCSA published recommendations from a Medical Expert Panel (MEP) that FMCSA tasked to review the existing seizure disorder guidelines for MEs.[2] The MEP performed a comprehensive, systematic literature review, including evidence available at the time. The MEP issued recommended criteria to evaluate whether an individual with a history of epilepsy, a single unprovoked seizure, or a provoked seizure should be allowed to drive a CMV.

On January 15, 2013, FMCSA began granting exemptions, on a case-by-case basis, to individual drivers from the physical qualification standard regarding seizures and loss of consciousness in 49 CFR 391.41(b)(8) (78 FR 3069). The Agency considers the medical advisory criteria, the 2007 MEP recommendations, any public comments received, and each individual's medical information and driving record in deciding whether to grant the exemption.

The 11 individuals listed in this notice have requested renewal of their exemptions from the epilepsy and seizure disorders prohibition in § 391.41(b)(8), in accordance with FMCSA procedures. Accordingly, FMCSA has evaluated these applications for renewal on their merits and decided to extend each exemption for a renewable 2-year period.

[1] Appendix A to Part 391, Title 49. *https://www.ecfr.gov/current/title-49/part-391/appendix-AppendixAtoPart391.*

[2] ''Expert Panel Recommendations, Seizure Disorders and Commercial Motor Vehicle Driver Safety,'' Medical Expert Panel (Oct. 15, 2007), available at *https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/Seizure-Disorders-MEP-Recommendations-v2-prot%2010152007.pdf.*

IV. Request for Comments

Interested parties or organizations possessing information that would otherwise show that any, or all, of these drivers are not currently achieving the statutory level of safety should immediately notify FMCSA. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b), FMCSA will take immediate steps to revoke the exemption of a driver.

V. Basis for Renewing Exemptions

In accordance with 49 U.S.C. 31136(e) and 31315(b), each of the 11 applicants have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition. The 11 drivers in this notice remain in good standing with the Agency, have maintained their medical monitoring and have not exhibited any medical issues that would compromise their ability to safely operate a CMV during the previous 2-year exemption period. In addition, the Agency has reviewed each applicant's certified driving record from their State Driver's Licensing Agency (SDLA). The information obtained from each applicant's driving record provides the Agency with details regarding any moving violations or reported crash data, which demonstrates whether the driver has a safe driving history and is an indicator of future driving performance. If the driving record revealed a crash, FMCSA requested and reviewed the related police reports and other relevant documents, such as the citation and conviction information. These factors provide an adequate basis for predicting each driver's ability to continue to safely operate a CMV in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of 2 years is likely to achieve a level of safety equivalent to the level of safety that would be achieved without the exemption.

As of September 10, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following nine individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Jon Bandy (AR)
Christopher Beaver (PA)
Timothy Brinkman (NE)
Alexander Carestia (NC)
Kelly Craft (MN)

Thomas Kepler (MO)
Brian Manning (NJ)
Shawn Springer (MN)
Ryan Webb (MI)

The drivers were included in docket number FMCSA–2023–0033, or FMCSA–2023–0035. Their exemptions were applicable as of September 10, 2025, and will expire on September 10, 2027.

As of September 30, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following two individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Ronald Boogay (NJ) and Tina Farmer (MD).

The drivers were included in docket number FMCSA–2014–0381 or FMCSA–2019–0031. Their exemptions were applicable as of September 30, 2025, and will expire on September 30, 2027.

VI. Terms and Conditions

The exemptions are extended subject to the following conditions: each driver must (1) remain seizure-free, maintain a stable treatment, and report to FMCSA within 24 hours if they experience a seizure during the 2-year exemption period; (2) submit to FMCSA annual reports from their treating physicians attesting to the stability of treatment and that the driver has remained seizure-free; (3) undergo an annual medical examination by a certified medical examiner, as defined by § 390.5T; (4) provide a copy of the annual medical certification to the employer for retention in the driver's qualification file, or keep a copy in their driver's qualification file if they are self-employed; (5) report to FMCSA the date, time, and location of any crashes, as defined in § 390.5T, within 7 days of the crash; (6) report to FMCSA any citations and convictions for disqualifying offenses under 49 CFR parts 383 and 391 to FMCSA within 7 days of the citation and conviction; and (7) submit to FMCSA annual certified driving records from their SDLA. The driver must also have a copy of the exemption when driving, for presentation to a duly authorized Federal, State, or local enforcement official. In addition, the driver must meet all the applicable commercial driver's license testing requirements. Each exemption will be valid for 2 years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) the person fails to comply with the terms and conditions of the exemption, as set forth in the initial renewal notice (*see* 90 FR 13978) and incorporated herein; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b).

VII. Preemption

During the period the exemption is in effect, no State shall enforce any law or regulation that conflicts with this exemption with respect to a person operating under the exemption.

VIII. Conclusion

Based on its evaluation of the 11 exemption renewal applications, FMCSA renews the exemptions of the aforementioned drivers from the epilepsy and seizure disorders prohibition in § 391.41(b)(8). In accordance with 49 U.S.C. 31136(e) and 31315(b), and FMCSA's policy of issuing medical exemptions for a 2-year period to correspond with the medical certificate, each exemption will be valid for 2 years unless revoked earlier by FMCSA.

Larry W. Minor,

Associate Administrator for Policy.

[FR Doc. 2025–21977 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2015–0116; FMCSA–2019–0028; FMCSA–2019–0031; FMCSA–2019–0033; FMCSA–2019–0034; FMCSA–2022–0046; FMCSA–2023–0035; FMCSA–2023–0036]

Qualification of Drivers; Exemption Applications; Epilepsy and Seizure Disorders

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Notice of renewal of exemptions; request for comments.

SUMMARY: FMCSA announces its decision to renew exemptions for 11 individuals from the requirement in the Federal Motor Carrier Safety Regulations (FMCSRs) that interstate commercial motor vehicle (CMV) drivers have ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a CMV.'' The exemptions enable these individuals who have had one or more seizures and are taking anti-seizure medication to continue to operate CMVs in interstate commerce.

DATES: Each group of renewed exemptions were applicable on the dates stated in the discussions below and will expire on the dates provided below. Comments must be received on or before January 5, 2026.

ADDRESSES: You may submit comments identified by Docket No. FMCSA–2015–0116, FMCSA–2019–0028, FMCSA–2019–0031, FMCSA–2019–0033, FMCSA–2019–0034, FMCSA–2022–0046, FMCSA–2023–0035, or FMCSA–2023–0036 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *www.regulations.gov,* insert the docket number (FMCSA–2015–0116, FMCSA–2019–0028, FMCSA–2019–0031, FMCSA–2019–0033, FMCSA–2019–0034, FMCSA–2022–0046, FMCSA–2023–0035, or FMCSA–2023–0036) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click on the ''Comment'' button. Follow the online instructions for submitting comments.
- *Mail:* Dockets Operations; U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery:* West Building Ground Floor, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 between 9 a.m. and 5 p.m. ET Monday through Friday, except Federal Holidays.
- *Fax:* (202) 493–2251.

To avoid duplication, please use only one of these four methods. See the ''Public Participation'' portion of the **SUPPLEMENTARY INFORMATION** section for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: Ms. Christine A. Hydock, Chief, Medical Programs Division, FMCSA, DOT, 1200 New Jersey Avenue SE, Washington, DC 20590–0001; (202) 366–4001; *fmcsamedical@dot.gov.* Office hours are from 8:30 a.m. to 5 p.m. ET Monday through Friday, except Federal holidays. If you have questions regarding viewing or submitting material to the docket, contact Dockets Operations, (202) 366–9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation

A. Submitting Comments

If you submit a comment, please include the docket number for this notice (FMCSA–2015–0116, FMCSA–2019–0028, FMCSA–2019–0031, FMCSA–2019–0033, FMCSA–2019–

0034, FMCSA–2022–0046, FMCSA–2023–0035, or FMCSA–2023–0036), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a mailing address, an email address, or a phone number in the body of your document so that FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to *www.regulations.gov,* insert the docket number (FMCSA–2015–0116, FMCSA–2019–0028, FMCSA–2019–0031, FMCSA–2019–0033, FMCSA–2019–0034, FMCSA–2022–0046, FMCSA–2023–0035, or FMCSA–2023–0036) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, click the ''Comment'' button, and type your comment into the text box on the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. FMCSA will consider all comments and material received during the comment period.

B. Confidential Business Information (CBI)

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to the notice contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to the notice, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission that constitutes CBI as ''PROPIN'' to indicate it contains proprietary information. FMCSA will treat such marked submissions as confidential under the Freedom of Information Act, and they will not be placed in the public docket of the notice. Submissions containing CBI should be sent to Brian Dahlin, Chief, Regulatory Evaluation Division, Office of Policy, FMCSA, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 or via email at *brian.g.dahlin@dot.gov.* At this time, you need not send a duplicate hardcopy of your electronic CBI submissions to FMCSA headquarters. Any comments FMCSA receives not specifically designated as CBI will be placed in the public docket for this notice.

C. Viewing Comments

To view comments, go to *www.regulations.gov.* Insert the docket number (FMCSA–2015–0116, FMCSA–2019–0028, FMCSA–2019–0031, FMCSA–2019–0033, FMCSA–2019–0034, FMCSA–2022–0046, FMCSA–2023–0035, or FMCSA–2023–0036) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click ''Browse Comments.'' If you do not have access to the internet, you may view the docket online by visiting Dockets Operations on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590–0001, between 9 a.m. and 5 p.m. ET Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

D. Privacy Act

In accordance with 49 U.S.C. 31315(b)(6), DOT solicits comments from the public on the exemption request. DOT posts these comments, including any personal information the commenter provides, to *www.regulations.gov* as described in the system of records notice DOT/ALL–14 FDMS (Federal Docket Management System), which can be reviewed under the ''Department Wide System of Records Notices'' link at *https://www.transportation.gov/individuals/privacy/privacy-act-system-records-notices.* The comments are posted without edit and are searchable by the name of the submitter.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315(b) to grant exemptions from the Federal Motor Carrier Safety Regulations (FMCSRs). FMCSA must publish a notice of each exemption request in the **Federal Register** (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including the applicant's safety analysis. The Agency must provide an opportunity for public comment on the request.

The Agency reviews the application, safety analyses, and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved absent such exemption, pursuant to the standard set forth in 49 U.S.C. 31315(b)(1). The Agency must publish its decision in the **Federal Register** (49 CFR 381.315(b)). If granted, the notice will identify the regulatory provision from which the applicant will be exempt, the effective period, and all terms and conditions of the exemption (49 CFR 381.315(c)(1)). If the exemption is denied, the notice will explain the reason for the denial (49 CFR 381.315(c)(2)). The exemption may be renewed (49 CFR 381.300(b)).

III. Background

The physical qualification standard for drivers regarding seizures and loss of consciousness provides that a person is physically qualified to drive a CMV if that person has ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause the loss of consciousness or any loss of ability to control'' a CMV (49 CFR 391.41(b)(8)). To assist in applying this standard, FMCSA publishes guidance for medical examiners (MEs) in the form of medical advisory criteria in Appendix A to 49 CFR part 391.[1] In 2007, FMCSA published recommendations from a Medical Expert Panel (MEP) that FMCSA tasked to review the existing seizure disorder guidelines for MEs.[2] The MEP performed a comprehensive, systematic literature review, including evidence available at the time. The MEP issued recommended criteria to evaluate whether an individual with a history of epilepsy, a single unprovoked seizure, or a provoked seizure should be allowed to drive a CMV.

On January 15, 2013, FMCSA began granting exemptions, on a case-by-case basis, to individual drivers from the physical qualification standard regarding seizures and loss of consciousness in 49 CFR 391.41(b)(8) (78 FR 3069). The Agency considers the medical advisory criteria, the 2007 MEP recommendations, any public comments received, and each individual's medical information and driving record in deciding whether to grant the exemption.

The 11 individuals listed in this notice have requested renewal of their

[1] Appendix A to Part 391, Title 49. *https://www.ecfr.gov/current/title-49/part-391/appendix-AppendixAtoPart391.*

[2] ''Expert Panel Recommendations, Seizure Disorders and Commercial Motor Vehicle Driver Safety,'' Medical Expert Panel (Oct. 15, 2007), available at *https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/Seizure-Disorders-MEP-Recommendations-v2-prot%2010152007.pdf.*

exemptions from the epilepsy and seizure disorders prohibition in § 391.41(b)(8), in accordance with FMCSA procedures. Accordingly, FMCSA has evaluated these applications for renewal on their merits and decided to extend each exemption for a renewable 2-year period.

IV. Request for Comments

Interested parties or organizations possessing information that would otherwise show that any, or all, of these drivers are not currently achieving the statutory level of safety should immediately notify FMCSA. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b), FMCSA will take immediate steps to revoke the exemption of a driver.

V. Basis for Renewing Exemptions

In accordance with 49 U.S.C. 31136(e) and 31315(b), each of the 11 applicants have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition. The 11 drivers in this notice remain in good standing with the Agency, have maintained their medical monitoring and have not exhibited any medical issues that would compromise their ability to safely operate a CMV during the previous 2-year exemption period. In addition, the Agency has reviewed each applicant's certified driving record from their State Driver's Licensing Agency (SDLA). The information obtained from each applicant's driving record provides the Agency with details regarding any moving violations or reported crash data, which demonstrates whether the driver has a safe driving history and is an indicator of future driving performance. If the driving record revealed a crash, FMCSA requested and reviewed the related police reports and other relevant documents, such as the citation and conviction information. These factors provide an adequate basis for predicting each driver's ability to continue to safely operate a CMV in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of 2 years is likely to achieve a level of safety equivalent to the level of safety that would be achieved without the exemption.

In accordance with 49 U.S.C. 31136(e) and 31315(b), the following groups of drivers received renewed exemptions in the month of October and are discussed below.

As of October 4, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following seven individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Colby Banks (NC)
Gary Cox (OR)
Douglas Day (IN)
Dennis Klamm (MN)
Michael Miller (TX)
Jerel Sayers (ID)
Adam Wilson (MN)

The drivers were included in docket number FMCSA–2015–0116, FMCSA–2019–0028, FMCSA–2019–0031, FMCSA–2019–0033, FMCSA–2019–0034, FMCSA–2022–0046, or FMCSA–2023–0035. Their exemptions were applicable as of October 4, 2025, and will expire on October 4, 2027.

As of October 22, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following four individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Colton Braun (IL)
Adam Brunson (AL)
Elsa Santos (NJ)
Brad Wetli (IN)

The drivers were included in docket number FMCSA–2023–0036. Their exemptions were applicable as of October 22, 2025, and will expire on October 22, 2027.

VI. Terms and Conditions

The exemptions are extended subject to the following conditions: each driver must (1) remain seizure-free, maintain a stable treatment, and report to FMCSA within 24 hours if they experience a seizure during the 2-year exemption period; (2) submit to FMCSA annual reports from their treating physicians attesting to the stability of treatment and that the driver has remained seizure-free; (3) undergo an annual medical examination by a certified medical examiner, as defined by § 390.5T; (4) provide a copy of the annual medical certification to the employer for retention in the driver's qualification file, or keep a copy in their driver's qualification file if they are self-employed; (5) report to FMCSA the date, time, and location of any crashes, as defined in § 390.5T, within 7 days of the crash; (6) report to FMCSA any citations and convictions for disqualifying offenses under 49 CFR parts 383 and 391 to FMCSA within 7 days of the citation and conviction; and (7) submit to FMCSA annual certified driving records from their SDLA. The driver must also have a copy of the exemption when driving, for presentation to a duly authorized Federal, State, or local enforcement official. In addition, the driver must meet all the applicable commercial driver's license testing requirements. Each exemption will be valid for 2 years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) the person fails to comply with the terms and conditions of the exemption, as set forth in the initial renewal notice (*see* 90 FR 13978) and incorporated herein; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b).

VII. Preemption

During the period the exemption is in effect, no State shall enforce any law or regulation that conflicts with this exemption with respect to a person operating under the exemption.

VIII. Conclusion

Based on its evaluation of the 11 exemption renewal applications, FMCSA renews the exemptions of the aforementioned drivers from the epilepsy and seizure disorders prohibition in § 391.41(b)(8). In accordance with 49 U.S.C. 31136(e) and 31315(b), and FMCSA's policy of issuing medical exemptions for a 2-year period to correspond with the medical certificate, each exemption will be valid for 2 years unless revoked earlier by FMCSA.

Larry W. Minor,

Associate Administrator for Policy.

[FR Doc. 2025–21975 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2017–0253; FMCSA–2018–0057; FMCSA–2020–0049; FMCSA–2021–0025; FMCSA–2023–0030; FMCSA–2023–0033]

Qualification of Drivers; Exemption Applications; Epilepsy and Seizure Disorders

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Notice of renewal of exemptions; request for comments.

SUMMARY: FMCSA announces its decision to renew exemptions for six individuals from the requirement in the Federal Motor Carrier Safety Regulations (FMCSRs) that interstate commercial motor vehicle (CMV) drivers have ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a CMV.'' The exemptions enable these individuals who have had one or more seizures and are taking anti-seizure medication to continue to operate CMVs in interstate commerce.

DATES: The exemptions were applicable on August 13, 2025. The exemptions expire on August 13, 2027. Comments must be received on or before January 5, 2026.

ADDRESSES: You may submit comments identified by Docket No. FMCSA–2017–0253, FMCSA–2018–0057, FMCSA–2020–0049, FMCSA–2021–0025, FMCSA–2023–0030, or FMCSA–2023–0033 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *www.regulations.gov,* insert the docket number (FMCSA–2017–0253, FMCSA–2018–0057, FMCSA–2020–0049, FMCSA–2021–0025, FMCSA–2023–0030, or FMCSA–2023–0033) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click on the ''Comment'' button. Follow the online instructions for submitting comments.
- *Mail:* Dockets Operations; U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery:* West Building Ground Floor, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 between 9 a.m. and 5 p.m. ET Monday through Friday, except Federal Holidays.
- *Fax:* (202) 493–2251.

To avoid duplication, please use only one of these four methods. See the ''Public Participation'' portion of the **SUPPLEMENTARY INFORMATION** section for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: Ms. Christine A. Hydock, Chief, Medical Programs Division, FMCSA, DOT, 1200 New Jersey Avenue SE, Washington, DC 20590–0001; (202) 366–4001; *fmcsamedical@dot.gov.* Office hours are from 8:30 a.m. to 5 p.m. ET Monday through Friday, except Federal holidays. If you have questions regarding viewing or submitting material to the docket, contact Dockets Operations, (202) 366–9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation

A. Submitting Comments

If you submit a comment, please include the docket number for this notice (FMCSA–2017–0253, FMCSA–2018–0057, FMCSA–2020–0049, FMCSA–2021–0025, FMCSA–2023–0030, or FMCSA–2023–0033), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a mailing address, an email address, or a phone number in the body of your document so that FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to *www.regulations.gov,* insert the docket number (FMCSA–2017–0253, FMCSA–2018–0057, FMCSA–2020–0049, FMCSA–2021–0025, FMCSA–2023–0030, or FMCSA–2023–0033) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, click the ''Comment'' button, and type your comment into the text box on the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. FMCSA will consider all comments and material received during the comment period.

B. Confidential Business Information (CBI)

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to the notice contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to the notice, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission that constitutes CBI as ''PROPIN'' to indicate it contains proprietary information. FMCSA will treat such marked submissions as confidential under the Freedom of Information Act, and they will not be placed in the public docket of the notice. Submissions containing CBI should be sent to Brian Dahlin, Chief, Regulatory Evaluation Division, Office of Policy, FMCSA, 1200 New Jersey Avenue SE, Washington, DC 20590–0001 or via email at *brian.g.dahlin@dot.gov.* At this time, you need not send a duplicate hardcopy of your electronic CBI submissions to FMCSA headquarters. Any comments FMCSA receives not specifically designated as CBI will be placed in the public docket for this notice.

C. Viewing Comments

To view comments, go to *www.regulations.gov.* Insert the docket number (FMCSA–2017–0253, FMCSA–2018–0057, FMCSA–2020–0049, FMCSA–2021–0025, FMCSA–2023–0030, or FMCSA–2023–0033) in the keyword box and click ''Search.'' Next, sort the results by ''Posted (Newer-Older),'' choose the first notice listed, and click ''Browse Comments.'' If you do not have access to the internet, you may view the docket online by visiting Dockets Operations on the ground floor of the DOT West Building, 1200 New Jersey Avenue SE, Washington, DC 20590–0001, between 9 a.m. and 5 p.m. ET Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366–9317 or (202) 366–9826 before visiting Dockets Operations.

D. Privacy Act

In accordance with 49 U.S.C. 31315(b)(6), DOT solicits comments from the public on the exemption request. DOT posts these comments, including any personal information the commenter provides, to *www.regulations.gov* as described in the system of records notice DOT/ALL–14 FDMS (Federal Docket Management System), which can be reviewed under the ''Department Wide System of Records Notices'' link at *https://www.transportation.gov/individuals/privacy/privacy-act-system-records-notices.* The comments are posted without edit and are searchable by the name of the submitter.

II. Legal Basis

FMCSA has authority under 49 U.S.C. 31136(e) and 31315(b) to grant exemptions from the Federal Motor Carrier Safety Regulations (FMCSRs). FMCSA must publish a notice of each exemption request in the **Federal Register** (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information

relevant to the application, including the applicant's safety analysis. The Agency must provide an opportunity for public comment on the request.

The Agency reviews the application, safety analyses, and public comments submitted and determines whether granting the exemption would likely achieve a level of safety equivalent to, or greater than, the level that would be achieved absent such exemption, pursuant to the standard set forth in 49 U.S.C. 31315(b)(1). The Agency must publish its decision in the **Federal Register** (49 CFR 381.315(b)). If granted, the notice will identify the regulatory provision from which the applicant will be exempt, the effective period, and all terms and conditions of the exemption (49 CFR 381.315(c)(1)). If the exemption is denied, the notice will explain the reason for the denial (49 CFR 381.315(c)(2)). The exemption may be renewed (49 CFR 381.300(b)).

III. Background

The physical qualification standard for drivers regarding seizures and loss of consciousness provides that a person is physically qualified to drive a CMV if that person has ''no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause the loss of consciousness or any loss of ability to control'' a CMV (49 CFR 391.41(b)(8)). To assist in applying this standard, FMCSA publishes guidance for medical examiners (MEs) in the form of medical advisory criteria in Appendix A to 49 CFR part 391.[1] In 2007, FMCSA published recommendations from a Medical Expert Panel (MEP) that FMCSA tasked to review the existing seizure disorder guidelines for MEs.[2] The MEP performed a comprehensive, systematic literature review, including evidence available at the time. The MEP issued recommended criteria to evaluate whether an individual with a history of epilepsy, a single unprovoked seizure, or a provoked seizure should be allowed to drive a CMV.

On January 15, 2013, FMCSA began granting exemptions, on a case-by-case basis, to individual drivers from the physical qualification standard regarding seizures and loss of consciousness in 49 CFR 391.41(b)(8) (78 FR 3069). The Agency considers the medical advisory criteria, the 2007 MEP recommendations, any public comments received, and each individual's medical information and driving record in deciding whether to grant the exemption.

The six individuals listed in this notice have requested renewal of their exemptions from the epilepsy and seizure disorders prohibition in § 391.41(b)(8), in accordance with FMCSA procedures. Accordingly, FMCSA has evaluated these applications for renewal on their merits and decided to extend each exemption for a renewable 2-year period.

IV. Request for Comments

Interested parties or organizations possessing information that would otherwise show that any, or all, of these drivers are not currently achieving the statutory level of safety should immediately notify FMCSA. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b), FMCSA will take immediate steps to revoke the exemption of a driver.

V. Basis for Renewing Exemptions

In accordance with 49 U.S.C. 31136(e) and 31315(b), each of the six applicants have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition. The six drivers in this notice remain in good standing with the Agency, have maintained their medical monitoring and have not exhibited any medical issues that would compromise their ability to safely operate a CMV during the previous 2-year exemption period. In addition, the Agency has reviewed each applicant's certified driving record from their State Driver's Licensing Agency (SDLA). The information obtained from each applicant's driving record provides the Agency with details regarding any moving violations or reported crash data, which demonstrates whether the driver has a safe driving history and is an indicator of future driving performance. If the driving record revealed a crash, FMCSA requested and reviewed the related police reports and other relevant documents, such as the citation and conviction information. These factors provide an adequate basis for predicting each driver's ability to continue to safely operate a CMV in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of 2 years is likely to achieve a level of safety equivalent to the level of safety that would be achieved without the exemption.

As of August 13, 2025, and in accordance with 49 U.S.C. 31136(e) and 31315(b), the following six individuals have satisfied the renewal conditions for obtaining an exemption from the epilepsy and seizure disorders prohibition in the FMCSRs for interstate CMV drivers.

Diego DaSilva (MA)
Jaime Dougherty (MN)
Jeffrey Douglass (ME)
Derek Jazdzewski (WI)
Kevin Wiggins (KY)
Stephen Wilson (PA)

The drivers were included in docket numbers FMCSA–2017–0253, FMCSA–2018–0057, FMCSA–2020–0049, FMCSA–2021–0025, FMCSA–2023–0030, or FMCSA–2023–0033. Their exemptions were applicable as of August 13, 2025, and will expire on August 13, 2027.

VI. Terms and Conditions

The exemptions are extended subject to the following conditions: each driver must (1) remain seizure-free, maintain a stable treatment, and report to FMCSA within 24 hours if they experience a seizure during the 2-year exemption period; (2) submit to FMCSA annual reports from their treating physicians attesting to the stability of treatment and that the driver has remained seizure-free; (3) undergo an annual medical examination by a certified medical examiner, as defined by § 390.5T; (4) provide a copy of the annual medical certification to the employer for retention in the driver's qualification file, or keep a copy in their driver's qualification file if they are self-employed; (5) report to FMCSA the date, time, and location of any crashes, as defined in § 390.5T, within 7 days of the crash; (6) report to FMCSA any citations and convictions for disqualifying offenses under 49 CFR parts 383 and 391 to FMCSA within 7 days of the citation and conviction; and (7) submit to FMCSA annual certified driving records from their SDLA. The driver must also have a copy of the exemption when driving, for presentation to a duly authorized Federal, State, or local enforcement official. In addition, the driver must meet all the applicable commercial driver's license testing requirements. Each exemption will be valid for 2 years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) the person fails to comply with the terms and conditions of the exemption, as set forth in the initial renewal notice (*see* 90 FR 13978)

[1] Appendix A to Part 391, Title 49. *https://www.ecfr.gov/current/title-49/part-391/appendix-AppendixAtoPart391.*

[2] ''Expert Panel Recommendations, Seizure Disorders and Commercial Motor Vehicle Driver Safety,'' Medical Expert Panel (Oct. 15, 2007), available at *https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2020-04/Seizure-Disorders-MEP-Recommendations-v2-prot%2010152007.pdf.*

and incorporated herein; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315(b).

VII. Preemption

During the period the exemption is in effect, no State shall enforce any law or regulation that conflicts with this exemption with respect to a person operating under the exemption.

VIII. Conclusion

Based on its evaluation of the six exemption renewal applications, FMCSA renews the exemptions of the aforementioned drivers from the epilepsy and seizure disorders prohibition in § 391.41(b)(8). In accordance with 49 U.S.C. 31136(e) and 31315(b), and FMCSA's policy of issuing medical exemptions for a 2-year period to correspond with the medical certificate, each exemption will be valid for 2 years unless revoked earlier by FMCSA.

Larry W. Minor,

Associate Administrator for Policy.

[FR Doc. 2025–21973 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

Notice of Deadline Extension for Notice of Funding Opportunity for Projects Located Off the Northeast Corridor for the Fiscal Years 2024–2025 Federal-State Partnership for Intercity Passenger Rail Program

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of submission deadline extension.

SUMMARY: On September 24, 2025, FRA published in the **Federal Register** a notice announcing the reissuance of a Notice of Funding Opportunity (NOFO) announcing the availability of funding for eligible projects located off the Northeast Corridor for the Fiscal Years 2024–2025 Federal-State Partnership for Intercity Passenger Rail Program. FRA is extending the application submission deadline from 11:59 p.m. Eastern Time (ET) on January 7, 2026 to 11:59 p.m. ET on February 6, 2026.

FOR FURTHER INFORMATION CONTACT: For further information concerning this notice, grant application submission, and processing questions, please contact *FRA-NOFO-Support@dot.gov.*

DATES: The full text of the NOFO can be found at *www.Grants.gov* using the funding opportunity ID FR–FSP–25–006 and on FRA's website at *https://railroads.dot.gov/partnership-program.* Applications for funding under this solicitation are due no later than 11:59 p.m. ET on February 6, 2026. Applications that are incomplete or received after 11:59 p.m. ET on February 6, 2026 will not be considered for funding. FRA reserves the right to modify this deadline. See Section 4 of the NOFO for additional information on the application process.

SUPPLEMENTARY INFORMATION: This extension of the NOFO application submission deadline modifies the January 7, 2025 deadline stated in the **DATES** section of two prior notices published in the **Federal Register**, at 90 FR 45976 (Sep. 24, 2025) and 90 FR 48164 (Oct. 8, 2025).

David A. Fink,

Administrator.

[FR Doc. 2025–22060 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–06–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2024–0041]

Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Request for Comment; 5-Star Safety Ratings Label Quantitative Concept Testing

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Notice and request for comments on a request for approval of a new information collection.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995 (PRA), this notice announces that the Information Collection Request (ICR) summarized below will be submitted to the Office of Management and Budget (OMB) for review and approval. The ICR describes the nature of the information collection and its expected burden. NHTSA is seeking OMB approval for a new information collection to conduct consumer research to enhance the usefulness of vehicle safety rating information and guide the potential redesign of the Government 5-Star Safety Ratings section of the Monroney label (vehicle window sticker). A **Federal Register** Notice with a 60-day comment period soliciting comments on the following information collection was published on March 7, 2025. NHTSA received three comments.

DATES: Comments must be submitted on or before January 5, 2026.

ADDRESSES: Written comments and recommendations for the proposed information collection, including suggestions for reducing burden, should be submitted to the Office of Management and Budget at *www.reginfo.gov/public/do/PRAMain.* To find this particular information collection, select ''Currently under Review—Open for Public Comment'' or use the search function.

FOR FURTHER INFORMATION CONTACT: For additional information or access to background documents, contact Mike Joyce, Marketing Specialist, Office of Communications and Consumer Information (NCO–0200), National Highway Traffic Safety Administration, 1200 New Jersey Ave. SE, W52–238, Washington, DC 20590. Mike Joyce's email address is *Mike.Joyce@dot.gov.* Contact by phone at: 202–366–9550.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501 *et seq.*), a Federal agency must receive approval from the Office of Management and Budget (OMB) before it collects certain information from the public and a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. In compliance with these requirements, this notice announces that the following information collection request will be submitted OMB.

Title: 5-Star Safety Ratings Label Quantitative Concept Testing.

OMB Control Number: New.

Form Number(s): NHTSA Form Nos. 2026, 2027, 2028.

Type of Request: Request for approval of a new information collection.

Type of Review Requested: Regular.

Length of Approval Requested: Three years from date of approval.

Summary of the Collection of Information:

NHTSA is seeking approval of a new information collection request for four information collections that NHTSA will use as part of a one-time study gather data to enhance the usefulness of the safety rating information provided under the New Car Assessment Program (NCAP) and guide the potential redesign of the Government 5-Star Safety Ratings section of the Monroney label.

The one-time research study will include two components. The first component will involve a series of

online webcam interviews that will collect qualitative feedback that will be used to improve the content included in the second component, a quantitative survey. Each of the two components will also include a screener questionnaire. The quantitative survey will be administered online and by phone (and potentially supplemented by mail if needed). Participants in the quantitative survey will be asked to evaluate design concepts that contain new information and improvements to the Government 5-Star Safety Ratings section of the Monroney label. The intent is to identify the clearest, most communicative and helpful way to display information related to vehicle safety. NHTSA will use the findings from this research to support planned changes to the label requirements and to inform future consumer communications on vehicle safety ratings and safety technology system performance assessments to assist the public when making vehicle purchasing decisions.

This collection of information will be voluntary. Respondents will include U.S. adult licensed drivers who are shared or primary decision-makers for their households' vehicle purchasing decisions and who are in the ''new vehicle purchasing mindset''—that is, they have purchased a new vehicle in the last six months or plan to do so in the next 12 months. Qualitative reporting will deidentify respondents and no personally identifiable information (PII) will be shared with NHTSA. Reports highlighting findings from the qualitative and quantitative research will be delivered to and maintained by NHTSA.

Description of the Need for the Information and Proposed Use of the Information:

The purpose of this research is to obtain critical information that will allow NHTSA and NCAP to fulfill a congressional mandate to improve highway traffic safety. NCAP is responsible for providing consumers with important safety information to assist them in their vehicle purchase decisions. The proposed research will gather necessary data to guide the redesign of the Government 5-Star Safety Ratings section of the Monroney label and enhance the usefulness of that safety rating information. This collection of information will allow NHTSA to obtain critical information to assist the agency in fulfilling the 2015 FAST Act's requirement that NHTSA issue a rule to ensure that crash-avoidance information is provided next to crashworthiness information on vehicle windows stickers.[1] Specifically, the data from this collection will be used to not only enhance consumer understanding of NHTSA's vehicle safety ratings and advanced driver assistance systems performance assessments, but also guide the development of communications that will help consumers as they consider this information in their vehicle purchase decisions.

60-Day Notice: A **Federal Register** notice with a 60-day comment period soliciting public comments on the following information collection was published on March 7, 2025.[2] NHTSA received three comments, two from anonymous commenters and a third from the Alliance for Automotive Innovation (Auto Innovators).

NHTSA received comments on a variety of topics, including the urgent need for a revised safety label and the lack of comparative ratings on the existing safety label. NHTSA also received comments asking about the need to conduct additional research after conducting research in 2022. NHTSA also received comments regarding providing environmental information on the label as well as issues regarding diversity, equity, and inclusion. After considering the comments, NHTSA has decided not to make changes to the planned research study and information collection in response to those comments. Detailed responses to the comments are provided in NHTSA's submission to OMB.

Affected Public: U.S. Residents ages 18 years or older with a driver's license, who are a decision-maker for vehicle purchases for their household, and are in the vehicle buying mindset (has either purchased or leased a vehicle in the last six months or is planning to do so in the next 12 months).

Estimated Number of Respondents: Varies by individual collection.

For this information collection, NHTSA plans to conduct an initial cognitive test as a pilot to assess the survey instrument and ensure the content is clear, easy to understand and includes the appropriate questions and response options to evaluate concepts for a new design for the section of the window sticker that contains safety information. The research team will partner with a market research recruiter and will use their proprietary database to find and recruit participants to complete the cognitive test. NHTSA estimates that they will be recruited using online outreach (and supplemented with other forms of outreach such as phone or mail as needed). A total of 9 respondents will participate in the qualitative phase (a cognitive test of the survey instrument). Past experience shows that nine interviews serve as a sufficient number for cognitive testing.

For the quantitative phase, 1,000 respondents will complete an online survey with screening questions.

Frequency: One time for each of the two phases (cognitive test and quantitative survey).

Number of Responses: The quantitative survey will exlude participants from the cognitive test, so each respondent will participate once. The research will collect 9 responses for the cognitive test and 1,000 responses for the quantitative survey resulting in a total of 1,009 responses.

Estimated Total Annual Burden Hours: 708 hours.

Because the number of respondents and the amount of time required is different for each phase of the research, burden estimates are calculated based on each phase and then summed to create a total.

TABLE 1—BURDEN ESTIMATES

Research phase	Respondents	Estimated burden per response (min)	Average hourly labor cost (%)	Opportunity cost per submission (%)	Total burden hours (rounded)	Total labor costs (rounded)
Qual Screener Responses	180	5	$46.29	$3.86	16	$695

[1] Section 24322 of Part II—Safety Through Informed Consumers Act of 2015 requires the Secretary of Transportation (NHTSA by delegation) to issue a rule to ensure that crash-avoidance information is indicated next to crashworthiness information on stickers placed on motor vehicles by their manufacturers. Public Law 114–94, December 4, 2015.

[2] 90 FR 22571.

TABLE 1—BURDEN ESTIMATES—Continued

Research phase	Respondents	Estimated burden per response (min)	Average hourly labor cost (%)	Opportunity cost per submission (%)	Total burden hours (rounded)	Total labor costs (rounded)
Qual Cognitive Testing	9	60	46.29	46.29	9	417
Quant Screening	10,000	*3	46.29	2.31	500	23,100
Quant Fielding	1,000	11	46.29	8.49	183	8,490
Total					708	32,702

*Quant screening is a simplified version of qual screener and does not include demographic questions since key demographic data is provided by the panel with whom we will work; therefore, we estimate 3 minutes for quant screening compared to 5 minutes for qual screening.

Based on projections (708 hours) in the table on the previous page, the estimated total annual opportunity cost associated with the information collection request is $32,702 (rounded).

Estimated Total Annual Burden Cost: $0.

NHTSA does not expect there to be any cost associated with the information collections other than the opportunity cost associated with the time they spend participating in the study.

Public Comments Invited: You are asked to comment on any aspects of this information collection, including (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Authority: The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; 49 CFR 1.49; and DOT Order 1351.29A.

Issued on December 3, 2025.

Juliette Marie Vallese,

Associate Administrator, Office of Communications and Consumer Information.

[FR Doc. 2025–22057 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

Hazardous Materials: Notice of Applications For Modification to Special Permits

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: List of applications for modification of special permits.

SUMMARY: In accordance with the procedures governing the application for, and the processing of, special permits from the Department of Transportation's Hazardous Material Regulations, notice is hereby given that the Office of Hazardous Materials Safety has received the application described herein.

DATES: Comments must be received on or before December 22, 2025.

ADDRESSES: Record Center, Pipeline and Hazardous Materials Safety Administration U.S. Department of Transportation Washington, DC 20590.

Comments should refer to the application number and be submitted in triplicate. If confirmation of receipt of comments is desired, include a self-addressed stamped postcard showing the special permit number.

FOR FURTHER INFORMATION CONTACT: Donald Burger, Chief, Office of Hazardous Materials Safety General Approvals and Permits Branch, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building, PHH–13, 1200 New Jersey Avenue Southeast, Washington, DC 20590–0001, (202) 366–4535.

SUPPLEMENTARY INFORMATION: Each mode of transportation for which a particular special permit is requested is indicated by a number in the ''Nature of Application'' portion of the table below as follows: (1) Motor vehicle, (2) Rail freight, (3) Cargo vessel, (4) Cargo aircraft only, (5) Passenger-carrying aircraft.

Copies of the applications are available for inspection in the Records Center, East Building, PHH–13, 1200 New Jersey Avenue Southeast, Washington DC or at *http://regulations.gov.*

This notice of receipt of applications for special permit is published in accordance with part 107 of the Federal hazardous materials transportation law (49 U.S.C. 5117(b); 49 CFR 1.53(b)).

Issued in Washington, DC, on December 1, 2025.

Donald P. Burger,

Chief, General Approvals and Permits Branch.

SPECIAL PERMITS DATA

Application No.	Applicant	Regulation(s) affected	Nature of the special permits thereof
7694–M	Applied Pressure Vessels, Inc.	173.302a, 175.3	To modify the special permit to authorize an additional hazardous material. (modes 1, 2, 4).
8757–M	Milton Roy, LLC	173.201(c), 173.202(c), 173.203(c), 173.302a(a)(1), 173.304a(a)(1).	To modify the special permit to authorize changes to the packaging. (modes 1, 2, 3, 4).
20646–M	Omni Tanker Pty. Ltd	107.503(b), 107.503(c), 178.274(b), 178.274(c), 178.274(d), 172.102(c)(3), 172.102(c)(7)(ii).	To modify the special permit to authorize additional packaging construction specifications and additional hazardous materials. (modes 1, 2, 3).
21018	Packaging and Crating Technologies, LLC.	173.185(c), 173.185(f)	To modify the special permit to authorize an increased WH rating. (modes 1, 2, 3).

SPECIAL PERMITS DATA—Continued

Application No.	Applicant	Regulation(s) affected	Nature of the special permits thereof
21354–M	Resonac America, Inc	171.23(a)(1), 171.23(a)(3)	To modify the special permit to authorize the cylinders to remain in service beyond five years. (modes 1, 3).
21784–M	Daicel Safety Systems (Jiangsu) Co., Ltd.	173.301(a)(1), 178.65(c)(3), 173.302(a)(1).	To modify the special permit to authorize an additional airbag inflator. (modes 1, 2, 3, 4).
21968–M	Caterpillar Inc	172.101(j), 173.185(a)(1)	To modify the special permit to authorize the transportation in commerce of an additional marine module which has recently passed UN 38.3 testing (mode 4).

[FR Doc. 2025–22035 Filed 12–4–25; 8:45 am]
BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

Hazardous Materials: Notice of Applications for New Special Permits

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: List of applications for special permits.

SUMMARY: In accordance with the procedures governing the application for, and the processing of, special permits from the Department of Transportation's Hazardous Material Regulations, notice is hereby given that the Office of Hazardous Materials Safety has received the application described herein.

DATES: Comments must be received on or before January 5, 2026.

ADDRESSES: Record Center, Pipeline and Hazardous Materials Safety Administration U.S. Department of Transportation Washington, DC 20590.

Comments should refer to the application number and be submitted in triplicate. If confirmation of receipt of comments is desired, include a self-addressed stamped postcard showing the special permit number.

FOR FURTHER INFORMATION CONTACT: Donald Burger, Chief, Office of Hazardous Materials Safety General Approvals and Permits Branch, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building, PHH–13, 1200 New Jersey Avenue Southeast, Washington, DC 20590–0001, (202) 366–4535.

SUPPLEMENTARY INFORMATION: Each mode of transportation for which a particular special permit is requested is indicated by a number in the ''Nature of Application'' portion of the table below as follows: (1) Motor vehicle, (2) Rail freight, (3) Cargo vessel, (4) Cargo aircraft only, (5) Passenger-carrying aircraft.

Copies of the applications are available for inspection in the Records Center, East Building, PHH–13, 1200 New Jersey Avenue Southeast, Washington DC.

This notice of receipt of applications for special permit is published in accordance with part 107 of the Federal hazardous materials transportation law (49 U.S.C. 5117(b); 49 CFR 1.53(b)).

Issued in Washington, DC, on December 1, 2025.

Donald P. Burger,

Chief, General Approvals and Permits Branch.

SPECIAL PERMITS DATA

Application No.	Applicant	Regulation(s) affected	Nature of the special permits thereof
22110–N	Blue Origin, LLC	173.301(f)(1), 173.302(a)(1) ..	To authorize the transportation in commerce of filled non-DOT specification cylinders that are not fitted with a pressure relief device and are incorporated into the New Glenn launch vehicle 1st Stage modules. (mode 1)
22113–N	Peak Energy Technologies, Inc.	173.185(e)	To authorize the transportation of prototype sodium-ion battery cells that have not yet completed UN 38.3 testing. (modes 1, 2, 3, 4)
22114–N	Busek Co., Inc	173.301(f)(1), 178.35(e)	To authorize the transportation of non-DOT specification fully wrapped carbon-fiber reinforced aluminum lined composite cylinders which are incorporated into a propulsion system within a spacecraft or components of a spacecraft. (modes 1, 2, 3, 4, 5)
22118–N	James Supplies, LLC	173.315(a)(2)	To authorize the manufacture, marking, sale and use of DOT MC 338 cargo tanks for use in the transportation of carbon dioxide, refrigerated liquid. (modes 1, 3)
22123–N	Lucid USA, Inc	172.101(j), 173.185(a)(1), 173.220(d).	To authorize the transportation in commerce of prototype and low production lithium cells and batteries that exceed 35 kg net weight aboard cargo-only aircraft. (mode 4)
22124–N	Sig Sauer Inc	172.101(i)(3), 172.300(a), 173.62(c).	To authorize the transportation in commerce of Division 1.4S in non-specification packagings without applying the required markings. (mode 1)
22127–N	Advance Auto Parts, Inc	172.101(k)(10), 176.83(b)	To authorize the transportation in commerce of UN 2794 batteries, wet, filled with acid, within the same cargo transport unit as R1234yf refrigerant classified as UN3161 liquefied gas, flammable, n.o.s. (mode 3)
22131–N	Composite Technical Systems S.p.A.	178.71(l)(1)	To extend the service life of CTS Type 4 composite cylinders to 30 years. (modes 1, 2, 3, 4)

SPECIAL PERMITS DATA—Continued

Application No.	Applicant	Regulation(s) affected	Nature of the special permits thereof
22132–N	Dragonfly Energy Corp	172.101(j)	To authorize the transportation in commerce of lithium-ion batteries that exceed 35 kg net weight aboard cargo-only aircraft. (mode 4)
22133–N	General Motors Company	171.2(k), 172.301(c)	To authorize the shipment of empty large packagings used for the transportation of tested lithium-ion cells as fully regulated without determining that a hazardous material is present. (modes 1, 2)
22134–N	Planet Labs PBC	173.301(f), 173.302a(a)(1)	To authorize the transportation in commerce of a non-DOT specification cylinder containing certain Division 2.2 compressed gases and incorporated into a spacecraft or components of a spacecraft. (modes 1, 4)
22135–N	National Refrigerants, Inc	172.203(a), 172.301(c)	To authorize the transportation in commerce of non-specification inner receptacles authorized under two special permits where the outer package is marked with a separate special permit number. (modes 1, 4)
22136–N	Aztlan Mora/WMA Motorsports.	173.202, 173.242	To authorize the transportation in commerce of UN1992, flammable liquids, toxic, n.o.s. in non-UN specification 5-gallon steel drums. (mode 1)
22137–N	Daicel Safety Systems Europe Sp.z o.o.	173.301(a)(1), 173.302a, 178.65(b), 178.65(c), 178.65(e)(1), 178.65(f), 178.65(g), 178.65(i).	To authorize the manufacture of a non-specification gas cylinder airbag inflator. (modes 1, 2, 3, 4)
22139–N	Rocket Lab USA, Inc	49 CFR Part 178	To authorize transportation in commerce of a non-DOT specification pressure vessel for use in a space vehicle. (mode 1)
22140–N	Novonix Battery Technology Solutions.	172.101(j), 173.185(e)	To authorize transportation in commerce of prototype lithium-ion and sodium-ion cells by cargo-only aircraft. (mode 4)
22141–N	Pacific Environmental Corp	173.24(f), 173.24a(a)(3)	To authorize transportation in commerce of 1H2 open head drums containing Nickel-Iron batteries with an installed vent for emitted hydrogen gas. (modes 1, 3)
22142–N	ZOLL Services LLC	172.102(c)(2)	To authorize the transportation in commerce of lithium-ion batteries packed with equipment that exceeds the 30% state of charge aboard cargo-only aircraft. (mode 4)
22143–N	Zhejiang TopFlying Metal Packaging Co., Ltd.	173.304(d)	To authorize the manufacture, mark, sale and use of a non-DOT specification non-refillable inner container conforming in part with the regulations applicable to a DOT specification 2Q container for the transportation in commerce of the hazardous material listed in the special permit. (mode 1, 2, 3, 4)
22144–N	Trinity Industries, Inc	179.201–6(b)	To authorize the manufacture, mark, sale and use of DOT111A100W5 tank car tanks equipped with a non-metallic, glass fiber reinforced polymer primary closure for manways to be used for the transportation of hydrochloric acid. (mode 2)
22145–N	Impulse Labs, Inc	172.101(j)	To authorize transportation in commerce of lithium-ion batteries in a battery pack that exceeds 35 kg aboard cargo-only aircraft. (mode 4)
22146–N	Bold Valuable Technology Spain S.L.	172.101(j)	To authorize the transportation in commerce of prototype lithium-ion batteries that exceed 35 kg aboard cargo-only aircraft. (mode 4)
22147–N	Jiangsu Huanqiu Can Manufacturing Co., Ltd.	173.304(d)	To authorize the manufacture, mark, sale and use of a non-DOT specification non-refillable inner container, similar to DOT specification 2Q inner containers, for the transportation in commerce of the hazardous materials listed in the special permit. (modes 1, 2, 3,)

[FR Doc. 2025–22046 Filed 12–4–25; 8:45 am]
BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

Hazardous Materials: Notice of Actions on Special Permits

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice of actions on special permit applications.

SUMMARY: In accordance with the procedures governing the application for, and the processing of, special permits from the Department of Transportation's Hazardous Material Regulations, notice is hereby given that the Office of Hazardous Materials Safety has granted or denied the application described herein.

DATES: Comments must be received on or before January 5, 2026.

ADDRESSES: Record Center, Pipeline and Hazardous Materials Safety Administration U.S. Department of Transportation Washington, DC 20590.

Comments should refer to the application number and be submitted in triplicate. If confirmation of receipt of comments is desired, include a self-addressed stamped postcard showing the special permit number.

FOR FURTHER INFORMATION CONTACT: Donald Burger, Chief, Office of Hazardous Materials Safety General Approvals and Permits Branch, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building, PHH–13, 1200 New Jersey Avenue Southeast, Washington, DC 20590–0001, (202) 366–4535.

SUPPLEMENTARY INFORMATION: Copies of the applications are available for inspection in the Records Center, East Building, PHH–13, 1200 New Jersey Avenue Southeast, Washington DC.

This notice of receipt of applications for special permit is published in accordance with part 107 of the Federal hazardous materials transportation law (49 U.S.C. 5117(b); 49 CFR 1.53(b)).

Issued in Washington, DC, on December 1, 2025.

Donald P. Burger,

Chief, General Approvals and Permits Branch.

SPECIAL PERMITS DATA—GRANTED

Application No.	Applicant	Regulation(s) affected	Nature of the special permits thereof
11725–M	Thales Alenia Space Italia Spa.	173.301(f), 173.302a(a)(1), 173.304a(a)(2).	To modify the special permit to authorize specific prototype lithium-ion batteries contained in equipment in excess of 35 kg aboard cargo-only aircraft.
20511–M	ARMOTECH s.r.o	173.302(a)(1), 173.302(f)(1), 173.302(f)(2).	To authorize two additional compressed gases to be transported in cylinders manufactured under the provisions of the special permit.
21729–M	SodaStream USA. Inc	172.315(a)(2), 173.306(a)(1)	To modify the special permit to authorize a reduced size limited quantity marking.
22025–N	Bhiwadi Cylinders Private Limited.	173.304(d), 178.33d-2	To authorize the manufacture, mark, sale and use of non-DOT specification inner receptacles like 2Q Variation 1 inner receptacles but with a large diameter and increased filling pressure.
22048–N	EnergySolutions, LLC	173.411(b)(2), 173.427(a)(1), 173.465(c), 173.465(d).	To authorize the transportation in commerce of radioactive materials that exceed the external dose rate and have not passed the drop and stack test requirements for Type A packagings.
22051–N	SciSafe Inc	173.199(a)(4)	To authorize the transportation in commerce of Category B biological substances in freezers that are not capable of passing the specified drop test specified in § 173.199(a)(4).
22066–N	Entegris, Inc	173.3(d)(2)(i)	To authorize the transportation of cylinders containing hazardous materials that are damaged or leaking and are overpacked in a salvage cylinder designed, constructed and marked in accordance with a technical code approved by German Transport Competent Authority.
22090–N	K2 Space Corporation	173.301(f), 173.302a(a)(1)	To authorize the transportation in commerce of non-DOT specification cylinders containing compressed krypton (UN1056) and incorporated into a spacecraft or components of spacecraft.
22105–N	Veolia ES Technical Solutions, LLC.	173.185(f)(1), 173.185(f)(2)	To authorize the transportation in commerce of damaged, defective, or recalled lithium-ion batteries for the purpose of disposal.
22112–N	Sandery Polymers Corp	172.300, 172.400, 173.240	To authorize the one-time, one-way transportation in commerce of antimony trioxide in non-UN Standard packagings that are not marked or labeled.
22120–N	Tesla, Inc	173.185(f), 173.185(f)(1), 173.185(f)(2), 173.185(f)(3).	To authorize the transportation in commerce of damaged, defective or recalled lithium-ion batteries in packagings that do not meet the requirements of the HMR.
22121–N	Space Exploration Technologies Corp.	173.56(e)(3), 173.56(e)(4)	To authorize SpaceX to use a contract carrier to transport unapproved explosives for developmental testing.

SPECIAL PERMITS DATA—Denied

SPECIAL PERMITS DATA—Withdrawn

22107–N	Allendale, LLC	173.185(a)(1)	To authorize the transportation of prototype lithium-ion batteries by cargo-only aircraft.
22108–N	D-Orbit US LLC	173.301(a)(9)	To authorize the transportation of non-DOT specification pressure vessels as part of a spacecraft.
22122–N	Honda Racing Corporation USA.	173.185(e)	To authorize the transportation of prototype and low production lithium-ion batteries by cargo-only aircraft.

[FR Doc. 2025–22033 Filed 12–4–25; 8:45 am]
BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Office of the Secretary

[Docket DOT–OST–2025–1887]

Revitalizing Washington Dulles International Airport

AGENCY: Office of the Secretary, Department of Transportation (Department).

ACTION: Request for information (RFI).

SUMMARY: The Department is interested in design concepts and construction and financing proposals for the development of completely new terminals and concourses to replace or build upon the existing main terminal and satellite concourses at Washington Dulles International Airport. This RFI is being conducted to inform and develop potential approaches for entirely new terminal(s) and concourses to replace the existing terminal and concourses. The Department will also accept submissions that propose to retain portions of the existing airport facilities, including, for example, by incorporating all or part of the historic Eero Saarinen-designed main terminal into a new terminal building.

DATES: Questions regarding this RFI must be submitted by December 15, 2025. By December 26, 2025, the Department will post on its website answers to questions received. Final submissions are due by January 20, 2026.

ADDRESSES: Interested persons are encouraged to submit responses to the questions posed in this RFI, along with supporting information, identified by ''Washington Dulles Revitalization,'' by any of the following methods:

Federal eRulemaking Portal: http://www.regulations.gov. Follow the instructions for submitting comments.

Mail: U.S. Department of Transportation, Office of the Secretary, 1200 New Jersey Ave. SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Owen Morgan, U.S. Department of Transportation, Office of the Secretary, 1200 New Jersey Ave. SE, Washington, DC 20590. Telephone: (202) 366–4000. Email: *DullesRFI@dot.gov.*

SUPPLEMENTARY INFORMATION:

1. Purpose

When people arrive to the Nation's capital from abroad, the airports they see should be inspiring, serving as a symbol of the might and prestige of the United States. Washington, DC's airports should be a source of pride for Americans. Yet they are anything but. Washington Dulles International Airport in particular—the busiest of the three airports servicing the National Capital Region—has fallen into a state of disrepair since it opened its doors in 1962. Once known for its iconic aerofoil-inspired main terminal designed by Eero Saarinen, the airport is now better known for its inefficient system of people movers that deliver passengers as much as a half mile or more away from their gates, its infamous moon-rover-like ''mobile lounges,'' jet fuel smell in the concourses, and a paltry number of gates at the main terminal. In short, Washington Dulles International Airport is no longer an airport suitable and grand enough for the capital of the United States of America.

On August 28, 2025, President Trump signed Executive Order (E.O.) 14344, *Making Federal Architecture Beautiful Again.* The goal of E.O. 14344 is to update the policies guiding Federal architecture so that America's public buildings inspire the American people and encourage civic virtue, and so that architects designing Federal buildings serve the American people. Consistent with E.O. 14344, the Department is requesting ideas from interested parties for design proposals, construction concepts, and potential financing plans, including public-private partnership ideas, for completely new terminals and concourses to replace the existing main terminal and satellite concourses at Washington Dulles International Airport or for proposals to build upon and transform the existing facilities. This RFI is an invitation to submit information in response to questions posed below, as well as design, finance, and construction concepts for a new international gateway airport for the National Capital Region. Ideas should be bold, creative, and uncompromising. Americans deserve a big, beautiful new airport for the Nation's capital.

The Department, which owns the airport, intends to provide all submissions received under this RFI to the Metropolitan Washington Airports Authority (MWAA), which operates the airport under a long-term lease, for MWAA's consideration and potential sponsorship.

2. Background

Washington Dulles International Airport has served the DC region since its opening in 1962. In 2024, the airport was the 24th largest in the United States by passenger enplanements.

The Secretary of Transportation and MWAA first executed a lease for Ronald Reagan National Airport and Washington Dulles International Airport and the surrounding properties in 1987 (''the lease''). Prior to the establishment of MWAA and the lease of both airports to MWAA, the airports had been operated by the Federal Aviation Agency and its predecessor (the Civil Aeronautics Authority). The Metropolitan Washington Airports Act of 1986 [1] (the Act), authorized the lease to transfer operating responsibility for both airports to MWAA, a public body created by an interstate compact between the Commonwealth of Virginia and the District of Columbia. The lease currently expires in 2100.

The Department seeks responses to the questions posed in this RFI, along with supporting information, developed independently from the current capital improvement plans proposed by MWAA, including the Washington Dulles International Airport Master Plan approved by the MWAA board of directors on July 16, 2025.

3. Nature of Information Request [2]

The purpose of this RFI is to solicit information for design-construction plans for new terminal(s) and concourses to replace or build upon the existing terminal and concourses at Washington Dulles International Airport that can assist the Department in:

- Learning more about what designs may be suitable and appropriate for the site.
- Gaining a better understanding of what structures could be employed to finance a redesign or design-build of the airport or a major renovation thereof.
- Learning the estimated timeline for completion of such a project.
- Gathering cost information.

The Department may use information obtained through this request to assist, inform, and research paths for new terminals and concourses to replace the existing terminal(s) and concourses using all available resources and authorities. The Department will also accept submissions that propose to retain all or part of the existing airport facilities, including the Eero Saarinen-

[1] Codified at 49 U.S.C. 49101 *et seq.*

[2] This is not a Screening Information Request or Request for Offers. DOT is not seeking or accepting unsolicited proposals related to this activity. The Department will not pay for any information received or costs incurred in preparing a response to this request. Any costs associated with a submittal are solely at the interested vendor's expense. The Department reserves the right to communicate with any, some, or none of the respondents. Any submissions will remain with the Department for its use and will not be returned to the respondents.

designed main terminal, such as proposals to incorporate portions of the Saarinen structure into a new terminal building. This information will assist the Department in its consideration of how best to accomplish this task.

DOT requests statements of interest and capability statements from qualified industry partners.

4. Submittal Requests for RFI

Interested members of the public, including potential vendors, are requested to submit information on the following:

Company Information. Respondents are requested to submit the following, as applicable:

- Company name and address;
- URL of company website (if applicable); and
- Point of contact, including telephone number and email address.

RFI Questions. Any interested member of the public, including a potential vendor, is invited to provide information responsive to the questions below. Responses will enable the Department to ascertain potential options for detailed design-construction plans for new terminal(s) and concourses to replace or build upon the existing terminal and concourses at Washington Dulles International Airport.

1. (Design/Concept) What designs should be considered for a bold new airport to replace the existing terminal and concourses?

- Are there any detailed renderings or designs sufficient to convey the concept?
- Is there a description of the vision, architecture, and key elements of the concept?
- Is there a design that could retain all or part of the existing airport facilities, including the Eero Saarinen-designed main terminal?

2. (Cost/Price) What is a Rough Order of Magnitude (ROM) cost estimate for a redesign or major renovation?

3. (Structure/Financing) How could a design-build be structured and financed to maximize available funds and speed of construction of new terminal(s) and concourses to replace or build upon the existing terminal and concourses?

- What are any innovative approaches to financing and delivery methods, such as a Public-Private Partnership (P3), Airport Investment Partnership Program, alternate delivery methods, exceptions to procurement requirements for recipients of Federal financial assistance, or other creative concepts for structure and finance of the design-build?

4. (Timing) What is the expected timing of a design-build of a redesign or major renovation(s), such as discussed in Item 1? Specifically:

- What is the expected timing of each phase of design-build and the schedule of activities necessary for a complete redesign and build or major renovation?
- What are the principal factors that could accelerate or delay a design and build of a redesign or major renovation of the airport?

5. (Limitations/Impediments) Are there any impediments or limitations to a successful design-build? What are the anticipated construction requirements for implementing your solution?

6. (Mitigation of Operational Impact) How could a redesign or major renovation be carried out while mitigating and minimizing disruption to airport operations during that time?

5. Timeline and Delivery of Submittal

See also the **DATES** section of this notice. Submit questions within December 15, 2025. By December 26, 2025, the Department will post on its website answers to questions received. Final submissions are due January 20, 2026.

Submittals: Interested parties must provide responses in writing. Responses to the RFI questions should be concise and reasonable in length.

The ROMs will be used solely for internal informational and planning purposes.

The Department may request clarification to responses directly related to this RFI through direct contact with respondents. Respondents must identify and clearly mark any proprietary information contained in their submissions and must be prepared to provide justification for confidential treatment to the Department of such designations if requested. This proprietary information will be will be treated confidentially by the Department; however, nothing alters the Department's obligations under existing law, including any duties owed by the Department under the Freedom of Information Act. The Department may need the Respondent's justification of the proprietary designation to support withholding the documents or information from public disclosure upon request.

Issued in Washington, DC, under authority at 49 U.S.C. 49101 *et seq.*

Sean P. Duffy,

Secretary.

[FR Doc. 2025–22010 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

Notice of OFAC Sanctions Action

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Notice.

SUMMARY: The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) is publishing the names of one or more persons that have been placed on OFAC's Specially Designated Nationals and Blocked Persons List (SDN List) based on OFAC's determination that one or more applicable legal criteria were satisfied. All property and interests in property subject to U.S. jurisdiction of these persons are blocked, and U.S. persons are generally prohibited from engaging in transactions with them.

DATES: This action was issued on October 1, 2025. See **SUPPLEMENTARY INFORMATION** for relevant dates.

FOR FURTHER INFORMATION CONTACT: OFAC: Associate Director for Global Targeting, 202–622–2420; Assistant Director for Licensing, 202–622–2480; Assistant Director for Sanctions Compliance, 202–622–2490 or *https://ofac.treasury.gov/contact-ofac.*

SUPPLEMENTARY INFORMATION:

Electronic Availability

The SDN List and additional information concerning OFAC sanctions programs are available on OFAC's website: *https://ofac.treasury.gov.*

Notice of OFAC Action

On October 1, 2025, OFAC determined that the property and interests in property subject to U.S. jurisdiction of the following persons are blocked under the relevant sanctions authority listed below.

Individuals

BILLING CODE 4810–AL–P

1. BOUZARY, Seyed Behzad, Essen, Germany; DOB 21 Mar 1963; POB Tehran, Iran; nationality Germany; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; Passport C6XTLL1T9 (Germany) (individual) [NPWMD] [IFSR] (Linked To: STAR MANAGEMENT GROUP GMBH).

   Designated pursuant to section 1(a)(iv) of Executive Order (E.O.) 13382 of June 28, 2005, "Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters," 70 FR 38567, 3 CFR, 2005 Comp., p. 170 (E.O. 13382), for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, STAR MANAGEMENT GROUP GMBH, a person whose property and interests in property are blocked pursuant to E.O. 13382.

2. CAI, Deshan (Chinese Simplified: 蔡得山) (a.k.a. "CAI, Sam"), China; DOB 24 Aug 1981; POB Juancheng County, Shandong, China; nationality China; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 372929198108247253 (China) (individual) [NPWMD] [IFSR] (Linked To: FUTECH CO LTD).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, FUTECH CO LTD, a person whose property and interests in property are blocked pursuant to E.O. 13382.

3. DEHGHAN FARSI, Mohamadreza (Arabic: محمد رضا دهقان فارسی) (a.k.a. DEHGHAN, Mohamad Reza), Iran; DOB 08 Mar 1987; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 2432835786 (Iran) (individual) [NPWMD] [IFSR] (Linked To: KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS, a person whose property and interests in property are blocked pursuant to E.O. 13382.

4. FARSHCHI, Mehdi (a.k.a. FARSHCHI, Mahdi; a.k.a. FARSHCHI, Mahdi Mohammad), Tehran, Iran; DOB 10 Oct 1980; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; Passport Z55919906 (Iran) expires 17 Feb 2027; National ID No. 0071756671 (Iran) (individual) [NPWMD] [IFSR] (Linked To: BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

5. HEIDARI, Gholamhasan (Arabic: غلامحسن حیدری), Iran; DOB 03 Sep 1974; POB Fares, Iran; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 5489526610 (Iran) (individual) [NPWMD] [IFSR] (Linked To: KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS).

Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS, a person whose property and interests in property are blocked pursuant to E.O. 13382.

6. HOSEINI MUNES, Sayyed Ahmad (Arabic: سید احمد حسینی مونس), Tehran, Iran; DOB 18 Mar 1974; POB Ali Sadr, Iran; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 4031738625 (Iran) (individual) [NPWMD] [IFSR] (Linked To: SHAHID HEMMAT SPACE GROUP).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, SHAHID HEMMAT SPACE GROUP, a person whose property and interests in property are blocked pursuant to E.O. 13382.

7. HOU, Xueyuan (Chinese Traditional: 侯雪員; Chinese Simplified: 侯雪员), No. 20-18, Xima Village, Shiliu Street, Donghai County, Jiangsu, China; DOB 07 Nov 1986; nationality China; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 320722198611070815 (China) (individual) [NPWMD] [IFSR] (Linked To: INNOVIA ELECTRONIC TECHNOLOGY CO LIMITED).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, INNOVIA ELECTRONIC TECHNOLOGY CO LIMITED, a person whose property and interests in property are blocked pursuant to E.O. 13382.

8. HU, Yunlu (Chinese Simplified: 胡运禄) (a.k.a. "HU, Hans"), China; DOB 01 Apr 1990; POB Yangxin County, Huangshi, Hubei, China; nationality China; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 420222199004010512 (China) (individual) [NPWMD] [IFSR] (Linked To: ROCKET PCB SOLUTION LTD).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, ROCKET PCB SOLUTION LTD, a person whose property and interests in property are blocked pursuant to E.O. 13382.

9. LEI, Guojian (Chinese Simplified: 雷国建) (a.k.a. "LEI, Jack"), China; DOB 21 May 1983; POB Boyang County, Jiangxi, China; nationality China; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 362330198305216238 (China) (individual) [NPWMD] [IFSR] (Linked To: RAYMING TECHNOLOGY).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, RAYMING TECHNOLOGY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

10. LIU, Baojuan (Chinese Simplified: 刘宝娟; Chinese Traditional: 劉寶娟), No. 20-18, Xima Village, Shiliu Street, Donghai County, Jiangsu, China; DOB 02 Aug 1987; POB

Linqu County, Weifang City, Shandong, China; nationality China; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Female; National ID No. 370724198708021 86X (China) (individual) [NPWMD] [IFSR] (Linked To: LIU, Baoxia).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, LIU, Baoxia, a person whose property and interests in property are blocked pursuant to E.O. 13382.

11. MIRA, Antonio Filipe Fortio (a.k.a. MIRRA, Antonio), Lisboa, Portugal; DOB 09 Oct 1992; POB Lisboa, Portugal; nationality Portugal; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 14138863 (Portugal) (individual) [NPWMD] [IFSR] (Linked To: BUSINESS UNITED UNIPESSOAL LDA).

Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, BUSINESS UNITED UNIPESSOAL LDA, a person whose property and interests in property are blocked pursuant to E.O. 13382.

12. NILI AHMADABADI, Mehdi (a.k.a. NILI AHMADABADI, Mahdi), Isfahan, Iran; DOB 18 Sep 1982; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; Passport X62230778 (Iran) expires 10 Mar 2028; National ID No. 1282460358 (Iran) (individual) [NPWMD] [IFSR] (Linked To: BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY).

Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

13. SALIMI, Amirhossein (a.k.a. SALIMI, Amir; a.k.a. SALIMI, Amir Hosein), Tehran, Iran; DOB 17 May 1971; POB Tehran, Iran; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 0055512550 (Iran) (individual) [NPWMD] [IFSR] (Linked To: PERFECT DAY CO SA).

Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, PERFECT DAY CO SA, a person whose property and interests in property are blocked pursuant to E.O. 13382.

14. SHAFIIAN AZARKHAVARANI, Alireza (a.k.a. SHAFIAN AZARKHAVARANI, Alircza; a.k.a. SHAFIEIAN AZARKHAVARANI, Alircza; a.k.a. SHAFIIAN AZARKHAVARANI, Ali Reza; a.k.a. SHAFIYAN AZARKHAVARANI, Alireza), Isfahan, Iran; DOB 22 Mar 1987; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 1292514851 (Iran) (individual) [NPWMD] [IFSR] (Linked To: BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

15. SHAFIIAN AZARKHAVARANI, Fatemeh (a.k.a. SHAFIEIAN AZARKHAVARANI, Fatemeh), Isfahan, Iran; DOB 18 Apr 1994; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Female; National ID No. 1271655969 (Iran) (individual) [NPWMD] [IFSR] (Linked To: BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY).

    Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

16. SHAYESTEH, Mehdi Shirazi (a.k.a. SHAYESTEH, Mehdi Shiarzi), Tehran, Iran; Essen, Germany; DOB 08 Jun 1980; POB Tehran, Iran; nationality Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Male; National ID No. 0073165727 (Iran) (individual) [NPWMD] [IFSR] (Linked To: PASARGAD HELICOPTER COMPANY).

    Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, PASARGAD HELICOPTER COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

17. SUN, Zhaolan (Chinese Simplified: 孙兆兰), China; DOB 21 Mar 1949; POB Linqu County, Weifang City, Shandong, China; nationality China; Additional Sanctions Information - Subject to Secondary Sanctions; Gender Female; National ID No. 370724194903211927 (China) (individual) [NPWMD] [IFSR] (Linked To: WESTCOM TECHNOLOGY CO LIMITED).

    Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, WESTCOM TECHNOLOGY CO LIMITED, a person whose property and interests in property are blocked pursuant to E.O. 13382.

Entities

1. ABZAR-E DAGHIGH-E TAHA COMPANY (a.k.a. ABZAR DAGHIGH TAHA; a.k.a. TAHA PRECISION TOOLS COMPANY), No. 1, Cho'gan Street, Unit 2, Ground Floor, Shahid Fahmideh Highway (Tehran-Karaj Highway), Farhangian-Azadi Town (Ansar Town), Central District, Tehran County, Tehran, Tehran 1398910003, Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 05 Mar 2014; National ID No. 14003933075 (Iran); Registration Number 451094 (Iran) [NPWMD] [IFSR] (Linked To: SHAHID BAKERI INDUSTRIAL GROUP).

    Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in

support of, SHAHID BAKERI INDUSTRIAL GROUP, a person whose property and interests in property are blocked pursuant to E.O. 13382.

2. BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY (a.k.a. BEH JOULE PARS ENGINEERING AND TRADING COMPANY; a.k.a. BEH JOULE PARS TRADING AND ENGINEERING COMPANY; a.k.a. FARAZ ALBORZ COMMERCIAL ENGINEERING COMPANY), Afra Complex, Unit 503, Fourth Floor, No. 432, Ayatollah Kashani Highway, North Shahid Ebrahimi Purbasa'i Street, Ferdows Neighborhood, Central District, Tehran County, Region 14, Tehran, Tehran 1481816668, Iran; Unit 502, Ayatollah Kashani Street, Tehran, Iran; Unit 5, 1st Floor, Surna Building, Sheikh Mofid Street, Isfahan, Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 17 Nov 2009; National ID No. 10104097189 (Iran); Registration Number 364251 (Iran) [NPWMD] [IFSR] (Linked To: AEROSPACE INDUSTRIES ORGANIZATION).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, AEROSPACE INDUSTRIES ORGANIZATION, a person whose property and interests in property are blocked pursuant to E.O. 13382.

3. BUSINESS UNITED UNIPESSOAL LDA (a.k.a. UNITED BUSINESS CO; a.k.a. "BUSINESS UNITED LLC"), Centro Empresarial Torres de Lisboa, Rua Tomas da Fonseca, Torre G-1, Lisboa 1600-209, Portugal; Rua dos Bombeiros Voluntarios, No. 27, Odivelas Freguesia, Lisboa Concelho 2675-305, Portugal; Website https://unitedbusiness.pt; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 26 Sep 2018; Organization Type: Non-specialized wholesale trade; V.A.T. Number 515091669 (Portugal); Legal Entity Number 894500IRS5HCYE71QL11 [NPWMD] [IFSR] (Linked To: PASARGAD HELICOPTER COMPANY).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, PASARGAD HELICOPTER COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

4. CABUK CALISAN TASIMACILIK VE ENDUSTRI MAKINELERI TICARET LIMITED SIRKETI (Latin: ÇABUK ÇALIŞAN TAŞIMACILIK VE ENDÜSTRİ MAKİNELERİ TİCARET LİMİTED ŞİRKETİ) (a.k.a. CABUK CALISAN TASIMACILIK VE ENDUSTRI MAKINELERI TIC LTD STI), Asmali Mescit Mahallesi Caddesi, Ishani No. 1, Ic Kapi No. 3, Beyoglu, Istanbul, Turkey; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 29 Sep 2021; Chamber of Commerce Number 1321028 (Turkey); Registration Number 330757-5 (Turkey) [NPWMD] [IFSR] (Linked To: PASARGAD HELICOPTER COMPANY).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, PASARGAD HELICOPTER COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

5. EXCELLENT BEIJING TECHNOLOGY DEVELOPMENT COMPANY LIMITED (Chinese Simplified: 卓越全球（北京）科技发展有限公司) (a.k.a. BEIJING EXCELLENT GLOBAL TECHNOLOGY DEVELOPMENT COMPANY; a.k.a. EXCELLENT BEIJING TECHNOLOGY DEVELOPMENT LIMITED), Room 1502, Floor 12, Building 9, No. 88 Jianguo Road, Chaoyang District, Beijing, China; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 24 Jan 2013; Unified Social Credit Code (USCC) 91110105059259703U (China) [NPWMD] [IFSR] (Linked To: PARSAJAM, Mohsen).

   Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, PARSAJAM, Mohsen, a person whose property and interests in property are blocked pursuant to E.O. 13382.

6. HANGZHOU JIEPEI INFORMATION TECHNOLOGY CO LTD (Chinese Simplified: 杭州捷配信息科技有限公司) (a.k.a. ALL-PCB SOLUTIONS LTD), Room 1201, West Building, Building 2, Xintiandi Business Center, Gongshu District, Hangzhou, Zhejiang 310000, China; Website www.jiepei.com; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 04 Jan 2015; Unified Social Credit Code (USCC) 91330103328163604H (China) [NPWMD] [IFSR] (Linked To: DEHGHAN FARSI, Mohamadreza).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, DEHGHAN FARSI, Mohamadreza, a person whose property and interests in property are blocked pursuant to E.O. 13382.

7. HEBEI SENNING AUTOMATED EQUIPMENT CO LTD (Chinese Simplified: 河北森宁自动化设备有限公司) (a.k.a. HEBEI SENNING INTERNATIONAL TRADING CO LTD (Chinese Simplified: 河北森宁国际贸易有限公司); a.k.a. "SUNNY INTERNATIONAL CO LTD"), No. 10-401, Blessgo Industry Park, Ying Bin Road, Yanjiao Development Zone, Sanhe, Langfang, Hebei, China (Chinese Simplified: 燕郊开发区迎宾北路西侧，孤山西路北侧百世金谷燕郊国际产业基地内 10-401, 三河市, 廊坊市, 河北省, China); Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 17 May 2019; Unified Social Credit Code (USCC) 91131082MA0DJYYW35 (China) [NPWMD] [IFSR] (Linked To: RAYAN FAN KAV ANDISH CO).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, RAYAN FAN KAV ANDISH CO, a person whose property and interests in property are blocked pursuant to E.O. 13382.

8. INNOVIA ELECTRONIC TECHNOLOGY CO LIMITED (Chinese Traditional: 香港英諾電子科技有限公司), Unit D3, 11/F, Luk Hop Industrial Building, No. 8 Luk Hop Street, San Po Kong, Kowloon, Hong Kong, China; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 15 Nov 2017; Business Registration Number 68485731 (Hong Kong) [NPWMD] [IFSR] (Linked To: LIU, Baoxia).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, LIU, Baoxia, a person whose property and interests in property are blocked pursuant to E.O. 13382.

9. KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS (Arabic: شركت راهيابان فناوری ارتباطات خضراء) (a.k.a. KHAZRA ERTEBAT CO; a.k.a. KHAZRA ERTEBATAT FANAVARI RAHYABAN; a.k.a. RAHIABAN FANAVARI ERTEBATAT KHAZRA), Unit 2, Second Floor, Number 58, Shahid Ismaeili Shakiyabi Sharghi Street, 37th Street, Narmak, Central Sector, Tehran District, Tehran, Tehran, Iran; Additional Sanctions Information - Subject to Secondary Sanctions; National ID No. 10103966853 (Iran); Registration Number 349085 (Iran) [NPWMD] [IFSR] (Linked To: SHIRAZ ELECTRONICS INDUSTRIES).

   Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, SHIRAZ ELECTRONICS INDUSTRIES, a person whose property and interests in property are blocked pursuant to E.O. 13382.

10. LONGSTONE TECHNOLOGY CO LIMITED (Chinese Traditional: 香港長石科技有限公司), Unit D3, 11/F, Luk Hop Industrial Building, No. 8 Luk Hop Street, San Po Kong, Kowloon, Hong Kong, China; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 15 Nov 2017; Business Registration Number 68485587 (Hong Kong) [NPWMD] [IFSR] (Linked To: LIU, Baojuan).

    Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, LIU, Baojuan, a person whose property and interests in property are blocked pursuant to E.O. 13382.

11. MICRO DEVICE CO LIMITED, Room D7, 8/F, Kai Tak Fty Building, No. 99 King Fuk Street, San Po Kong, Kowloon, Hong Kong, China; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 29 Dec 2023; Business Registration Number 76070867 (Hong Kong) [NPWMD] [IFSR] (Linked To: HOU, Xucyuan).

    Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, HOU, Xueyuan, a person whose property and interests in property are blocked pursuant to E.O. 13382.

12. PASARGAD HELICOPTER COMPANY (Arabic: هلیکوپتری پاسارگاد پرواز کیش) (a.k.a. PASARGAD CO; a.k.a. PASARGAD PARVAZ KISH CO; a.k.a. PASARGAD PARVAZE KISH; a.k.a. "PHC"), 2nd and 3rd Floor, No. 10, Banisi St., Between Mirdamad Blvd. and Zafar Ave., Nelson Mandela Blvd., Tehran 7941963355, Iran; Pasargad Helicopter Hanger, Airside Area, Kish International Airport, Kish Island 1968874511, Iran; Unit 17, 4th Floor, Mona Tower, Kish Island, Iran; Ground Floor, Kish International Exhibition Building, No. 0, Imam Khomeini Square, Airport Boulevard, Kish Airport, Bandar Lengeh, Hormozgan, Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 06 May 2017; National ID No. 14006750018 (Iran); Registration Number 13360 (Iran)

[NPWMD] [IFSR] (Linked To: IRAN HELICOPTER SUPPORT AND RENEWAL COMPANY).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, IRAN HELICOPTER SUPPORT AND RENEWAL COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

13. PERFECT DAY CO SA (a.k.a. PERFECT DAY CO; a.k.a. PERFECTDAY SOCIEDAD ANONIMA; a.k.a. "EPV INTERNATIONAL"), Bolivia Ave., 2239/301, Montevideo, Uruguay; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 25 Nov 2014; Tax ID No. 217537690015 (Uruguay) [NPWMD] [IFSR] (Linked To: PASARGAD HELICOPTER COMPANY).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, PASARGAD HELICOPTER COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

14. RAYMING TECHNOLOGY (a.k.a. RAYMING PCB AND ASSEMBLY; a.k.a. RAYMING TECHNOLOGY HK CO LIMITED (Chinese Traditional: 雷鳴科技香港有限公司); a.k.a. SHENZHEN RAYMING ELECTRONIC CO LTD (Chinese Simplified: 深圳市雷明电子有限公司)), 601, L3#, Exhibition Bay South, Zhanyun Road, Fuhai Bao'an, Shenzhen, Guangdong, China; Room 02, Area B, 4th Floor, Building 12, Fuan Second Industrial City, Dayang Development Zone, Fuyong Street, Shenzhen, Guangdong 518100, China; Office No. 3, 10/F, Witty Commercial Building, 1A-1L Tung Choi Street, Mongkok, Kowloon, Hong Kong, China; Website www.raypcb.com; Additional Sanctions Information - Subject to Secondary Sanctions; Business Registration Number 52543426 (Hong Kong); Unified Social Credit Code (USCC) 91440300595655179U (China) [NPWMD] [IFSR] (Linked To: DEHGHAN FARSI, Mohamadreza).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, DEHGHAN FARSI, Mohamadreza, a person whose property and interests in property are blocked pursuant to E.O. 13382.

15. ROCKET PCB SOLUTION LTD (Chinese Simplified: 东莞市跃捷电路科技有限公司), 301 Building B, Huafeng Digital Technology Industrial Park, Chaoyang Ro, Yanchuan, Songgang, Shenzhen, Guangdong 518105, China; No. 69, Lianfeng North Road, Xianxi Area, Changan Town, Dongguan, Guangdong, China; Website www.rocket-pcb.com; Additional Sanctions Information - Subject to Secondary Sanctions; Unified Social Credit Code (USCC) 91441900595831304L (China) [NPWMD] [IFSR] (Linked To: KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS, a person whose property and interests in property are blocked pursuant to E.O. 13382.

16. SHAHID HEMMAT SPACE GROUP (a.k.a. "SHSG"), Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Type: Defense activities; Target Type Government Entity [NPWMD] [IFSR] (Linked To: AEROSPACE INDUSTRIES ORGANIZATION).

    Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, AEROSPACE INDUSTRIES ORGANIZATION, a person whose property and interests in property are blocked pursuant to E.O. 13382.

17. STAR MANAGEMENT GROUP GMBH, Lichstr. 2, Essen, Nordrhein-Westfalen 45127, Germany; Lindenstr. 48-52, Dusseldorf 40233, Germany; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 21 Aug 2017; V.A.T. Number DE314040843 (Germany); Registration Number 45130B28433 (Germany) [NPWMD] [IFSR] (Linked To: PASARGAD HELICOPTER COMPANY).

    Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, PASARGAD HELICOPTER COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

18. TAKTA FANAVARAN RASA COMPANY (a.k.a. TEKTA FANAVARAN RASA COMPANY), Unit 5, Floor 1, Sorna Building, No. 5, Sheikh Mofid Street, Pasha Alley 3, Masli Mosque Neighborhood, Central Sector, Isfahan County, Isfahan, Isfahan 8164763854, Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 17 Nov 2013; National ID No. 10260699110 (Iran); Registration Number 51286 (Iran) [NPWMD] [IFSR] (Linked To: BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY).

    Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

19. TAMIN SANAT AMEN COMPANY (a.k.a. AMEN INDUSTRY SUPPLY; a.k.a. TAAMIN INDUSTRIAL SUPPLY COMPANY; a.k.a. TAAMIN SANAT AMEN COMPANY), Sorena Building, Unit 5, First Floor, No. 0, Sheikh Mofid Street, Pasha Alley 3, Mosalla Grand Mosque, Central District, Isfahan County, Isfahan, Isfahan 8164763854, Iran; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 23 Oct 2014; National ID No. 14004486100 (Iran); Registration Number 52967 (Iran) [NPWMD] [IFSR] (Linked To: BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY).

    Designated pursuant to section 1(a)(iv) of E.O. 13382 for being owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, BEH JOULE PARS COMMERCIAL ENGINEERING COMPANY, a person whose property and interests in property are blocked pursuant to E.O. 13382.

20. UIY INC (Chinese Simplified: 优译有限公司) (a.k.a. UIY TECHNOLOGY CO LTD), No. 8, Lane 1, Xintun East Zone, Longgang District, Shenzhen, Guangdong 518172,

China; Website www.uiy.com; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 10 Apr 2003; Unified Social Credit Code (USCC) 914403007488681764 (China) [NPWMD] [IFSR] (Linked To: KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS, a person whose property and interests in property are blocked pursuant to E.O. 13382.

21. WESTCOM TECHNOLOGY CO LIMITED (Chinese Simplified: 北京韦思通科技有限公司) (a.k.a. BEIJING WEISITONG TECHNOLOGY CO LTD), Room 1502, Floor 12, Building 9, No. 88 Jianguo Road, Chaoyang District, Beijing, China; Additional Sanctions Information - Subject to Secondary Sanctions; Organization Established Date 17 Dec 2014; Unified Social Credit Code (USCC) 91110117318319919E (China) [NPWMD] [IFSR] (Linked To: KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS).

Designated pursuant to section 1(a)(iii) of E.O. 13382 for having provided, or attempted to provide, financial, material, technological or other support for, or goods or services in support of, KHAZRA COMMUNICATIONS TECHNOLOGY SOLUTIONS, a person whose property and interests in property are blocked pursuant to E.O. 13382.

(Authority: E.O. 13382.)

Bradley T. Smith,

Director, Office of Foreign Assets Control.

[FR Doc. 2025–22113 Filed 12–4–25; 8:45 am]

BILLING CODE 4810–AL–C

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

Notice of OFAC Sanctions Actions

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Notice.

SUMMARY: The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) is publishing the names of one or more persons that have been placed on OFAC's Specially Designated Nationals and Blocked Persons List (SDN List) based on OFAC's determination that one or more applicable legal criteria were satisfied. All property and interests in property subject to U.S. jurisdiction of these persons are blocked, and U.S. persons are generally prohibited from engaging in transactions with them.

DATES: This action was issued on December 3, 2025. See **SUPPLEMENTARY INFORMATION** section for relevant dates.

FOR FURTHER INFORMATION CONTACT: OFAC: Associate Director for Global Targeting, 202–622–2420; Assistant Director for Sanctions Compliance, 202–622–2490; or *https://ofac.treasury.gov/contact-ofac.*

SUPPLEMENTARY INFORMATION:

Electronic Availability

The SDN List and additional information concerning OFAC sanctions programs are available on OFAC's website: *https://ofac.treasury.gov.*

Notice of OFAC Action

On December 3, 2025, OFAC determined that that the property and interests in property subject to U.S. jurisdiction of the following persons are blocked under the relevant sanctions authorities listed below.

Individuals

1. ESCOBAR CABRERA, Asdrubal Rafael (a.k.a. ''El Asdrubal''), Venezuela; DOB 04 Aug 1992; POB Venezuela; nationality Venezuela; citizen Venezuela; Gender Male; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 21269516 (Venezuela) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(C) of Executive Order 13581 of July 24, 2011, ''Blocking Property of Transnational Criminal Organizations,'' 76 FR 44757 (July 27, 2011), as amended by Executive Order 13863 of March 15, 2019, ''Taking Additional Steps to Address the National Emergency With Respect to Significant Transnational Criminal Organizations,'' 84 FR 10255 (March 19, 2019) (E.O. 13581, as amended) for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of Executive Order 13224 of September 23, 2001, ''Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism,'' 66 FR 49079, as amended by Executive Order 13886 of September 9, 2019, ''Modernizing Sanctions To Combat Terrorism,'' 84 FR 48041 (E.O. 13224, as amended) for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

2. ESPINAL QUINTERO, Richard Jose (a.k.a. ESPINEL QUINTERO, Richard Jose; a.k.a. ''El Coty''), Venezuela; DOB 19 Apr 1996; POB Venezuela; nationality Venezuela; citizen Venezuela; Gender Male; Secondary

sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 24419648 (Venezuela) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

3. GUERRERO PALMA, Cheison Royer (a.k.a. ''Arabe Negro''; a.k.a. ''Mexicali''), Chile; DOB 16 Feb 1985; POB Maracay, Aragua, Venezuela; nationality Venezuela; Gender Male; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 17984659 (Venezuela) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

4. SEVILLA ARTEAGA, Kenffersso Jhosue (a.k.a. MARTINEZ LOPEZ, Jose Daniel; a.k.a. SEVILLA ARTEGA, Kenffersso Jhosue; a.k.a. SEVILLA ATEAGA, Kenferson; a.k.a. ''El Flipper''; a.k.a. ''Flypper''), Colombia; DOB 29 Apr 1993; POB Venezuela; nationality Venezuela; citizen Venezuela; Gender Male; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 21098983 (Venezuela); alt. Cedula No. 1047240759 (Colombia) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

5. APONTE CORDOVA, Noe Manases (a.k.a. ''El Noe''), Venezuela; DOB 30 May 1988; POB Venezuela; nationality Venezuela; citizen Venezuela; Gender Male; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 19554865 (Venezuela) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

6. ARAYA NAVARRO, Jimena Romina (a.k.a. ''ARAYA, Jimena''; a.k.a. ''Rosita''), Venezuela; Colombia; DOB 05 Sep 1983; nationality Venezuela; Gender Female; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 16011070 (Venezuela) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(B) of E.O. 13581, as amended, for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(C) of E.O. 13224, as amended, for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

7. LANDAETA HERNANDEZ, Eryk Manuel (a.k.a. ''Eryk''), Colombia; DOB 29 Aug 1982; nationality Venezuela; Gender Male; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Cedula No. 15978329 (Venezuela) (individual) [SDGT] [TCO] (Linked To: TREN DE ARAGUA).

Designated pursuant to section 1(a)(ii)(B) of E.O. 13581, as amended, for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(C) of E.O. 13224, as amended, for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, Tren De Aragua, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

Entities

1. YAKERA Y LANE SAS (a.k.a. YAKERA YLANE S.A.S.), Cucuta, Norte de Santander, Colombia; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Organization Established Date 20 Jun 2019; Organization Type: Wholesale and retail trade; NIT # 901296366–9 (Colombia) [SDGT] [TCO] (Linked To: SEVILLA ARTEAGA, Kenffersso Jhosue).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Kenffersso Jhosue Sevilla Arteaga, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Kenffersso Jhosue Sevilla Arteaga, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

2. ERYK PRODUCCIONES SAS, Bogota, Colombia; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Organization Established Date 23 Jun 2023; Organization Type: Creative, arts and entertainment activities; NIT # 901726321–4 (Colombia) [SDGT] [TCO] (Linked To: LANDAETA HERNANDEZ, Eryk Manuel).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Eryk Manuel Landaeta Hernandez, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Eryk Manuel Landaeta Hernandez, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

3. GLOBAL IMPORT SOLUTIONS S.A., Anaco, Anzoategui, Venezuela; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Organization Established Date 20 Jul 2021; Tax ID No. J411408778 (Venezuela) [SDGT] [TCO] (Linked To: ARAYA NAVARRO, Jimena Romina).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Jimena Romina Araya Navarro, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Jimena Romina Araya Navarro, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

4. MAIQUETIA VIP BAR RESTAURANT (a.k.a. MAIQUETIA VIP; a.k.a. ''DISCOTECA MAIQUETIA VIP''), Cl. 17 Sur #16–54, Bogota, Colombia; Secondary sanctions risk: section 1(b) of Executive Order 13224, as amended by Executive Order 13886; Organization Established Date 17 Dec 2020; Organization Type: Beverage serving activities; Matricula Mercantil No 3319256 (Colombia) [SDGT] [TCO] (Linked To: LANDAETA HERNANDEZ, Eryk Manuel).

Designated pursuant to section 1(a)(ii)(C) of E.O. 13581, as amended, for being owned or controlled by, or having acted or purported to act for or on behalf of, directly or indirectly, Eryk Manuel Landaeta Hernandez, a person whose property and interests in property are blocked pursuant to E.O. 13581, as amended.

Designated pursuant to section 1(a)(iii)(A) of E.O. 13224, as amended, for being owned, controlled, or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Eryk Manuel Landaeta Hernandez, a person whose property and interests in property are blocked pursuant to E.O. 13224, as amended.

(Authority: 31 CFR chapter V)

Dated: December 3, 2025.

Bradley T. Smith,

Director, Office of Foreign Assets Control.

[FR Doc. 2025–22061 Filed 12–4–25; 8:45 am]

BILLING CODE 4810–AL–P

FEDERAL REGISTER

Vol. 90 Friday,

No. 232 December 5, 2025

Part II

Department of Justice

Antitrust Division

United States of America et al. v. RealPage, Inc. et al.; Proposed Final Judgment and Competitive Impact Statement; Notice

DEPARTMENT OF JUSTICE

Antitrust Division

United States of America et al. v. RealPage, Inc. et al.; Proposed Final Judgment and Competitive Impact Statement

Notice is hereby given pursuant to the Antitrust Procedures and Penalties Act, 15 U.S.C. 16(b)–(h), that a proposed Final Judgment, Stipulation, and Competitive Impact Statement have been filed with the United States District Court for the Middle District of North Carolina in *United States of America et al.* v. *RealPage, Inc. et al.,* Civil Action No. 1:24–cv–00710. On January 7, 2025, the United States filed a Complaint alleging that RealPage, Inc., along with six landlords, violated Section 1 of the Sherman Act, 15 U.S.C. 1, by unlawfully agreeing to share and use landlords' competitively sensitive information and agreeing to use RealPage's software to align pricing among competing landlords. The Complaint also alleges that RealPage violated Section 2 of the Sherman Act, 15 U.S.C. 2, by monopolizing or attempting to monopolize the commercial revenue management software market for conventional multifamily rental housing by preventing other software providers from effectively competing with products that do not harm the competitive process. The proposed Final Judgment, filed on November 24, 2025, seeks to stop the exchange of competitively sensitive data among competing landlords through RealPage and to deter exchanges of such data by other means, such as in revenue management meetings attended by competitors. RealPage must also ensure that certain features of RealPage's revenue management software do not facilitate an alignment of pricing among competing landlord users. RealPage must establish an antitrust compliance policy and cooperate with the United States in this litigation.

Copies of the Complaint, proposed Final Judgment, and Competitive Impact Statement are available for inspection on the Antitrust Division's website at *http://www.justice.gov/atr* and at the Office of the Clerk of the United States District Court for the Middle District of North Carolina. Copies of these materials may be obtained from the Antitrust Division upon request and payment of the copying fee set by Department of Justice regulations.

Public comment is invited within 60 days of the date of this notice. Such comments, including the name of the submitter, and responses thereto, will be posted on the Antitrust Division's website, filed with the Court, and, under certain circumstances, published in the **Federal Register**. Comments should be submitted in English and directed to Danielle Hauck, Acting Chief, Technology and Digital Platforms Section, Antitrust Division, Department of Justice, 450 Fifth Street NW, Suite 7100, Washington, DC 20530 (email address: *ATR.Public-Comments-Tunney-Act-MB@usdoj.gov*).

Suzanne Morris,

Deputy Director Civil Enforcement Operations, Antitrust Division.

In The United States District Court for the Middle District of North Carolina

UNITED STATES OF AMERICA, U.S. Department of Justice, Antitrust Division, 950 Pennsylvania Avenue NW, Washington, DC 20530, STATE OF NORTH CAROLINA, 114 W Edenton Street, Raleigh, NC 27603, STATE OF CALIFORNIA, 300 South Spring Street, Suite 1702, Los Angeles, CA 90013, STATE OF COLORADO, 1300 Broadway, 7th Floor, Denver, CO 80203, STATE OF CONNECTICUT, 165 Capitol Avenue, Hartford, CT 06106, STATE OF ILLINOIS, 115 S LaSalle St., Floor 23, Chicago, IL 60603, COMMONWEALTH OF MASSACHUSETTS, One Ashburton Place, 18th Floor, Boston, MA 02108, STATE OF MINNESOTA, 445 Minnesota Street, St. Paul, MN 55101, STATE OF OREGON, 100 SW Market St., Portland, OR 97201, STATE OF TENNESSEE, P.O. Box 20207, Nashville, TN 37202, and STATE OF WASHINGTON, 800 Fifth Avenue, Suite 2000, Seattle, WA 98104–3188, Plaintiffs, v. *REALPAGE, INC., 2201 Lakeside Blvd., Richardson, TX 75082, CAMDEN PROPERTY TRUST, 11 Greenway Plaza, Ste. 2400, Houston, TX 77046, CORTLAND MANAGEMENT, LLC, 3424 Peachtree Rd., Ste. 300, Atlanta, GA 30326, CUSHMAN & WAKEFIELD, INC., 225 W Wacker Dr., Ste. 3000, Chicago, IL 60606, GREYSTAR REAL ESTATE PARTNERS, LLC, 465 Meeting St., Ste. 500, Charleston, SC 29403, LIVCOR, LLC, 233 South Wacker Dr., Ste. 4700, Chicago, IL 60606, PINNACLE PROPERTY MANAGEMENT SERVICES, LLC, 2401 Internet Blvd., Ste. 110, Frisco, TX 75034, and WILLOW BRIDGE PROPERTY COMPANY, LLC, 2000 McKinney Ave., Ste. 1100, Dallas, TX 75201,* Defendants.

AMENDED COMPLAINT

Case No. 1:24–cv–00710–LCB–JLW

JURY TRIAL DEMANDED

Table of Contents

I. Introduction
II. RealPage's Revenue Management Software Is Fueled by Nonpublic, Competitively Sensitive Information Shared by Landlords
A. Landlords Agree To Share Nonpublic, Competitively Sensitive Transactional Data With RealPage for Use in Generating Competitors' Pricing Recommendations
B. AIRM and YieldStar Users Agree With RealPage To Use the Software To Align Pricing
C. RealPage's Transactional Data Is Fundamentally Different From Other Data Available to Landlords
D. RealPage Revenue Management Software Uses Nonpublic, Competitively Sensitive Data To Recommend Prices
1. AIRM and YieldStar Leverage Competitively Sensitive Data To Generate Price Recommendations
(a) AIRM Model Training Relies on Competitively Sensitive Data To Generate Learned Parameters
(b) AIRM and YieldStar Incorporate Competitors' Nonpublic Data To Generate Floor Plan Price Recommendations
(c) AIRM and YieldStar Use Competitors' Nonpublic Data—Including Data on Future Occupancy—To Determine Unit-Level Prices
2. LRO Relies Primarily on Landlords To Input Data on Competitors
E. RealPage Uses Multiple Mechanisms To Increase Compliance With Price Recommendations
1. AIRM and YieldStar Make It Easy To Accept Recommendations and More Difficult and Time-Consuming To Decline
2. RealPage Pushes Clients To Adopt Auto-Accept Settings That Automatically Approve Recommendations
3. RealPage Pricing Advisors Provide a ''Check and Balance'' on Property Managers To Increase Acceptance of Recommendations
4. Pricing Recommendations Heavily Influence Landlords' Behavior
III. Coordination Among Competing Landlords is a Feature of This Industry
A. Rental Housing is a Necessity for Millions of Americans
B. The Multifamily Property Industry Is Rife With Cooperation Among Ostensible Competitors
1. At the Local Level, the Multifamily Property Industry Comprises a Small Number of Large Landlords Managing Buildings With Different Owners
2. Landlords Regularly Discuss Competitively Sensitive Topics With Their Competitors and Swap Information
3. At RealPage User Group Meetings, Landlords Discuss Competitively Sensitive Topics
C. RealPage Uses Nonpublic Information To Allow Landlords To More Easily Compare Units on an Apples-to-Apples Basis
IV. RealPage Harms the Competitive Process and Renters By Entering Into Unlawful Agreements With Landlords To Share and Exploit Competitively Sensitive Data
A. AIRM and YieldStar Have the Purpose and Effect of Distorting the Competitive Pricing of Apartments
B. AIRM and YieldStar Impose Multiple Guardrails Intended To Artificially Keep Prices High or Minimize Price Decreases
C. AIRM and YieldStar Harm the Competitive Process by Discouraging the Use of Discounts and Price Negotiations
D. AIRM and YieldStar Increase and Maintain Landlords' Pricing Power by

Using Competitors' Data To Manage Lease Expirations
E. No Procompetitive Benefit Justifies, Much Less Outweighs, RealPage's Use of Competitively Sensitive Data To Align Competing Landlords
V. RealPage Uses Landlords' Competitively Sensitive Data To Maintain Its Monopoly and Exclude Commercial Revenue Management Software Competitors
A. Landlords Are Drawn to RealPage Because of Access to Nonpublic Transactional Data That Is Used To Increase Landlords' Revenue
B. RealPage's Collection and Use of Competitively Sensitive Data Excludes Competition in Commercial Revenue Management Software
VI. Relevant Markets
A. Conventional Multifamily Rental Housing Markets
1. Product Markets
(a) Conventional Multifamily Rentals Are Distinct From Other Types of Multifamily Housing
(b) Single-Family Housing Is Not a Reasonable Substitute to Multifamily Rentals
(c) Conventional Multifamily Rental Units With Different Bedroom Counts Are Relevant Product Markets
2. Geographic Markets
(a) RealPage-Defined Submarkets Identify Relevant Geographic Markets
(b) Core-Based Statistical Areas (CBSAs) Are Relevant Geographic Markets
B. Commercial Revenue Management Software Market
1. Product Market
2. Geographic Market
VII. Jurisdiction, Venue, and Commerce
VIII. Violations Alleged
IX. Request for Relief
X. Demand for a Jury Trial
Appendix A: Submarkets
Appendix B: Submarkets By Bedroom Count

I. Introduction

1. Renters are entitled to the benefits of vigorous competition among landlords. In prosperous times, that competition should limit rent hikes; in harder times, competition should bring down rent, making housing more affordable. RealPage has built a business out of frustrating the natural forces of competition. In its own words, ''a rising tide raises all ships.'' This is more than a marketing mantra. RealPage sells software to landlords that collects nonpublic information from competing landlords and uses that combined information to make pricing recommendations. In its own words, RealPage ''*helps curb [landlords'] instincts to respond to down-market conditions by either dramatically lowering price* or by holding price when they are losing velocity and/or occupancy. . . . *Our tool [] ensures that [landlords] are driving every possible opportunity to increase price even in the most downward trending or unexpected conditions*'' (emphases added).

2. In fact, as RealPage's Vice President of Revenue Management Advisory Services described, ''*there is greater good in everybody succeeding versus essentially trying to compete against one another* in a way that actually keeps the entire industry down'' (emphasis added). As he put it, if enough landlords used RealPage's software, they would ''*likely move in unison versus against each other*'' (emphasis added). To RealPage, the ''greater good'' is served by ensuring that otherwise competing landlords rob Americans of the fruits of competition—lower rental prices, better leasing terms, more concessions. At the same time, the landlords enjoy the benefits of coordinated pricing among competitors.

3. RealPage replaces competition with coordination. It substitutes unity for rivalry. It subverts competition and the competitive process. It does so openly and directly—and American renters are left paying the price.

* * * * *

4. Americans spend more money on housing than any other expense. On average, American households allocate more than one-third of their monthly income to housing. Some purchase a home, while others choose to, or must, rent. A family's selection of an apartment reflects a complex set of values and criteria including comfort, safety, access to schools, convenience, and critically, affordability. To ensure they secure the greatest value for their needs, renters rely on robust and fierce competition between landlords.

5. RealPage distorts that competition. Across America, RealPage sells landlords commercial revenue management software. RealPage develops, markets, and sells this software to enable landlords to sidestep vigorous competition to win renters' business. Many of the largest landlords in the United States, including Greystar, Camden, Cortland, Cushman & Wakefield and Pinnacle, LivCor, and Willow Bridge (collectively, Defendant Landlords), which would otherwise be competing with each other, submit or have submitted on a daily basis their competitively sensitive information to RealPage.[1] This nonpublic, material, and granular rental data includes, among other information, a landlord's rental prices from executed leases, lease terms, and future occupancy. RealPage collects a broad swath of such data from competing landlords, combines it, and feeds it to an algorithm.

6. Based on this process and algorithm, RealPage provides daily, near real-time pricing ''recommendations'' back to competing landlords. These recommendations are based on the sensitive information of their rivals. But these are more than just ''recommendations.'' Because, in its own words, a ''rising tide raises all ships,'' RealPage monitors compliance by landlords to its recommendations. RealPage also reviews and weighs in on landlords' other policies, including trying to—and often succeeding in—ending renter-friendly concessions (like a free month's rent or waived fees) to attract or retain renters. A significant number of landlords then effectively agree to outsource their pricing function to RealPage with auto acceptance or other settings such that RealPage as a middleman, and not the free market, determines the price that a renter will pay. Competing landlords choose to share their information with RealPage to ''eliminate the guessing game'' about what their competitors are doing and ultimately take instructions from RealPage on how to make business decisions to ''optimize''—or in reality, maximize—rents.

7. Each landlord pays steep fees to license RealPage's software. RealPage's stated goals and value proposition are not a secret. Its executives are blunt: They want landlords to ''avoid the race to the bottom in down markets.'' Sometimes RealPage is even more direct, acknowledging that its software is aimed at ''driving every possible opportunity to increase price'' or observing that among landlords, ''there is a greater good in everybody succeeding versus essentially trying to compete against one another in a way that actually keeps the entire industry down.''

8. But that is not how the free market works. A free market requires that landlords compete on the merits, not coordinate pricing. Landlords should win renters by offering whatever combination of price and quality they think is most attractive. For example, landlords could lower rents or provide other financial concessions, like free months of rent, or with investments in amenities like gyms, grilling areas, or pools. Put differently, the fear of losing a renter to a competitor should motivate rival landlords to compete vigorously.

9. RealPage's revenue management software ingests on a daily basis nonpublic rental rates, future apartment availability, and changes in competitors' rates and occupancy. As competitor-

[1] As used in this Complaint, the term ''landlord'' refers to a variety of entities that are responsible for setting rents and other lease terms at multifamily properties, including owners, operators, and managers.

landlords increase their rents, RealPage's software nudges other competing landlords to increase their rents as well. RealPage calls this ''maximiz[ing] opportunity[.]'' As RealPage explained to one landlord, by using competitors' data, they can identify situations where ''we may have a $50 increase instead of a $10 increase for that day.'' This is what RealPage encourages as ''stretch and pull pricing.''

10. RealPage allows landlords to manipulate, distort, and subvert market forces. One landlord observed that RealPage's software ''can eliminate the guessing game'' for landlords' pricing decisions. Discussing a different RealPage product, another landlord said: ''I always liked this product because your algorithm uses proprietary data from other subscribers to suggest rents and term. That's classic price fixing. . . .'' A third landlord explained, ''Our very first goal we came out with immediately out of the gate is that we will not be the reason any particular sub-market takes a rate dive. So for us our strategy was to hold steady and to keep an eye on the communities around us and our competitors.''

11. RealPage's scheme not only distorts competition to the detriment of renters, but also allows it to reinforce its dominant position in the market for commercial revenue management software. By its own account, RealPage controls at least 80 percent of that market. Its dominant position is protected by substantial data advantages due to its massive reservoir of ill-gotten competitively sensitive information from competing landlords. No other revenue management company can match RealPage's access to landlords' nonpublic, competitively sensitive rental data. This is why RealPage acknowledges that it ''does not have any true competitors, mainly because our data is based on real lease transaction data.'' RealPage's conduct is predatory and exclusionary, which has allowed it to distort the market opportunities for honest providers of revenue management software.

12. At bottom, RealPage is an algorithmic intermediary that collects, combines, and exploits landlords' competitively sensitive information. And in so doing, it enriches itself and compliant landlords, including Defendant Landlords, at the expense of renters who pay inflated prices and honest businesses that would otherwise compete.

13. The United States, and the States of North Carolina, California, Colorado, Connecticut, Illinois, Minnesota, Oregon, Tennessee, and Washington, and the Commonwealth of Massachusetts, acting by and through their respective Attorneys General, bring this action pursuant to Sections 1 and 2 of the Sherman Act to rid markets of (i) RealPage's and Defendant Landlords' unlawful information-sharing and pricing alignment schemes, and (ii) RealPage's illegal monopoly in commercial revenue management software. In so doing, Plaintiffs seek to restore the free market to deserving individuals, families, and honest businesses.

II. RealPages's Revenue Management Software Is Fueled by Nonpublic, Competitively Sensitive Information Shared by Landlords

14. RealPage dominates the market for commercial revenue management software that landlords use to price apartments, controlling at least 80 percent of that market, according to its own estimates. RealPage currently offers three revenue management systems to landlords: YieldStar, AI Revenue Management (AIRM), and Lease Rent Options (LRO). The company's main legacy software, YieldStar, is the product of three acquisitions and subsequent internal development. Its successor, AIRM, uses much of the same codebase as YieldStar, but RealPage claims that AIRM's refined models and forecasting are more precise. RealPage acquired its other revenue management software, LRO, in 2017. RealPage has made plans to sunset both YieldStar and LRO by the end of 2024.

15. Competitively sensitive data collected from competing landlords is a critical input to RealPage's revenue management software. AIRM and YieldStar collect this data, such as rental applications, executed new leases, renewal offers and acceptances, and forward-looking occupancy, and use it to generate price recommendations for the competing landlords. This information is among the most competitively sensitive data a landlord maintains.

16. The exploitation of sensitive data from competing landlords is central to RealPage's approach. As part of pitching its software to landlords, RealPage highlights that its pricing algorithms use their competitors' data sourced directly from ''lease transaction data.'' RealPage describes this nonpublic data from competitors as one of three ''building blocks of price'' in AIRM and YieldStar. Landlords thus share their competitively sensitive information with RealPage with the understanding that RealPage's software will use the data to generate recommendations for rivals (and vice versa).

A. Landlords Agree To Share Nonpublic, Competitively Sensitive Transactional Data With RealPage for Use in Generating Competitors' Pricing Recommendations

17. RealPage amasses nonpublic, competitively sensitive data from competing landlords through use of its pricing algorithms, other rental property software, and thousands of monthly phone calls. The combined troves of nonpublic, competitively sensitive data are much more granular, sensitive, timely, and comprehensive than alternatives—and far more detailed than any data publicly available to potential renters. RealPage then uses this data in generating competitors' pricing recommendations.

18. *Data shared through YieldStar and AIRM.* Each AIRM and YieldStar client agrees to share detailed data with RealPage that are private, updated nightly, and granular. The data includes lease-level information on each unit's effective rent (rent net of discounts), rent discounts, rent term, and lease status, as well as unit characteristics such as layout and amenities. It also includes the number of potential future renters who have visited a property or submitted a rental application.

19. Landlords understand that AIRM and YieldStar use their data to recommend prices not just for their own units, but also for competitors. For example, a revenue management director at Greystar testified that she understood that Greystar, and other competing landlords who used AIRM or YieldStar, agreed with RealPage to share their data, which was combined in a single data pool for use by YieldStar and AIRM. An executive at Willow Bridge noted the advantages to using YieldStar at a property if others in the property's submarket—the small geographic area around the property—also used YieldStar because ''the shared data between the models at different communities can be a benefit in getting accurate transactional data on a timely basis.''

20. Landlords agree to provide this information for use by their competitors because they understand they will be able to leverage the sensitive information of their rivals in turn. In its pitch to prospective clients, RealPage describes AIRM's and YieldStar's access to competitors' granular, transactional data as a meaningful tool that it claims enables landlords to outperform their properties' competitors by 2–7%. RealPage clients receive training that highlights the role of competitors' transactional data in the price recommendation process.

21. *Data Shared Through Other RealPage Products.* AIRM and YieldStar are not the only ways that RealPage shares nonpublic, competitively sensitive information among landlords. RealPage obtains the same confidential transactional data from landlords that license at least three other programs: OneSite, Performance Analytics with Benchmarking, and Business Intelligence.

22. *OneSite* is RealPage's property management software, which operates as the central source of data for landlords' leasing activity. *Performance Analytics with Benchmarking* allows landlords to compare the performance of their properties and floor plans (*e.g.,* a one-bedroom, one-bathroom unit) to their competitors. *Business Intelligence* is a data analytics tool that pulls data from a landlord's property management software and other products.

23. Each landlord using RealPage's OneSite, Business Intelligence, and Performance Analytics with Benchmarking products agrees to share its proprietary data with RealPage and agrees that RealPage's revenue management software can use the data to generate pricing recommendations. The license agreements for these products specifically identify the shared data, such as pricing information, as confidential, nonpublic information. RealPage takes this deeply confidential information and uses it to provide rent recommendations to competitors of these clients.

24. These agreements grant RealPage access to confidential information from over 16 million units across the country, including many that do not use its revenue management products. With respect to Performance Analytics with Benchmarking alone, a RealPage sales representative told a prospective client that ''we have over 16 million units of data coming from various source operating systems (PMS) [property management software] into the PAB platform,'' making RealPage the top choice for ''transactional data benchmarking.'' With properties containing approximately 3 million units using AIRM and YieldStar, these additional agreements meaningfully multiply the scale of the transactional data used by AIRM and YieldStar. This gives RealPage greater visibility, including into markets with less penetration by AIRM and YieldStar, granting even initial AIRM and YieldStar adopters in a new market the benefit of access to a significant amount of nonpublic, competitively sensitive information.

25. Landlords understand that AIRM and YieldStar will use data from these products. A revenue management director at Greystar explained that RealPage ingests transactional data from several RealPage products, besides AIRM and YieldStar, for use in revenue management. A property owner requested information from Greystar on which competing properties used revenue management software. In an internal response, the Greystar director noted that RealPage has ''access to more transactional history than anyone and [is] pulling data from anyone using RealPage products which includes companies who manually price or use other revenue management firms but leveraging their BI [Business Intelligence] products.''

26. A revenue management executive at Willow Bridge asked RealPage if other specific landlords were using RealPage's non-revenue management products. The landlord's owner client was concerned about the data available to YieldStar because competing properties were unsophisticated and did not use revenue management. This executive wanted to confirm that ''YieldStar will be able to leverage actual transactional data behind the scenes and not just look at offered rents for their comps.'' RealPage reminded the Willow Bridge executive that RealPage collected transactional data for *all* users of OneSite, Business Intelligence, and Performance Analytics with Benchmarking, and reassured the executive that YieldStar had ample transactional and survey data for that area.

27. *Calling Landlords.* RealPage has an additional, complementary product called Market Analytics. Market Analytics compiles data from over 50,000 monthly phone calls that RealPage makes to landlords across the country. On these calls RealPage collects nonpublic, competitively sensitive information by floor plan on occupancy rates, effective rents, and concessions, as well as information on the owner, management company, and any revenue management software used at the property. These market surveys cover over 11 million units and approximately 52,000 properties. Landlords, including but not limited to those that use AIRM, YieldStar, or other RealPage products, knowingly share this nonpublic information with RealPage.

B. AIRM and YieldStar Users Agree With RealPAge To Use the Software To Align Pricing

28. In addition to agreeing to share nonpublic, competitively sensitive data with RealPage, each AIRM and YieldStar licensee agrees with RealPage to use the AIRM or YieldStar pricing software as RealPage designed it.[2] Landlords are expected to review daily AIRM or YieldStar floor plan price recommendations and use the programs to set scheduled floor plan rents or even unit-level prices.

29. While landlords may not accept every price recommendation, they use AIRM or YieldStar as their pricing software, regularly review AIRM or YieldStar floor plan recommendations, use AIRM or YieldStar to set a scheduled floor plan rent, and use AIRM or YieldStar to set unit-level prices.

30. Landlords who use AIRM and YieldStar know that others are using the same software. Some landlords track which revenue management software their competitors use, including by contacting competing properties directly and exchanging nonpublic information. Other landlords, including prospective AIRM and YieldStar users, ask RealPage whether there are existing AIRM and YieldStar users nearby before they themselves license the products.

31. An executive at Willow Bridge, for example, explained to her team how she would learn from RealPage data or from a property's website whether a property used revenue management. This information is important because properties that use revenue management tend to update prices much more frequently, and so a landlord will react differently to those price changes if it knows the competitor is using revenue management.

32. RealPage frequently tells prospective and current clients that a ''rising tide raises all ships.'' A RealPage revenue management vice president explained that this phrase means that ''there is greater good in everybody succeeding versus essentially trying to compete against one another in a way that actually keeps the industry down.'' This rising tide lifts all landlords, including but not limited to AIRM and YieldStar users.

33. In using AIRM and YieldStar, landlords expect this pricing alignment and use RealPage software in part for this reason. One landlord echoed the RealPage executive, using the phrase ''a rising tide rises [sic] all ships'' to explain that AIRM would move prices in a ''similar manner'' to how the top and bottom of the market move. Elsewhere that same landlord noted that ''if everyone in the market is doing well and everyone in the market has [sic] is having the rates go up, so should ours,

[2] Defendants Camden, Cushman & Wakefield and Pinnacle, Greystar, LivCor, and Willow Bridge were active beta testers for AIRM and provided feedback to RealPage during the AIRM design process.

right?'' An employee at Willow Bridge referenced RealPage's use of the phrase ''a rising tide raises all ships'' to explain how AIRM would provide price recommendations that amplify market trends. Multiple landlords have expressed their preference that their competitors use YieldStar and AIRM because widespread use would benefit them all. An executive of one landlord (which itself uses YieldStar and AIRM) said in a 2021 earnings call that more sophisticated, ''high-quality competition'' was better for that landlord when ''they all use revenue management. They are all smart. They raised rents when they should.'' RealPage highlighted in promotional materials the sentiments of another landlord who noted, ''It actually gives me chills to think about what a disadvantage we'd be at if we hadn't adopted YieldStar, knowing others are using it.''

C. RealPage's Transactional Data Is Fundamentally Different From Other Data Available to Landlords

34. The data that RealPage uses and supplies is unique relative to public data available to landlords on listing or property websites. As compared to public data, RealPage data is much more granular, covers a broader array of business information, and includes competitively sensitive data across several dimensions. For example:

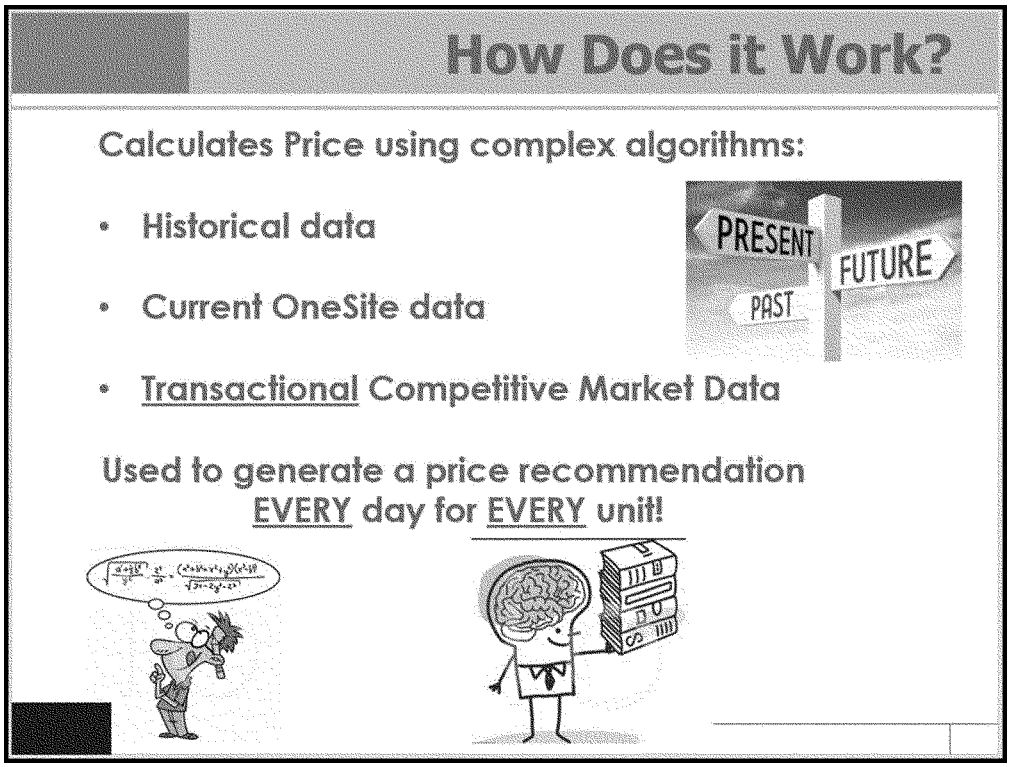
- *Information on Actual Transactions.* RealPage's data include, for each lease, the unit, floor plan, listed rent, final transacted lease price (including any discounts), and lease term.
- *Renewals.* RealPage's data include the same information for lease renewals. Information on renewals is not listed publicly—not even asking rents—leaving a significant blind spot for landlords not using RealPage.
- *Time Span.* AIRM and YieldStar have access to current and historical lease data, from the previous day and going back two to three years.
- *Future Demand.* The shared data further includes information on tenant demand, including detailed information on inquiries and applications by potential future tenants.
- *Accuracy.* Landlords have greater assurance of the accuracy of the data because it comes directly from the landlords' own databases.
- *Coverage.* The RealPage data covers millions of units from users of its revenue management software and other products.

35. RealPage touts how its data is different. As one RealPage pitch deck put it, ''we have [the] most data and the best data.'' And the ''[q]uality of data is best in class given that it is 'lease transaction data'—this provides insight into performance data from actual signed leases, both new and renewal, net effective of concessions.'' Another noted that without YieldStar ''you'll be pricing your renewals in the dark without insight into actual lease transaction data that YS uses to help you make pricing decisions. This is critical to price renewals right[,] especially in a downturn.''

36. Access to this data proves important in winning over revenue management clients, including skeptical ones. One RealPage senior manager noted that a ''highly suspicious CFO'' was won over in part by YieldStar's ''lease transaction data'' that allowed his company to ''achieve what his people couldn't achieve on their own.''

37. One landlord explained the benefits of YieldStar to its owner clients by calling the use of competitors' transactional data a ''game changer! We have 100% truth on [competitors'] activity powering YieldStar recommendations.''

38. Another landlord's internal training presentation on YieldStar highlighted the importance of having access to competitors' transactional data:



D. RealPage Revenue Management Software Uses Nonpublic, Competitively Sensitive Data To Recommend Prices

39. AIRM and YieldStar are built upon similar code and leverage competitive data in similar ways. LRO, on the other hand, was originally developed outside of RealPage and takes a different approach.

1. AIRM and YieldStar Leverage Competitively Sensitive Data To Generate Price Recommendations

40. AIRM uses competitors' nonpublic, transactional data in three separate stages of the pricing process: (1) model training, (2) floor plan price recommendations, and (3) unit-level prices. YieldStar uses competitors' nonpublic, transactional data in stages two and three of its process.

(a) AIRM Model Training Relies on Competitively Sensitive Data To Generate Learned Parameters

41. In the first stage, RealPage trains its AIRM models using nonpublic data from OneSite and other property management software, totaling millions of executed lease transactions, new lead applications, renewal applications, and guest cards filled out by visiting potential tenants. This data is run through a machine learning model to generate learned parameters for supply and demand models that are then used for all AIRM clients across the country. Like the coefficients in a regression model, the learned parameters are applied to the data of a landlord's specific property, and to the data of its competitors, when AIRM makes pricing recommendations. RealPage generally retrains the models three to four times per year using updated nonpublic data.

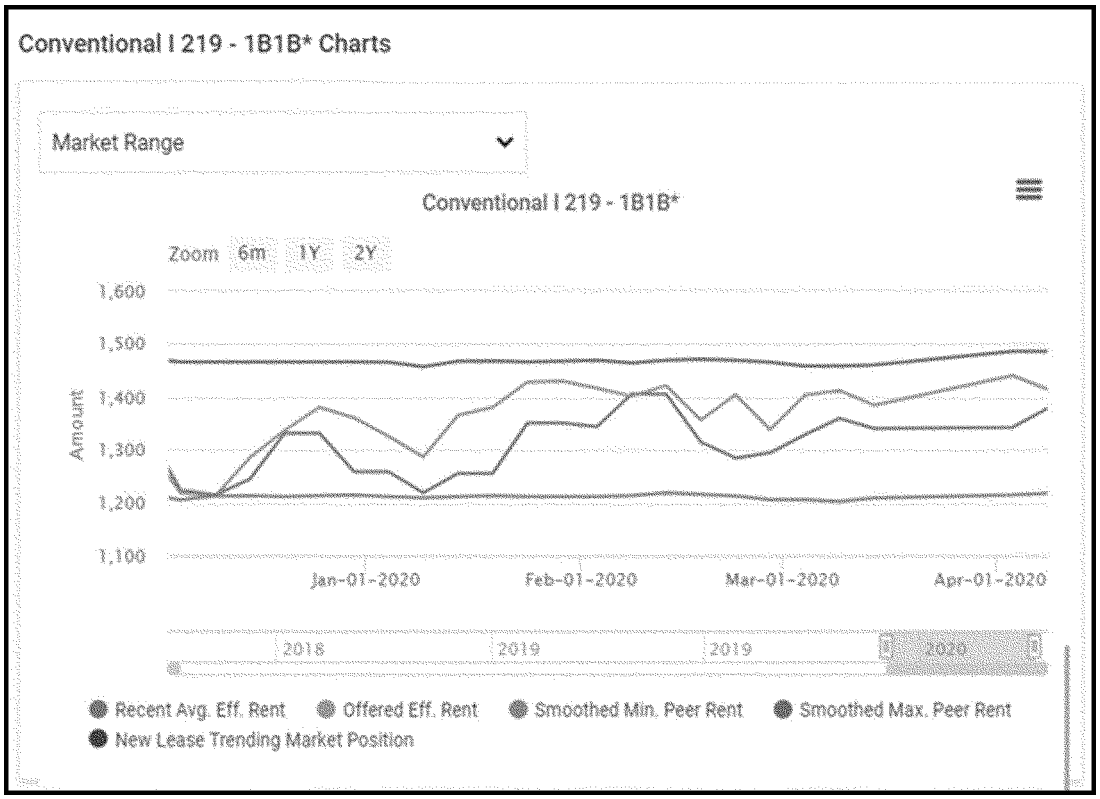
(b) AIRM and YieldStar Incorporate Competitors' Nonpublic Data To Generate Floor Plan Price Recommendations

42. In the second stage AIRM or YieldStar provides a price recommendation for every floor plan of a given property. A floor plan is a grouping of units that share similar characteristics, such as the number of bedrooms and bathrooms and square footage. Landlords define the floor plans in their buildings—for example, a large apartment building might have separate sets of floor plans for studios, one-bedroom, and two-bedroom apartments. As discussed below, AIRM and YieldStar use competitors' nonpublic, transactional data in nearly every step of setting a recommended floor plan price, including identifying peer properties, forecasting occupancy and leasing, increasing rents to match competitors' changes, and determining the magnitude of price changes.

43. *Identifying Peers.* First, AIRM and YieldStar use confidential transaction data to identify a property's peer properties, which include close competitors. In selecting peer properties, RealPage's algorithm generally looks for properties with similar floor plans, within close geographic proximity, and with similar effective rents over time. AIRM or YieldStar clients may review the list of peer properties and request that RealPage add or remove specific properties.

44. AIRM or YieldStar then uses the nonpublic data from competitors' executed leases to generate a market range chart for each floor plan. This chart identifies a ''smoothed'' market minimum effective rent and market maximum effective rent. The market minimum is a hard floor. AIRM and YieldStar will not recommend a rent below the market minimum. On the other hand, the market maximum is a ''soft ceiling,'' and the programs will recommend prices above the ceiling.

45. The client has access to the market range chart within the AIRM and YieldStar interfaces. As shown below, for each floor plan the client can see the smoothed market minimum and market maximum and where the client's own floor plan sits within the market range.



46. *Forecasting Occupancy and Leasing.* Every night, for each participating property, AIRM applies the model's learned parameters to that property's internal transactional data to forecast the number of expected vacancies and expected lease applications for a certain period into the future. AIRM may also use competitors' data to adjust the projected supply.

47. AIRM or YieldStar then determines whether actual leasing for a floor plan is on track to meet predicted leasing. To do so, it creates a forecast of the number of leases over time, using nonpublic lease and application data from the subject property, and potentially from so-called surrogate properties (similar properties in the surrounding area).[3] When there is an imbalance between a property's actual and forecasted leasing, it recommends a price change.

48. *Changing Rents to Match Competitors.* Even when a property's supply and demand are balanced, RealPage's software will still recommend a price change, based on competitors' nonpublic data, when it determines that the market is moving. For example, if the minimum and maximum of the competing floor plans' effective rents increase, it will recommend a price increase to maintain the floor plan's market position (its price position relative to its competitors).

49. *Determining Magnitude of Price Changes.* Once AIRM or YieldStar has determined that it will recommend a price increase or a price decrease, it again uses competitors' transactional data to determine *how much* the price should move and provide a floor plan price recommendation. It uses nonpublic transactional data from peer properties, in addition to data from the subject property and surrogate properties, to generate a market response curve—analogous to a market demand curve—for every floor plan. This demand curve provides an estimate of how demand for particular apartments would change in response to changes in rents, a measure that RealPage calls elasticity. In other words, it uses competitors' nonpublic transactional data to calculate how many leases the property will likely gain or lose for a particular floor plan, for every price point along the curve. Using this data, AIRM or YieldStar can determine how much the price can increase and still achieve the target number of leases, or by how little price can decrease to maintain a target occupancy.

50. RealPage describes elasticity as a pivotal input into balancing supply and demand and, therefore, price.

51. The use of surrogate properties in this pricing process has the potential to push convergence on price even further. As two properties' surrogate sets become closer—and therefore their respective demand curves become more similar—AIRM and YieldStar will generate increasingly similar prices for the two properties. And the use of surrogates is common. One of the largest landlords in the country, for example, uses surrogates at over 80% of its properties.

52. This process repeats for every floor plan in the client's property, every night. A new floor plan price recommendation is generated daily.

(c) AIRM and YieldStar Use Competitors' Nonpublic Data—Including Data on Future Occupancy—To Determine Unit-Level Prices

53. A property manager at the landlord reviews each floor plan recommendation daily and enters the floor plan price. AIRM and YieldStar then use the floor plan price to generate prices for every unit within the floor plan. The unit price is shown in a pricing matrix, which provides the price for each combination of start date and lease term. To generate the price for an individual unit, the floor plan price is adjusted to account for unit-specific factors such as amenities (*e.g.,* a desirable view, the floor level, or an in-unit washer and dryer), staleness (*i.e.,* how long that specific unit has been vacant), and the timing of lease expirations. AIRM and YieldStar again use competitors' nonpublic data during this step in at least two ways.

54. First, AIRM and YieldStar use data on competitors' supply of multifamily housing to adjust recommendations to limit ''exposure'' with a feature called lease expiration management. Exposure refers to the number of units that are available for lease. Managing lease expirations is an important element of revenue management software. If too many leases expire and the corresponding units become available at the same time, supply increases and rents for those units will tend to drop. This process will also tend to repeat itself as the same units will become available at the same time a year later for leases with a standard twelve-month term.

55. The objective of expiration management is to smooth out this exposure so that landlords, as explained by one RealPage employee, ''remain in a position of pricing power.'' For example, if AIRM or YieldStar sees that a large number of units will likely be available in twelve months, it will increase the price recommendation for a twelve-month lease relative to price recommendations for leases of other terms, such as 11 months or 13 months, in order to nudge potential renters to accept those terms. Expiration management can only raise prices—AIRM does not lower a unit's price if the lease term would fall in an underexposed period.

56. This calculation does not rely *only* on the predicted future supply for the client's property. For any landlord who uses a ''market seasonality'' setting, AIRM and YieldStar *also* rely on competitors' transactional data and the supply for those competitors—including the supply of competitors' existing leases that expire in the future. AIRM and YieldStar thus work to manage lease expirations for the client's units based on how competitors' supply will change. RealPage strongly recommends to landlords that they use market seasonality.

57. The use of competitors' nonpublic data in expiration management to fill out the pricing matrix occurs regardless of whether the landlord accepts the AIRM or YieldStar recommendation. Thus, even if a landlord were to override every price recommendation, its rental prices would still be influenced by nonpublic information about its competitors' supply.

58. Second, AIRM and YieldStar include an amenity optimization feature. By pricing specific amenities within units, landlords can avoid making wholesale pricing changes to a floor plan if a specific unit fails to lease. Within the amenity analysis, AIRM and YieldStar provide market values for specific amenities to landlords, allowing them to compare their perceived value of an amenity with the nonpublic valuation of their competitors. The peer data include the market minimum and maximum value for specific amenities.

2. LRO Relies Primarily on Landlords To Input Data on Competitors

59. RealPage's LRO also provides pricing recommendations to users. Each week, LRO users manually input competitor information into the system that they have obtained from public websites or more questionable means, such as communicating directly with their competitors.

60. A small number of LRO users subscribe to a feature called AutoComp. With this feature, RealPage provides

[3] If there is insufficient historical data for a particular building, or floor plan within that building, RealPage will use data from what it calls a ''surrogate property,'' which is the confidential transactional data from another property with characteristics similar to the subject property.

information on competitors' rents, traffic, and occupancy. This information comes from market surveys that RealPage compiles using call centers to call competitor properties. Landlords may use LRO without using AutoComp.

E. RealPage Uses Multiple Mechanisms To Increase Compliance With Price Recommendations

61. AIRM and YieldStar provide daily price recommendations. RealPage has taken multiple steps to increase compliance with AIRM and YieldStar price recommendations. It designed AIRM and YieldStar to make it much easier to accept recommendations than to decline them. It built an auto-accept function and pushes clients to adopt it and increase its role. And its pricing advisors encourage landlords to follow AIRM and YieldStar pricing recommendations. Among their duties, pricing advisors review any request to override a price recommendation.

1. AIRM and YieldStar Make It Easy To Accept Recommendations and More Difficult and Time-Consuming To Decline

62. Every morning, the landlord's property manager chooses whether to accept the floor plan price recommendation, keep the previous day's rent, or override the recommendation. These options are the same for new leases and renewal leases. RealPage makes it easier and faster for a client to accept a recommendation than to decline it. When accepting recommendations, the manager can choose to do a bulk acceptance—she can accept all or multiple floor plan recommendations at once. But she cannot do the same when overriding, or rejecting, the recommendation.

63. Instead, for every recommendation that she does not accept—whether overriding or keeping the previous day's rent—the property manager must provide ''specific business commentary'' for diverging from the recommendation. This justification, RealPage instructs, should not be a mere preference for another price but must be based on a factor that the model cannot account for, such as local construction or renovations occurring in the building. It must be a ''strong sound business minded approach.''

64. The property manager knows that these recommendation rejections and accompanying justifications will be sent to a RealPage pricing advisor.[4] If the pricing advisor disagrees with the rejection or justification, the disagreement is escalated for resolution to a landlord's regional manager, who typically supervises the property manager.

65. As one client who complained to RealPage explained, RealPage's design is ''trying to persuade [clients] to take the recommendations (almost like we made it hard to do anything but).''

2. RealPage Pushes Clients To Adopt Auto-Accept Settings That Automatically Approve Recommendations

66. AIRM and YieldStar each include auto-accept functions. This functionality automatically accepts price recommendations falling within certain parameters. By default, AIRM and YieldStar set auto-accept parameters of a 3% daily change and an 8% weekly change. The landlord can change these parameters, disable or enable auto-accept, and even enable partial auto-accept. With partial auto-accept, if the recommendation exceeds the auto-accept parameters, the recommendation is accepted as far as the parameter permits. For example, if the auto-accept daily change limit is 4% and the price recommendation is 5%, using partial auto-accept will result in an increase of 4%. By enabling auto-accept, a landlord functionally delegates pricing authority to RealPage (within the bounds of the daily and weekly limits).

67. As part of the onboarding process, internal RealPage guidance states, ''AUTO ACCEPT should be confirmed as 'on' with parameters in place.'' Internal AIRM training explained that RealPage wanted to ''widen auto accept parameters'' by introducing the feature and then ''creating enough trust so that over time we have client[s] that are willing to let auto accept run with very wide parameters . . . AKA—accept all recommendations.'' RealPage trains pricing advisors to have an ''accountability conversation'' or a ''refresher on short term vs long term goals'' for clients that show less tolerance for increasing auto-accept parameters.

68. Even if a landlord does not want to use auto-accept, RealPage trains its advisors to convince the landlord to turn it on with 0% limits—a setting whereby auto-accept will never accept price changes. The reason? So that it is no longer a question of whether the client turns on auto-accept, but only a matter of convincing them to widen the parameters and further delegate pricing decisions. RealPage instructs its advisors on best practices: ''[I]f a partner is not ready to use auto acceptance, are they ready to use revenue management?''

3. RealPage Pricing Advisors Provide a ''Check and Balance'' on Property Managers To Increase Acceptance of Recommendations

69. RealPage offers landlords pricing advisory services. Landlords typically have an assigned pricing advisor, unless the client has internal revenue managers that were certified by RealPage. Pricing advisors play an important role in the daily review of pricing recommendations. Landlords' property managers are asked to review recommendations every morning by 9:30 a.m. After their review, a pricing advisor accepts agreed-upon pricing within an hour and escalates any disputes to the landlord's regional manager.

70. If a property manager disagrees with the direction of a recommended price change—*e.g.,* the manager wants to implement a price decrease when the model recommends a price increase—the RealPage pricing advisor escalates the dispute to the manager's superior. As a pricing advisor manager explained in a client training, the advisor would ''stop the process and reach out to our partners''—the property manager's supervisors—to ''talk about this further.'' The advisors, the manager elaborated, are part of a system of ''checks and balances.'' The client confirmed the value of this system to stop property managers from acting on emotions, which could limit RealPage's influence on their pricing.

71. Beyond the daily interactions between pricing advisors and their own property managers, clients agree to make meaningful changes when they use RealPage's pricing advisory services. Under the specifications for this service, clients agree to use AIRM or YieldStar exclusively to give quotes to potential renters, further tying landlords' pricing decisions to RealPage's software. Clients also agree to change their commission programs for leasing agents to ''ensure these programs motivate sales behavior that is consistent with the objectives of revenue growth.'' And clients further agree to revenue growth as the official metric to evaluate AIRM and YieldStar, as opposed to occupancy rates.

72. RealPage imposes additional requirements on landlords who want to use internal or in-house revenue management advisors with YieldStar or AIRM (rather than use RealPage pricing advisors). RealPage requires these

[4] Some clients have internal revenue managers that are certified by RealPage. For those clients who have internalized the revenue management function, recommendation rejections may be routed to the internal revenue manager rather than a RealPage pricing advisor.

landlords' employees go through RealPage certification. Certification is a multiday course in which landlords are trained—at times in the same session—on AIRM and YieldStar use and best practices, according to RealPage. Certification includes observing and leading pricing calls with property managers and passing a written exam. This certification program facilitates the landlords' agreements with RealPage to align pricing by ensuring that landlords' internal revenue managers are trained and tested to use AIRM and YieldStar in the same way.

4. Pricing Recommendations Heavily Influence Landlords' Behavior

73. RealPage defines an acceptance as where the final floor plan price is within 1% of the recommended floor plan price. According to that definition, the average acceptance rate across all landlords nationally for new leases between January 2017 and June 2023 is between 40–50%. But RealPage itself recognizes that acceptance rates are not necessarily the best measure of its influence; one employee explained that the spread between a floor plan recommendation and the final scheduled floor plan price is more useful for measuring model adoption—and therefore influence—than the binary accept/reject decision that the RealPage-defined acceptance rate reflects. Widening the definition of acceptance even slightly to account for partial acceptances illustrates the influence of recommendations: nearly 60% of final floor plan prices are within 2.5% of RealPage's recommendation, and more than 85% are within 5% of RealPage's recommendation.

74. RealPage's preferred measure of acceptance understates the influence of RealPage's price recommendations and the effect of competitors' data. AIRM and YieldStar use competitors' nonpublic transactional data to adjust unit-level pricing, after a floor plan recommendation has been accepted or rejected. RealPage's metric does not capture the cumulative effect of rate acceptances over time. Nor do they capture when a client is influenced by and partially accepts a recommendation.

III. Coordination Among Competing Landlords Is a Feature of This Industry

75. Several characteristics of apartment-rental markets make it easier for landlords to coordinate with, or accommodate, each other. Rental housing is a necessity for many Americans, meaning that demand is inelastic—that is, changes in rent produce relatively small changes in the number of renters. There is significant concentration among landlords in local markets, and these landlords engage in widespread, regular communications with one another. And RealPage makes rental units more comparable to each other in AIRM and YieldStar, allowing landlords to track one another more easily. These industry characteristics exacerbate the harm to the competitive process—and ultimately to renters—from the exchange of nonpublic, competitively sensitive data through RealPage and the use of the AIRM and YieldStar models.

A. Rental Housing Is a Necessity for Millions of Americans

76. Shelter is a basic, foundational necessity of life. And for tens of millions of Americans, conventional multifamily apartment buildings are the only reasonable option for much of their lives. Many renters cannot afford the significant down payment needed to purchase a single-family home, among other requirements.

77. Demand for apartments is relatively inelastic. Rising rents have disproportionately affected low-income residents: The percentage of income spent on rent for Americans without a college degree increased from 30% in 2000 to 42% in 2017. In 2021, the proportion of severely burdened households—households spending more than half of their income on gross rent—was 25%, or approximately 10.4 million households, an increase in approximately 1 million households since 2019. By 2022, this number increased to 12.1 million households. For college graduates, the percentage of income spent on rent increased from 26% to 34% from 2000 to 2017.

B. The Multifamily Property Industry Is Rife With Cooperation Among Ostensible Competitors

78. Within particular metropolitan areas and neighborhoods, the multifamily property industry is concentrated and replete with competitively sensitive discussions among ostensible competitors. Landlords have agreed with one another to share nonpublic, sensitive information, both indirectly through RealPage software and directly outside of RealPage's software. RealPage facilitates some of these discussions, while others are made directly between competing landlords. These discussions supplement and reinforce the indirect information sharing among landlords that occurs through AIRM and YieldStar. As a result of this coordination, RealPage's pricing algorithms are even more likely to restrain, rather than promote, competition.

1. At the Local Level, the Multifamily Property Industry Comprises a Small Number of Large Landlords Managing Buildings With Different Owners

79. In 595 zip codes with at least 1,000 total multifamily units across 125 core-based statistical areas, five or fewer landlords manage more than 50% of the multifamily units. Within the submarkets alleged in this complaint, there are at least 214 zip codes, each with at least 1,000 total multifamily units, in which five or fewer landlords manage more than half of those units. Similarly, within the ten core-based statistical areas alleged in the complaint, there are 144 zip codes, each with at least 1,000 total multifamily units, in which five or fewer landlords manage more than half of those units.

80. The same landlord often oversees nearby properties with different owners. In at least 502 zip codes, at least one landlord using AIRM or YieldStar oversees properties with different owners.

81. There is also overlap among RealPage pricing advisor assignments. In at least 683 zip codes, within 96 core-based statistical areas, a RealPage pricing advisor has responsibility for properties managed by different landlords. RealPage takes no steps to avoid assigning the same pricing advisor to properties with different owners, even if those properties compete with each other or are RealPage-mapped competitors.

2. Landlords Regularly Discuss Competitively Sensitive Topics With Their Competitors and Swap Information

82. Landlords regularly solicit and obtain nonpublic information about inquiries by prospective renters, occupancy, and rents from their direct competitors. Although this information is not as accurate or thorough as the transactional-level data shared with AIRM and YieldStar, it is nonetheless sensitive competitive information.

83. Landlords collect this information through a variety of means, including weekly phone calls, emails, and in-person visits. Some landlords also share information on their local geographic markets through shared Google Drive documents. One RealPage employee explained to his colleagues, reflecting on his former time working at a landlord, that these weekly inquiries ''required cooperation among the comp[etitor]s but wasn't hard to get that.'' In June 2023, a senior director at Cushman & Wakefield admitted that

''this practice has been prevalent in our industry for a long time.''

84. Landlords not only knew of these so-called ''market surveys,'' but expected their property managers to participate. As a manager of Cushman & Wakefield's revenue management department explained, ''we have always expected our properties to continue doing a traditional market survey[,]'' which ''gives us insight into the very specific handful of competitors closest to the subject property.''

85. At a February 2020 industry event, representatives from Cushman & Wakefield and two other landlords shared tips on collecting information on concessions and net effective rents from competitors. The suggestions included bi-weekly and monthly meetings with competitors, sponsored ''cocktail hours for regional competitors to share info and build relationships and rapport,'' and using Google Drive documents to share information on a weekly basis. Building relationships with competitors to get accurate data was ''critical.'' The representatives cautioned that the collected data was used to make ''major decisions about pricing,'' so the landlord employees collecting data should be trained accordingly to ask such questions as ''are you seeing a slow down?'' and ''are you adjusting pricing?''

86. Some landlords engage in even more sensitive communications about price, demand, and market conditions. These communications are not isolated instances at a specific property. Rather, they are conversations at the corporate revenue management level about strategies and approaches to market conditions that apply to the landlords' business across all markets.

87. For example, in January 2018, Willow Bridge's director of revenue management reached out to Greystar's director of revenue management and asked about Greystar's use of auto accept in YieldStar. In response, Greystar's director provided Greystar's standard auto-accept settings, including daily and weekly limits and for which days of the week auto accept was used. The Greystar director, explaining why she provided this information, testified that the Willow Bridge director was a ''colleague,'' even though Willow Bridge was a competitor to Greystar.

88. In March 2020, Cushman & Wakefield's director of revenue management reached out to Willow Bridge's director of revenue management. The Cushman & Wakefield director wanted to hold a call among revenue management executives at multiple landlords to discuss market conditions, use of YieldStar, and strategy plans. The Willow Bridge director agreed and suggested a small number of landlords to invite to keep the group ''tight.'' The directors agreed to reach out to Greystar, as well as several other landlords.

89. Also in March 2020, a senior executive at Greystar obtained a copy of Willow Bridge's sensitive strategic plans regarding the COVID–19 pandemic. The plans included Willow Bridge's corporate protocols for concessions, rent increases, and lease terms. The plans recommended that property managers work closely with YieldStar and LRO to preserve rent integrity. The Greystar executive forwarded Willow Bridge's plans to executives at Cushman & Wakefield and another landlord. All four landlords compete with one another.

90. In September 2020, Camden's director of revenue management reached out to Greystar's director of its internal revenue management team. Camden asked Greystar—a direct competitor—what increases on renewal pricing Greystar had seen in August and offered what it had seen. Greystar's director replied with information not only on August renewals, but also on how Greystar planned to approach pricing in the upcoming quarter. Greystar's director further disclosed its practices on accepting YieldStar rates and use of concessions. As the conversation continued, the two competitors shared additional highly-sensitive information on occupancy—including in specific markets—demand, and the strategic use of concessions.

91. At the same time, Camden's director emailed a revenue management executive at LivCor and asked how LivCor was faring on raising renewal rates. He explained his request by noting that Performance Analytics provided some good data, but it was ''hard to see what our competitors are signing today.'' The two executives shared information about their respective renewal increases. After the Camden executive passed this information along internally, he continued his outreach with several other landlords and with the LivCor executive—who in the meantime had reached out to three other landlords about their renewal rates. Camden's internal team decided to raise a renewal cap to get to the same renewal gains as LivCor.

92. Camden's director received competitively sensitive information from at least four competitors. Another senior executive at Camden asked him to compile the information so it could be shared internally. That executive noted the usefulness of the competitors' information and the need to take advantage of the shared information while it was fresh.

93. In June 2021, Willow Bridge's head of revenue management emailed Greystar's revenue management director. She proposed collaborating with Greystar to convince a client to move all of its properties, including those managed by Willow Bridge and those managed by Greystar, to AIRM. But she also noted that, in thinking about ''the larger picture as well,'' it could be useful to ''coordinate with the other companies that we often share business with'' to prepare to move their clients to AIRM as well. Greystar responded favorably to transitioning the joint client to AIRM.

94. In November 2021, a revenue management executive at LivCor emailed an executive at Camden to propose a call to discuss Camden's ''renewal philosophy,'' for the purpose of informing how LivCor calculated renewal increases. The two spoke that day. The following day, another LivCor executive—who was included on the call—thanked the Camden executive for the opportunity to ''connect on industry best practices'' and asked another ''operational question'' about implementing ''larger renewal increases.'' The executives exchanged emails over the next few months, including discussing their respective strategies on maximum increases to lease renewal prices. They shared not only their increase limits in specific markets but also what price increases they were able to achieve. For example, in April 2022, the executive at LivCor reached out to Camden to share that ''my current thinking (not sure it's right, just where my mind is at) is . . . prices for almost everything are up 20%. Therefore, unless there is a good reason not to, should we be increasing rates on rentable items by 20%?'' The Camden executive responded, ''I like your thinking.'' He continued, ''Typically, we lean into the demand signals to inspire a price increase. . . . I'm divided on whether the default increase should be 20% or closer to the 10%. . . . Curious what your thoughts are!?''

95. In September 2021, a property manager at Cortland explained to a colleague that the manager had called two competitors and received from them pricing information on two-bedroom and three-bedroom units. The property manager asked for the information to decide how to act on YieldStar's price recommendations.

96. Landlords also engage in group discussions with local and national competitors about sensitive topics. For example, for a number of months in

2020, dozens of ''high-level participants'' from competing landlords participated in weekly ''multifamily leadership huddle'' videoconferences. The organizer informed participants that ''the goal of the call is to share information about what our companies are doing, share some collateral and resources,'' and then—perhaps recognizing the problematic nature of these calls—he claimed that ''then we hang up and make our own decisions.''

97. In one such call in April 2020 with over 100 attendees, participants discussed a number of topics, including ''pricing and renewal strategies.'' Several senior landlord executives, including a Greystar senior managing director and a CEO of another landlord, participated and shared their practices on new leases and renewals, use of renter payment plans, and use of YieldStar and other revenue management software. On a similar call in October 2020, participants discussed current and forecast rent prices, renewal strategies, and use of concessions. A Willow Bridge employee forwarded a colleague notes from the call, and he specifically highlighted information about a competitor's use of concessions.

98. These conversations among competing landlords have extended from the national level to local markets across the country. For example, in Minnesota, property managers from Cushman & Wakefield, Greystar, and other landlords regularly discussed competitively sensitive topics, including their future pricing. When a property manager from Greystar remarked that another property manager had declined to fully participate due to ''price fixing laws,'' the Cushman & Wakefield property manager replied to Greystar, ''Hmm . . . Price fixing laws huh? That's a new one! Well, I'm happy to keep sharing so ask away. Hoping we can kick these concessions soon or at least only have you guys be the only ones with big concessions! It's so frustrating to have to offer so much.'' The property managers from Greystar and Cushman & Wakefield continued to discuss competitively sensitive topics. For example, in response to Greystar's tipoff that it had reduced concessions and ''hop[ed] the Spring/Summer market allow us to pull further back on concessions,'' the Cushman & Wakefield property manager replied, ''That's great news and I love hearing about the concessions being pulled back. We have done the same and hoping the rest of the market follows suit.'' These communications between RealPage users that are ostensibly competitors are examples of the industry-wide coordination that magnifies the anticompetitive effects of RealPage's software.

99. In addition to contacting each other directly, many landlords also exchange information through other intermediaries. One vendor offers a tool for landlords to exchange with one another nonpublic information on concessions, net effective rents, inquiries and visits by prospective renters, and occupancy that is pulled from each landlord's property management software. Over 150 landlords nationally have used this service, including Greystar, LivCor, and some of the other largest landlords across the country. The vendor's CEO described this as a ''quid pro quo or give to get'' arrangement among landlords where ''if you share this data with me, I'll share the same data.'' A RealPage employee noted that this vendor makes it ''quicker and easier to get your market surveys.''

100. Some landlords use this direct exchange of competitively sensitive information to update competitor rents within LRO—a practice that RealPage is aware of and accepts.

101. Recently, under the scrutiny of antitrust lawsuits, some landlords have adopted internal policies prohibiting ''call arounds'' and other direct sharing of competitively sensitive information with direct competitors. But even assuming that their property managers fully comply with these legally unenforceable internal policies, these landlords continue to use RealPage's revenue management software.

3. At RealPage User Group Meetings, Landlords Discuss Competitively Sensitive Topics

102. RealPage holds monthly ''user group'' meetings attended by competing landlords that use RealPage's software. There are separate user group meetings for LRO and for YieldStar and AIRM.[5] One of RealPage's stated purposes for the user groups is to ''to promote communications between users.'' Attendees include a wide mix of competing landlords. For example, the June 2022 YieldStar user group included representatives from five of the largest property management companies in the country, among a larger group.

103. Recurring topics at the user group meetings include product enhancements and an ''idea exchange'' on potential changes to the products. The user group participants often vote on the proposals discussed in the idea exchange. But discussions have covered competitively sensitive topics, including managing lease expirations, pricing amenities, the use of concessions, pricing strategies, and how to manage properties during the COVID–19 pandemic. RealPage encouraged landlords to use the user group meetings to discuss such topics in their industry and set agendas for these meetings to aid them in doing just that, remarking that ''[t]he user group is meant to be self-governed to a degree and the clients should be leading it.'' These RealPage-fostered discussions among competitors enhance and facilitate the landlords' agreement with RealPage to use AIRM and YieldStar to align pricing.

104. At an April 2020 YieldStar user group meeting, the participants discussed strategies for handling the COVID–19 pandemic. In the presentation, two RealPage employees and a landlord led a group discussion of trends in rent payments and collections and provided five strategic tips. One tip encouraged landlords to ''push for occupancy but don't give away the farm (pricing).'' Another counseled landlords to ''balance internal and external dynamics'' and, referring to the nonpublic information used by YieldStar, to ''use transactional market data for decision support and to know when you can be more aggressive'' in pushing higher rents. Invited attendees included representatives from at least twelve landlords. At this meeting, Greystar and another landlord shared information on their usage of payment plans with tenants.

105. In May 2020, RealPage started a YieldStar user group meeting by surveying them on concessions. RealPage asked landlords how many of their properties offered concessions, whether concessions applied to new leases or renewals, and the types of concessions offered (such as discounts, gift cards, or other benefits). Invited attendees included representatives of thirteen landlords.

106. In March 2021, the user group meeting included a discussion on possible adjustments to how YieldStar calculated lease expiration premiums. A RealPage executive shared that she liked the idea of adding weekend premiums to incentivize prospective renters to move in during the week, and commented that ''the rev[enue] potential would then scale up.'' The LivCor representative responded in favor of weekend premiums, and another user group member suggested adding the proposal to the user group idea exchange. RealPage agreed to do so.

107. RealPage began its agenda for an April 2021 YieldStar user group meeting with ''strategic insights'' from a

[5] RealPage previously held separate AIRM and YieldStar user groups but combined them in 2023.

RealPage economist. This employee shared ''21 key strategic insights,'' including ''focus on renewals,'' ''be cautious with concessions,'' and ''drive up revenues—not just base rent.'' Specifically, he urged the group to ''push up new and renewal pricing where demand [is] solid'' and warned against over-relying on concessions. They were instead to ''trust the science'' of YieldStar.

108. In May 2021, RealPage included a ''Back to Basics'' discussion in a YieldStar user group meeting. This discussion covered ''returning to renewal increases post-COVID'' and ''declining concessions,'' as well as eviction moratoria and areas where acceptance rates were ''seeing significant uptick in past 6 months.'' The meeting group chat is even more revealing. Over a period of approximately fifteen minutes, representatives from fifteen landlords shared their plans for renewal increases and their use of concessions. The questions were posed, ''At what point do we go back to normal? I[f] we go back to normal[,] [i]s it now? Is anyone seeing that the model is raising rent and are you doing it?'' In response, these representatives made statements on renewal increases such as ''increasing, back to normal,'' ''major rent growth on the west coast,'' ''increasing the renewals,'' ''almost all markets we are raising rents,'' ''actually raising more than before covid at some,'' ''raising,'' and ''we are pushing to get back to normal. Sending increases.'' A representative from LivCor stated, ''increasing renewals and pushing new lease rents.''

109. The user group members were similarly open about their disinterest in concessions, signaling to each other that they do not intend to offer them or would offer them less frequently. Their pronouncements included ''no consessions [sic],'' ''no concessions,'' ''considerably less concessions,'' ''less frequent and less aggressive,'' ''no concessions except in markets with a lot of lease-ups,'' and ''almost no concessions currently.'' A representative from Willow Bridge noted concessions had ''gone away a LOT. People asking for a free month on renewals and being denied, but still signing the renewal.''

110. When the discussion turned to acceptance rates, a RealPage employee stated that rates had ''pretty much gone back to pre-COVID. Rate Acceptance has grown 11% over the past 6 months.'' A landlord responded that they had ''seen our acceptance rate increase tremendously.'' Another user group member explained to the group, for ''about ⅓ of the communities I manage the [YieldStar] model was too slow to respond, and we are pushing rates above market and above YS rec[ommendation].'' A representative from Willow Bridge concluded, ''Are we deciding as a group to remove hesitation? :).''

111. The LivCor representative who attended this May 2021 meeting testified that similar discussions happened numerous times during the COVID–19 pandemic—specifically, the beginning of 2020 through the middle of 2022. In these meetings, user group members discussed new and renewal rent increases, concessions, and renewal strategies, as well as other sensitive topics.

112. RealPage claims that this and other user group meetings were not recorded.

113. The July 2021 YieldStar user group meeting, held at RealWorld (a RealPage-hosted industry event), included a roundtable discussion among competitors. One of the discussion topics? ''What is the one thing you consistently consider outside of the model when accepting or changing price and why?''

114. At the October 2021 YieldStar user group meeting, a RealPage economist gave a presentation regarding the 2022 market outlook. RealPage presented analyses on current occupancy and pricing, and on expected occupancy and rent growth in 2022 by geographic regions.

115. At the July 2022 RealWorld YieldStar user group meeting, RealPage hosted a ''roundtable discussion'' on market volatility and its impact on how to use revenue management, unit amenities and their impact on tenant rents, and best practices for conducting lease ups.[6]

116. RealPage recognized the sensitive nature of the information shared at these meetings. Beginning in late 2022, after public reporting about AIRM and YieldStar, RealPage added an antitrust compliance statement in the user group presentations. Among other directions, the statement instructed participants not to discuss ''confidential or competitively sensitive information,'' and then noted that this included ''you or your competitors' prices or anything that may affect prices, such as current or future pricing strategies, costs, discounts, concessions or profit margins.'' But these were the very topics of previous user group meetings, as described above, that RealPage encouraged its users to discuss. And these are the very types of nonpublic information that AIRM and YieldStar use to recommend and determine prices.

117. Landlords frequently take advantage of RealPage user group meeting invites to email each other directly. In August 2020, for example, an employee of Cortland emailed a user group invitee list and asked them to support a change to how YieldStar calculated the number of leases needed. In response, an employee of a different landlord agreed, adding that ''I also rely on comparing available units to adj[usted] leases needed, to forecast leases, to gut check the pricing recs. These data points are always a factor in my pricing decisions.''

C. RealPage Uses Nonpublic Information To Allow Landlords To More Easily Compare Units on an Apples-to-Apples Basis

118. Renters typically search for a rental unit using certain key criteria, including the number of bedrooms and the location. Recognizing this market reality, RealPage enables landlords to more easily compare unit prices. When picking a property's ''peer set,'' RealPage matches floorplans with the same number of bedrooms that are geographically proximate. This makes it easier for landlords, through AIRM and YieldStar, to track and respond to competitors' movements at the floor plan level.

119. To account for amenities, RealPage instructs landlords to identify amenities using standardized naming conventions so that RealPage can use machine learning to group amenities together. RealPage then provides the market value for specific amenities, allowing landlords to more accurately identify and track how their competitors value these amenities and adjust their own pricing accordingly. The peer data include the market minimum and maximum value, as well as market quartile values, for specific amenities.

IV. RealPage Harms the Competitive Process and Renters by Entering Into Unlawful Agreements With Landlords To Share and Exploit Competitively Sensitive Data

120. AIRM's and YieldStar's use of nonpublic, competitively sensitive data is likely to harm, and has harmed, the competitive process and renters. AIRM and YieldStar distort the competitive process by using nonpublic data to maximize pricing increases and minimize pricing decreases. AIRM and YieldStar incorporate special rules, called ''guardrails,'' that override the

[6] A lease up is typically a pre-leasing period (such as with a newly constructed property) where a landlord is seeking to reach a certain, initial occupancy threshold.

ordinary functioning of the algorithms in ways that tend to push rival landlords' rental prices higher than would occur in a competitive market. RealPage presses landlords to curtail ''concessions'' to renters. And AIRM and YieldStar's ''lease expiration management'' features aim to sequence vacancies to maximize landlords' pricing power.

A. AIRM and YieldStar Have the Purpose and Effect of Distorting the Competitive Pricing of Apartments

121. As RealPage frequently trumpets to landlords, ''a rising tide raises all ships.'' AIRM and YieldStar ensure that the 'tide' flows primarily one way—higher rental prices. In a hot market, AIRM and YieldStar will recommend price increases to test what the market will bear, while in a down market AIRM and YieldStar will, to the extent possible, still increase or hold prices and minimize price decreases to reach the target occupancy rate.

122. AIRM and YieldStar are designed to help landlords press pricing beyond what they could otherwise achieve while reducing the risk that other landlords would undercut them. A revenue manager at Willow Bridge explained it succinctly: YieldStar is ''designed to always test the top of the market whenever it feels it's safe to.'' By using competitors' sensitive nonpublic data to generate elasticity estimates, among other things, AIRM and YieldStar can recommend higher price increases to extract more money from renters without losing an additional lease. As RealPage explained to a YieldStar client in training, this pricing elasticity measurement informs ''how far do we stretch and pull pricing within the market.'' That, in turn, means that ''we may have a $50 increase instead of a $10 increase for that day.''

123. That insight, gleaned from competitors sharing sensitive, transactional data with RealPage, which is in turn shared with landlords through pricing recommendations, removes uncertainty and competitive pressure that benefits renters. As one landlord put it, these products ''eliminate the guessing game'' on rent.

124. As RealPage explains to its clients, AIRM and YieldStar reveal ''hidden yield.'' This extra yield or revenue is hidden in a competitive market—a market in which competitors do not share sensitive information with each other—because landlords ''can't see the opportunity'' and ''fail to capture [the] full opportunity.''

125. AIRM and YieldStar disrupt the normal competitive bargaining process between landlords and renters. They place landlords in a better negotiating position vis-à-vis renters. Landlords using AIRM and YieldStar know that these models recommend floor plan prices and price units incorporating nonpublic data of their competitors, including effective rents and occupancy rates, all of which allow landlords to raise price with more certainty.

126. As landlords appreciate, AIRM and YieldStar use competitors' nonpublic data to predict with more certainty the highest price that the market will bear for a particular unit. A landlord is therefore less likely to negotiate on price. Any potential negotiation instead turns on lease term and move-in date, which AIRM and YieldStar adjust the pricing for to avoid overexposure for the landlord in the future.

127. AIRM and YieldStar also encourage landlords to follow each other in raising rents. When transactional data reveal that peers are raising effective rents—particularly the highest and lowest competitors for a given floor plan—AIRM and YieldStar follow with recommendations to increase rental prices. This movement with the market is ingrained in the AIRM and YieldStar models; AIRM and YieldStar will not recommend a floor plan price that falls below the market minimum.

128. Accordingly, as adoption of AIRM and YieldStar increases among peer competitors, the use of AIRM and YieldStar can push prices up through a feedback effect. As peers move up, other AIRM or YieldStar users may move up accordingly. This phenomenon, where participating landlords ''likely move in unison versus against each other,'' a RealPage executive testified, explains ''the rising tide.'' The same executive saw evidence of this ''rising tide'' in 2020: When looking at multiple peer sites using YieldStar, ''we started to see the trajectory of performance and trends be eerily similar when comparing subject sites and comp sets, thus showing that we are in fact 'r[a]ising the entire tide.' '' He acknowledged that YieldStar contributed to market prices rising as a tide.

129. Landlords rely on competitors' data within AIRM and YieldStar to determine their prices and how hard they need to try to be competitive. A revenue management director at Greystar noted in an internal AIRM deck that competitors' data is ''like the boundaries of the street you are driving on.'' The director elaborated that ''the competitive market range are [sic] the edges of the road, staying in those boundaries are [sic] necessary to get you to the destination.''

130. Another landlord that used YieldStar told RealPage that within a week of adopting YieldStar they started increasing their rents, and within eleven months had raised rents more than 25% and eliminated concessions. The landlord added that they were now pricing at the top of their peers and, importantly, had ''brought the rest of the Comps rents up with us.'' A RealPage executive responded internally that this was a ''great case study that highlights performance before, during, and a result of YS [YieldStar].''

131. A landlord explained in an internal presentation that because YieldStar recommends floor plan pricing that moves with the market—a market position—YieldStar would use competitors' data to inform ''how competitive we need to be [e]ach [d]ay.''



132. AIRM uses machine learning to train models on competing landlords' sensitive data. The parameters learned in this training are then applied to each AIRM client.[7] As a result, the model uses the same method and learned parameters to generate price recommendations from the relevant data for each landlord.

133. This aligns and stabilizes prices in at least two ways. First, it reduces volatility in *how* prices change, compared to a situation in which each client sets prices independently. No longer do competitors react in distinctive ways to changing market conditions as they would in a market without access to competitors' transactional data. Instead, AIRM price recommendations tend to standardize those reactions. This leads to the second result: pricing recommendations, and consequently pricing decisions, become more predictable and aligned among competitors as each is using the same set of learned model parameters.

134. RealPage has even manipulated competitor mappings to increase the likelihood that AIRM or YieldStar would recommend price increases. For example, a prominent client asked why a subject property had mapped peers located more than 100 miles away, in a different metropolitan area, when there were satisfactory mapped competitors within five miles. RealPage's response was that if these distant properties were not mapped, the client's property would be at the top of the market and it would be more difficult for AIRM to recommend price increases. RealPage had originally mapped these distant properties to give the model more room to recommend price increases for the client's property.

135. This dynamic exists not only in markets with growing demand, but also so-called ''down markets,'' where demand is decreasing. In a competitive market with a fixed supply (at least in the short run) of housing units, a demand decrease would result in prices falling. But AIRM and YieldStar resist price decreases in down markets as much as possible while achieving targeted occupancy rates. RealPage told one prospective AIRM client that the combination of ''AI and the robust data in the RealPage ecosystem'' would allow the landlord to ''avoid the race to the bottom in down markets.''

136. Using competitors' transactional data to calibrate and set the bounds of its model enables YieldStar and AIRM to decrease prices as little as possible in a down market. As one example, in 2023 a landlord reached out to RealPage with concerns about price recommendations at a property. Despite the property having too many vacancies and peer properties decreasing in price, AIRM was recommending price increases, frustrating the property owner. A senior RealPage executive responded that the model was not lowering prices because ''there isn't much elasticity between the recommended position and the current one'' and ''the model would recommend the highest possible position [*i.e.,* price] without affecting demand.''

137. RealPage succinctly summarized for landlords the effect of using AIRM and YieldStar in down markets: it ''curbs [clients'] instincts to respond to down-market conditions by either dramatically lowering price or by holding price when they are losing velocity and/or occupancy.'' These tools instill pricing discipline in landlords, curbing normal fully independent competitive reactions by substituting them with interdependent decision-making (*i.e.,* through the use of pricing recommendations based on shared, competitively sensitive information). These products ensure that clients are ''driving *every possible opportunity to increase price* even in the most

[7] There are separate AI Supply models, and therefore potentially different learned model parameters, for clients using Yardi's property management software and clients using other property management software. But within these two categories the learned model parameters for the AI Supply models are the same.

downward trending or unexpected conditions.''

138. When one client wanted to cancel YieldStar, a RealPage executive noted to colleagues that with cancelation the client would lose ''our helping them mitigate damage during rent control and covid.'' In particular, the client would lose ''us helping them rise with the tide given their strategy.''

139. Landlords understand the sensitivity of the information being shared and the likely anticompetitive effects. One potential client put it succinctly to RealPage: ''I always liked this product [AIRM] because your algorithm uses proprietary data from other subscribers to suggest rents and term. That's classic price fixing. . . .''

140. Cushman & Wakefield recognized the anticompetitive potential of sharing this level of detailed competitor data. When a property owner asked for information on specific competitors, Cushman & Wakefield's director of revenue management replied that the requested tool, RealPage's Performance Analytics with Benchmarking, did not provide information on specific competitors. The reason? Performance Analytics with Benchmarking ''tracks transactional information therefore due [to] the potential pricing collusion, it's anonymize[d] by RealPage.'' Performance Analytics with Benchmarking draws from the same transactional database as AIRM and YieldStar. And while AIRM and YieldStar do not display the granular transactional data to the user, AIRM and YieldStar see and use that data. The price recommendations are based upon the very data that this client recognized could lead to collusion.

141. Even RealPage employees selling LRO recognized the anticompetitive harm from using competitors' transactional data to recommend prices. In a 2018 training deck provided to clients, RealPage explained, ''we often times get the question about if comps are on LRO, can we just update the rents for you? Unfortunately, no, we can't. That could be considered price collusion, and it's illegal□.'' But this is precisely what AIRM and YieldStar do.

B. AIRM and YieldStar Impose Multiple Guardrails Intended To Artificially Keep Prices High or Minimize Price Decreases

142. Unsatisfied with relying merely on competitively sensitive data to advantage landlords, RealPage created ''guardrails'' within AIRM and YieldStar to force adjustments to the price recommendation. But these guardrails serve as one-way ratchets that help landlords, not renters, by increasing price recommendations or limiting a recommended decrease. And each of these guardrails makes use of competitively sensitive data that landlords agree to share with RealPage. These guardrails have even spurred multiple landlords to tell RealPage that AIRM and YieldStar are not dropping recommended rents as much as their individual conditions, or even market conditions, would warrant.

143. *Hard Floor.* AIRM and YieldStar will not recommend a floor plan price that falls below the smoothed market minimum effective rent. The market minimum is a hard floor. AIRM and YieldStar thus explicitly constrain floor plan price recommendations based on the prices of competitors, using shared nonpublic information.

144. *Revenue Protection Mode.* RealPage created a ''revenue protection'' mode that effectively lowers output to increase revenues. Revenue protection activates when AIRM or YieldStar predict—using calculations incorporating competitors' data—that demand is too low for a landlord to meet its target occupancy. Rather than lowering the price to stimulate demand, the algorithm reduces the target number of leases. AIRM and YieldStar then maximizes revenue for the *reduced* occupancy level, which tends to reduce price decreases or increase rental prices.

145. RealPage acknowledges that revenue protection ''may seem counterintuitive to leasing needs.'' In June 2023, a landlord complained to RealPage that ''something in your model is broken'' because ''the pricing model is not lowering rents dramatically'' despite the client's high exposure during a busy summer leasing season. RealPage explained that, with revenue protection, ''the model still sees the way to make more revenue is to lease fewer units at higher prices.'' In other words, the model seeks to ''raise rates to get the highest dollar value possible for the leases we can statistically achieve'' and ignore those leases that the client wants but the model predicts, using competitors' data, the client will not get.

146. The model's hard price floor can trigger revenue protection mode. In May 2022, for example, a landlord complained that AIRM was recommending price increases despite a projected shortfall in leases. Because revenue protection mode cannot be turned off, the RealPage pricing advisor recommended that the client reduce sustainable capacity. Sustainable capacity is a client-set parameter that imposes an inventory constraint and determines the number of leases AIRM and YieldStar will try to achieve. This is, of course, what revenue protection mode functionally does on its own: increase inventory constraints to reduce output.

147. This phenomenon, a RealPage employee explained internally, was ''true revenue protection mode.'' The client's floor plan was priced toward the bottom of its competitors. AIRM did not see any price decrease that would achieve the original target number of leases without dropping below the market floor (determined using competitors' data). Because AIRM never recommends prices below the market floor, AIRM instead reduced the number of leases and optimized against that new, lower occupancy rate.

148. Revenue protection mode interrupts AIRM's and YieldStar's normal revenue maximization process. As a RealPage data scientist explained, ''the model really wants to reduce rent but is prevented from doing so by the revenue protection restriction.'' Revenue protection leads to higher prices and lower occupancy.

149. *Sold-Out Mode.* Once a landlord reaches its targeted capacity for a particular floor plan, the model considers that floor plan ''sold out'' even though units may still be physically available. In that situation, AIRM and YieldStar recommends the maximum rent charged by a property's competitors, even if the floor plan's previous price was far lower.

150. RealPage intentionally designed sold-out mode to use competitively sensitive data to lift rents. In an earlier version of the software, sold-out mode pushed rents to 95% of that floor plan's highest recently achieved rent. But RealPage modified the algorithm in 2022 to go ''straight to 100% of comps,'' deliberately aligning rents with competitors' highest rents, rather than the property's own historical performance.[8]

151. *The Governor.* AIRM and YieldStar favor recommended price increases over price decreases. When the model calculates that the current day's ''optimal'' price will result in greater revenue than the previous day, a feature called the ''governor'' causes the model to recommend the current day's optimal price.[9] But when AIRM or YieldStar calculates that the current

[8] RealPage has at least considered changing this model logic because it introduced meaningful pricing volatility and significant price increases. Even if RealPage has implemented this proposed logic change, the new model logic still incorporates competitors' confidential rents because AIRM and YieldStar recommend a market position that is tied to the bottom and top of the market, as defined by mapped competitors.

[9] In some circumstances AIRM will cap the floor plan recommended price increase at a five percent increase.

day's optimal price will result in less revenue than the previous day, the governor recommends the recent average price *even though it is not optimal for the current day.* In other words, when market conditions weaken and the model calculates that a price decrease is warranted, this guardrail kicks in and recommends keeping the recent rent even though it is suboptimal. This asymmetry favors price increases over price decreases.

152. The effect of these guardrails is intentionally asymmetric. AIRM and YieldStar recommend price increases generated by the model. But the guardrails reduce or eliminate certain proposed price decreases even though the model has determined such deviations may contravene the landlord's individual economic interest.

C. AIRM and YieldStar Harm the Competitive Process by Discouraging the Use of Discounts and Price Negotiations

153. RealPage discourages landlords using AIRM and YieldStar from discounting rents. In the multifamily property industry, discounts typically consist of ''concessions,'' which are financial allowances (such as a free month's rent or waived fees) offered to incentivize renters. Concessions may be offered generally or negotiated individually with a potential tenant.

154. In a competitive marketplace, each landlord may independently decide to offer concessions so that it can better compete in enticing lessors. But, again, RealPage seeks to replace fully independent, competitive decision-making with collective action by ending concessions. AIRM and YieldStar do not work as well when landlords use one-off or lumpy concessions. In its ''best practices'' for revenue management to landlords, RealPage's guidance is simple: ''Eliminate concessions.'' Detailed ''best practices'' documents for both YieldStar and AIRM users explain that ''concessions will no longer be used in conjunction with'' YieldStar and AIRM.

155. When onboarding a new property, RealPage emphasizes the importance of accepting price recommendations without offering discounts, including ''no concessions.'' Concessions cause landlords to deviate from what RealPage determines is the maximum revenue-generating price.

156. Landlords have worked to implement RealPage's requests. In one YieldStar training, Greystar explained that ''Concessions are gone!'' In a client-facing FAQ document about its revenue management products, RealPage explained that ''the vast majority of our clients have discontinued the use of concessions.'' A 2023 RealPage client presentation showed that the number of units offering concessions generally trended downward from approximately 30% of units in 2013 to under 15% in 2023. A client's refusal to offer concessions is bolstered by its awareness of competing landlords receiving the same advice from RealPage. In addition to discouraging discounts, RealPage discourages negotiating prices with renters. RealPage trains landlords that ''YieldStar [or AIRM] is managing your Price,'' so the landlord's staff can focus on other things. The YieldStar or AIRM rent matrix is to be the source of prices that are given to a prospective renter. RealPage instructs leasing staff to provide prospective renters the specific price from the matrix that corresponds to the prospect's desired move-in date, unit, and lease term. RealPage cautions landlords not to show renters the matrix itself.

D. AIRM and YieldStar Increase and Maintain Landlords' Pricing Power by Using Competitors' Data To Manage Lease Expirations

157. Supply is a basic component of pricing. For this reason, information on a company's supply is highly sensitive, and its disclosure to competitors is particularly concerning. Yet AIRM and YieldStar use competitors' supply data precisely for the purpose of adjusting unit-level pricing, regardless of whether the landlord accepts the floor plan price recommendation. The goal of this ''lease expiration management'' is clear: As a RealPage senior manager explained for a client, using this data means that the client's property ''will remain in a position of pricing power.''

158. The purpose of lease expiration management is to avoid too many units becoming available in the market at the same time. Expiration management only increases unit-level prices. It never reduces the price.

159. Every landlord can choose to use ''market seasonality'' to inform its lease expiration management. As the name suggests, market seasonality adjusts the landlord's prices based on how many of its competitors' units will be vacant—that is, *future supply.* This feature is popular among landlords. For example, one of the largest landlords in the United States uses it in 98% of its properties. Every single property that uses market seasonality is leveraging RealPage's access to this highly sensitive, nonpublic data about its competitors' supply to inform pricing. RealPage trains landlords to turn on market seasonality as a best practice.

160. When activated, the market seasonality function changes unit-level prices across the different possible lease terms *regardless* of whether the landlord accepts the AIRM or YieldStar floor plan price recommendation.

161. RealPage determines for landlords an important input into lease expiration management: the expirations threshold. This threshold influences the point at which expiration premiums are added. The threshold calculation relies on nonpublic lease transaction data for the property's submarket and pulls from numerous RealPage products, including YieldStar, AIRM, OneSite, Business Intelligence, and Performance Analytics with Benchmarking. Landlords cannot adjust the expirations threshold.

162. Fueled by competitor data, expiration management results in ''increased stability'' and ''pricing power.'' Using competitors' data reduces the risk of overexposure that ''could erode rent roll growth.'' By adjusting price recommendations based on how much total supply is forecast in the market for a given time period, AIRM empowers landlords to charge higher prices than they could without access to competitors' nonpublic data.

E. No Procompetitive Benefit Justifies, Much Less Outweighs, RealPage's Use of Competitively Sensitive Data To Align Competing Landlords

163. AIRM and YieldStar do not benefit the competitive process or renters. Any legitimate benefits of revenue management software can be achieved through less anticompetitive means, and any theoretical additional benefits of AIRM and YieldStar are not cognizable and outweighed by harm to the competitive process and to renters.

V. RealPage Uses Landlords' Competitively Sensitive Data To Maintain Its Monopoly and Exclude Commercial Revenue Management Software Competitors

164. Landlords are not the only ones that benefit from RealPage's rental pricing practices. RealPage benefits too through maintaining its monopoly over commercial revenue management software for conventional multifamily housing rentals. In that market, RealPage's internal documents reflect that it commands an 80% share.

165. RealPage's core value proposition creates a self-reinforcing feedback loop of data and scale advantages. The sharing of competitively sensitive information among rivals attracts more landlords that seek to maximize revenues and extract more money from renters. As a result of its exclusionary conduct, RealPage has been able to

obstruct rival software providers from competing on the merits via revenue management products that do not harm the competitive process.

166. Over time, RealPage has become more entrenched and has stymied alternatives unless they too enter into similar unlawful agreements with landlords to obtain and use nonpublic transactional data to price units. Even then, RealPage's unparalleled troves of competitively sensitive data provide an ill-gotten advantage.

A. Landlords Are Drawn to RealPage Because of Access to Nonpublic Transactional Data That Is Used To Increase Landlords' Revenue

167. Landlords prize RealPage's accumulation of nonpublic transactional data from competing landlords. For example, Greystar noted that ''RealPage supplies the best set of transactional data available via their millions of units of data—this becomes a valuable source of truth to our competitive landscape.'' In a training document for its employees, the same landlord explained that ''better data = better outcomes'' and that AIRM has ''over 15 million units of data available.'' From the perspective of Greystar, ''pricing decisions start with data'' and that precision in pricing ''comes from data driven decisions.'' Importantly, the landlord believed that AIRM's ability to ''examine data quality . . . each night'' via its property management software integrations, including guest card entry, ''plays an important role'' in pricing.

168. As another example, Cushman & Wakefield identified this data as especially helpful in a dense market because of insights into competitors' actions in the market. The same landlord also concluded that the more data points, the better confidence a landlord has in RealPage's rental recommendations. According to Cushman & Wakefield, more data—especially data about concessions—enabled the landlord to make better decisions because it showed the landlord where the market stood. Cushman & Wakefield's director of revenue management explained to a colleague that YieldStar ''collects about 14 MILLION transactional lease data across the US and has over 20 years of historical records.'' The director acknowledged that ''[t]his is huge! Essentially, this is a window into the market and the shifts we are going to experience . . . Having insight into this data, allows [landlords] to make changes with the dynamic changes in the market.''

169. Willow Bridge, who compared AIRM to another commercial revenue management software product, noted that the competing product ''is about half of the cost and does a good job in reviewing rents and making recommendations but does it without the additional reporting capabilities and market data that AIRM uses.'' Ultimately, this landlord decided to push their owner clients towards AIRM. The landlord's decision to use AIRM was in part based on receiving ''more accurate and time sensitive data'' and noted that, although revenue management is not changing, ''the amount of data and how that information is used to grow revenue is bigger and better than ever'' with AIRM.

170. Landlords want access to RealPage's transactional data because RealPage advertises, and landlords believe, that the use of this data will increase a landlord's revenue. ''Due to the amount of data RealPage possesses,'' Greystar explained, RealPage developed AIRM ''to leverage machine learning to improve both the supply and demand modeling and provide a tool to further customize to each asset's needs.'' The materials sent to the landlord's clients also included a flyer explaining that AIRM will ''outperform the market 2–7% year over year'' and that it provides ''[a]ctionable intelligence derived from the industry's largest lease transaction database of 13M+ units.''

171. Landlords view the lack of access to transactional data as a significant shortcoming in other commercial revenue management software. One landlord received a request from a property owner client for information on YieldStar and how it compared to another commercial revenue management product. A landlord executive explained that YieldStar was backed by robust data and ''millions of units of transactional data to support not only their demand and forecast modeling but also their market/competitive set information.'' She concluded that the other revenue management software was ''in a completely different class'' than YieldStar. More than two years later, the same executive again concluded that this company's new revenue management product was inferior to AIRM because AIRM had far more transactional data, supported by RealPage's Market Analytics survey data. In another example, a different landlord compared multiple commercial revenue management products to RealPage's YieldStar. He concluded that a major weakness of these alternatives was that they lacked access to transactional data on competitors' rents.

B. RealPage's Collection and Use of Competitively Sensitive Data Excludes Competition in Commercial Revenue Management Software

172. RealPage recognizes the barriers to competition on the merits that its data, scale, and business model provide. RealPage understands that ''pricing decisions start with data.'' RealPage explains to its clients that ''[t]he data entered into your [property management software] and collected each night, along with current market data (and lead data if OneSite) provides insight into advantageous demand drivers, identifies revenue risk and opportunity, and captures this competitive landscape for informed pricing.''

173. This data and scale advantage is significant and creates a feedback loop that further increases barriers to competition for commercial revenue management software. RealPage touts its access to an ''unmatched database.'' In one case from 2023, a RealPage sales representative noted that RealPage's ''revenue management is the most widely adopted solution in the industry'' and RealPage had ''approximately 4.8M units on revenue management.'' In a 2023 presentation for AIRM, RealPage advertised that the ''[a]mount of data we have (~17mm units) is unique to RealPage'' and that the ''[q]uality of data is best in class given that it is 'Lease Transaction Data.' '' RealPage claimed this ''supports that fact that the industry views RealPage as the source of truth for performance data.''

174. RealPage has used this competitively sensitive data to develop an AI-driven revenue management solution that leverages the scale and scope of its data. RealPage's plan to use this database as fuel for its AI pricing model is spelled out in a Go-To-Market summary from 2019. In that document, RealPage describes that:

> RealPage can achieve $10 Million in organic ACV growth through delivery of the next generation of revenue management. Failure to do so reduces the opportunity to harvest gains from our $300M investment in LRO and places a portion of current $100M revenue management revenue at risk to emerging competitors, including Yardi and low-cost alternatives that say 'all revenue management is the same.' Over time we can sunset YieldStar and LRO reducing expense, and leverage LRO capabilities as a revenue management lite offering.

175. This plan came to fruition with the introduction of AIRM. In a RealPage training presentation from February 2020—right before the launch of AIRM—RealPage discusses a new optimization solution that is built on the ''RealPage Foundation'' which is

defined as ''13.5m units of lease transactional data informing our models with real actionable intelligence in near real time.'' As described earlier in the deck, RealPage's competitors ''lack the foundational capabilities on which to build upon'' leaving RealPage with the possibility ''to tie together each capability . . . in a single view.''

176. RealPage knows that its rivals do not have access to similar data sets. In one presentation from 2022, RealPage discussed competing revenue management products from Yardi and Entrata. Yardi and Entrata have fewer than 250,000 units, RealPage concluded, while RealPage had at least 4 million. Unlike RealPage, Yardi had a limited data set that used data only from Yardi's property management software. RealPage likewise explained that Entrata lacked much data outside of student housing and Entrata's revenue management software worked only with its own property management software, meaning Entrata could not pull data from RealPage's OneSite or other property management software products. RealPage further criticized manual in-house pricing options for having biased data, introducing errors through manual pricing, and being inefficient.

177. RealPage pitches prospective clients on its unique access to and use of nonpublic transactional data that is competitively sensitive. In 2021, RealPage discussed internally how to pitch AIRM to a prospective client who was considering an alternative revenue management solution. A RealPage employee pointed to the competitor's lack of ''AI driven competitor information derived from lease transaction data.'' Another employee added that the salesperson should amplify the prospective client's concerns about the competitor's lack of nonpublic transactional data, comparing it to buying a ''Ferrari without an engine.'' RealPage's chief economist concurred.

178. RealPage's use of competitors' nonpublic transactional data provides it an important advantage on pricing renewals. Information on renewals is not available publicly. Competing revenue management vendors who do not use nonpublic, competitively sensitive data are left partially blind to this important part of the rental market. In 2022, a RealPage salesperson stressed this advantage to a prospective client who was also considering a competing commercial revenue management solution. The salesperson noted the lease transaction data RealPage collected on a nightly basis and declared that RealPage had an ''unequaled ability to stress test renewals *nightly* and drive amenity optimization.''

179. RealPage recognizes that its use of competitively sensitive data minimizes any competitive pressure it faces. A RealPage senior vice president explained in a strategy document that RealPage's unique nonpublic data on leasing decisions was a ''data moat,'' protecting RealPage from competitors. In 2020 RealPage's chief economist noted that RealPage's access to this data was a ''major competitive advantage'' and a ''major reason we can do what we do.'' In 2021 a prospective client asked RealPage why AIRM cost three times the amount of a competing revenue management product. Internally, a RealPage employee pointed to AIRM leveraging daily transactional data of over 13 million units to collect competitors' rents and forecast demand. He noted that multiple large landlords had refused to adopt the competing revenue management product rather than AIRM even when the competitor offered it for free. The same RealPage employee explained to another client that RealPage's leveraging of lease transaction data—with access to confidential data for over 14 million units—was a key advantage over a competing commercial revenue management provider.

180. In June 2023 a landlord emailed RealPage and asked, ''who are your competitors?'' A RealPage sales executive responded, ''Our revenue management solution does not have any true competitors, mainly because our data is based on real lease transaction data from all kinds of third-party property management systems. . . .''

181. In addition, when discussing a potential entrant, a RealPage executive noted that the entrant needed ''to get the data to enable [revenue management].'' He further noted that [g]etting the data (and more modern methods) . . . will be hurdles for [the entrant].'' Another RealPage senior executive explained that shifting clients from LRO, which is less reliant on competitively sensitive information of rivals, to AIRM, which is very reliant on such information, reduced the threat from new entry when she noted that migrating LRO clients to AIRM was ''critical to reducing the risk that may come from this new [entrant's] offering.''

182. RealPage's power and conduct in connection with commercial revenue management software serves to exclude rivals and maintain its monopoly power. RealPage has ensured rivals cannot compete on the merits unless they enter into similar agreements with landlords, offer to share competitively sensitive information among rival landlords, and engage in actions to increase compliance. As a result of its exclusionary conduct, RealPage has been able to obstruct rival software providers from competing via revenue management products that do not harm the competitive process in addition to cementing its massive data and scale advantage that keeps increasing due to feedback effects.

VI. Relevant Markets

A. Conventional Multifamily Rental Housing Markets

1. Product Markets

183. Conventional multifamily rental housing is a relevant product market. Conventional multifamily rental housing includes apartments available to the general public in properties that have five or more living units. Conventional rental housing does not include student housing, affordable housing, age-restricted or senior housing, or military housing. This product market reflects consumer preferences, industry practice, and governmental policy.

184. In 2023, RealPage estimated the conventional multifamily rental market to cover approximately 14 million units. The 2021 American Housing Survey estimated a total of 21.1 million multifamily apartments—not limited to conventional—in the United States.

(a) Conventional Multifamily Rentals Are Distinct From Other Types of Multifamily Housing

185. Other types of multifamily apartment buildings are not good substitutes for conventional multifamily rentals. Some kinds of multifamily buildings are restricted to specific types of renters, such as student housing units, affordable housing units (*i.e.,* income-restricted housing), senior (*i.e.,* age-restricted) housing, and military housing. These housing units focused on different classes of renters are not reasonable substitutes for conventional multifamily rentals. RealPage distinguishes conventional multifamily as being in a different market segment from senior, affordable, and student housing in the ordinary course of business.

186. Non-conventional units are not widely available to all renters and can exhibit different buying patterns. For example, student housing serves individuals enrolled in higher education and is typically located on or near universities. Student housing is typically leased by the bed instead of by unit, and faces a significantly different leasing cycle and different patterns in

renewals and leasing practices. Recognizing these differences, RealPage will assign to student properties surrogates that are distant student assets rather than nearby conventional assets. RealPage in fact offers a different version of both AIRM and OneSite, its property management software, for the ''student market.''

187. Affordable housing units are available only to individuals or households whose income falls below certain thresholds. Multiple federal affordable housing regulations, for example, require participants in affordable housing programs to have incomes lower than a set percentage, such as 30%, of the median family income in the local area. Affordable housing units are also relatively scarce, with families seeking such housing often waiting years on a waitlist. These legal and practical restrictions prevent affordable housing from being a reasonable substitute to conventional multifamily housing for the typical renter.

188. Senior housing is typically restricted to individuals aged 55 and older. RealPage separates senior housing into four categories: independent living, assisted living, memory care, and nursing care. Independent living offers senior-focused amenities—such as transportation, meals, and social gatherings among community members—that materially increase housing costs and are less desirable to younger households. The other three categories of senior housing provide professional or special care to assist renters with basic tasks like eating, bathing, and dressing, and they are not reasonable substitutes for conventional multifamily rentals.

189. Military housing is also not a reasonable substitute to conventional multifamily rentals. It is typically geographically proximate to military installations, with roughly 95% of military housing found on-base. Although civilians may in some cases be able to live in military housing properties experiencing low occupancy rates, military regulations place them below five higher-priority categories of potential renters, including active and retired military personnel.

(b) Single-Family Housing Is Not a Reasonable Substitute to Multifamily Rentals

190. The multifamily industry, government regulators, and policy documents distinguish between properties with at least five units, which are classified as ''multifamily housing'' and those with fewer units, which are classified as ''single-family rentals.''

191. The purchase of single-family or other types of homes is not a reasonable substitute for conventional multifamily housing rentals. A former RealPage economist explained that ''the choice between renting and owning is first and foremost a life stage and lifestyle choice over a financial one.'' Single-family homes also generally require a substantial down payment. In March 2023, a RealPage economist estimated an ''entry premium'' of $800 per month to home ownership over rentals. According to a 2021 RealPage strategic planning guide, the ''myth'' that people were abandoning multifamily properties for single-family homes is false, stating that ''rising home sales do not hurt apartment demand.'' Single-family home sales are not reasonable substitutes for conventional multifamily housing.

192. More broadly, renters living in conventional multifamily apartments will not switch to single-family homes—purchases or rentals—because of a small increase in rent. The decision to move from an apartment building to a single-family home is primarily a life-stage and lifestyle choice. For example, the decision by a household to have children may spur a move to a single-family home. In many areas, relatively few children live in conventional multifamily apartments. Multifamily apartments typically offer community amenities and a different lifestyle, such as high walkability in an urban area, whereas single-family homes generally do not offer the same amenities and offer instead increased privacy, including private yards. A RealPage analyst explained in 2022 that because a move to a single-family home is a ''lifestyle choice,'' single-family home rentals were not direct competitors to multifamily rental housing. A 2022 RealPage deck, shared with a landlord, stated that multifamily rentals and single-family rentals were ''complementary, not competitive,'' and targeted different renters, with different floor plans, in different locations. Another RealPage analyst explained to a multifamily property owner that single-family rentals offer a different renter profile than multifamily rentals.

193. Industry participants agree that single-family rentals attract a different pool of renters from multifamily rentals. A managing director of a single-family rental property management company explained in 2021 that a renter's journey from multifamily apartment living to single-family rentals came as life stages evolved. The CEO of a single-family rental developer similarly explained that these single-family rental homes are for renters who age out of multifamily apartments.

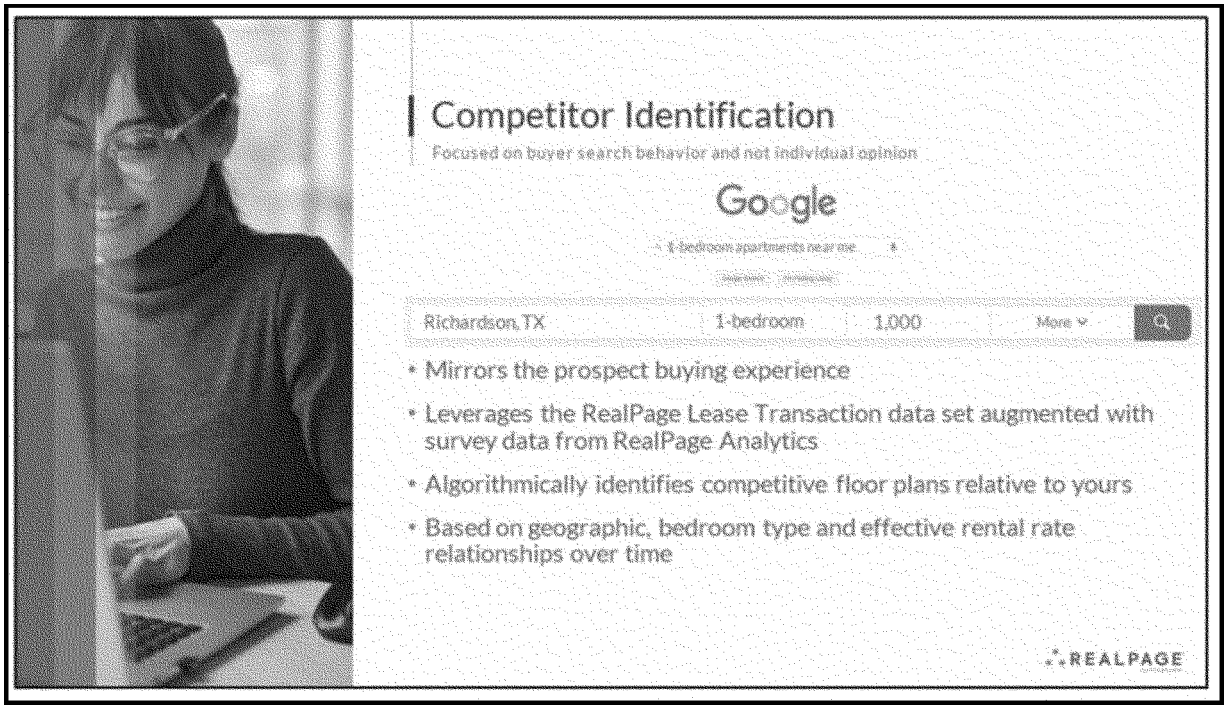
194. Single-family rentals are also typically priced higher than multifamily apartments, further reducing potential substitution between them. The chairman of one institutional multifamily property owner explained in a 2022 earnings call that multifamily housing was relatively affordable compared to single-family rentals. An industry price index showed that, in March 2024, single-family rent was approximately 18% higher than multifamily rent.

(c) Conventional Multifamily Rental Units With Different Bedroom Counts Are Relevant Product Markets

195. Different bedroom floor plans also constitute relevant product markets. A key criterion by which a current or prospective renter searches for a rental unit is the number of bedrooms. One-bedroom units are substitutes for other one-bedroom units, two-bedroom units are substitutes for other two-bedroom units, and so forth. Individual renters may change their desired numbers of bedrooms, but this is typically tied to changes in circumstance independent from price. For example, the birth of a new child may require a family to shift from a one-bedroom unit to a two-bedroom unit.

196. RealPage adopts this practical reality in the ordinary course of business. For every property using AIRM or YieldStar, RealPage maps peer floor plans. These mapped floor plans capture reasonable substitutes for the subject property floor plan and reflect the perceived market by a prospective renter.

197. To be selected as a peer, a floor plan must have the same number of bedrooms. A RealPage employee explained the mapping process to a client: ''we are looking specifically at the bedroom level. The tool will only map 2b[edroom] with 2b[edroom] or 1b[edroom] with 1b[edroom].'' The object of mapping peers is to mirror the prospect buying experience by identifying properties that a potential tenant will see in online searches when searching for a particular floor plan and price range.



198. AIRM and YieldStar price the different floor plans, which consist of different numbers of bedrooms, independently. RealPage testified that the model considers no cross-price elasticity between different floor plans: ''when you set up the different floor plans, a one bedroom, a two bedroom, or three bedroom, those are completely independent . . . . [T]here's no influence in what the pricing is for the two bedrooms, for example . . . has no influence on what the pricing is for the one bedrooms.'' Landlords also take steps to maintain a pricing spread between one- and two-bedroom units and avoid pricing one-bedrooms at a higher rate than two-bedroom units.

199. Landlords recognize that units with different bedroom counts face different demand from renters. For example, Greystar explained internally in 2022 that demand for studio apartments differs from demand for three-bedroom units. A separate 2023 training by Greystar reiterated that demand trends, and therefore pricing trends, differ by bedroom counts and that staff should not react to a downward trend in one category, such as two bedrooms, with discounts in one- or three-bedroom units. At another time, Greystar emphasized the benefit of RealPage's lease expiration management feature because it is managed at the bedroom level—not at the property level—so it could match seasonal demand for units with that specific number of bedrooms. A revenue manager at Willow Bridge similarly explained to colleagues that one-bedroom units have drastically different demand patterns from two-bedroom units and from three-bedroom units.

2. Geographic Markets

200. Defining relevant geographic markets help courts assess the potential anticompetitive impact of the agreements challenged. Here, the relevant geographic markets for the purposes of analyzing the anticompetitive effects of RealPage's agreements with landlords are the areas in which the sellers (the landlords) sell and in which the purchasers (potential renters) can practicably turn for alternatives. RealPage's agreements are alleged to have suppressed price competition in the markets for conventional multifamily housing. The relevant geographic markets to assess those agreements are those property locations close enough for their apartments to be considered reasonable substitutes. In delineating a geographic market for conventional multifamily housing, the focus is inherently local. Renters are typically tied to a particular location for work, family, or other needs.

201. RealPage recognizes the local nature of geographic markets. One RealPage former employee explained that under ''Real Estate 101 rules, real estate is local, local, local.'' Another RealPage former chief economist noted that an effective evaluation of a property's performance must be done in comparison to similar properties in the property's neighborhood because competitive conditions in the neighborhood could differ widely from the city at large. When training landlords on lease expiration management, two RealPage executives explained that market seasonality was based on the most accurate geographic level, such as zip code, neighborhood, or submarket. They further explained that renters typically move locally. Similarly, a former property manager explained that potential tenants will look at a small number of properties in the same neighborhood, and it is on that neighborhood level where competition occurs among multifamily properties. This individual testified, ''location really does matter in real estate.''

202. RealPage has created a tool called True Comps. Used in performance benchmarking products that provide decisional support to AIRM and YieldStar, True Comps provides a more accurate mapping of competitor properties. It uses an algorithm to find the properties most comparable to the subject property, as measured by characteristics including distance, effective rent, age, property height, and unit count and mix. By default, True Comps picks competitors within a 15-mile radius. In scoring distance, True Comps applies a ''highly-punitive model''—the distance score drops from 99% for a distance of 0.05 miles, to 56% for a distance of 2 miles, and to 10% for a distance of 8 miles. Thus, RealPage acknowledges and incorporates small geographic areas as the appropriate

location in which to find true competitive alternatives.

203. During a property's implementation process, AIRM and YieldStar require the mapping of peer properties, including competitors. RealPage starts by looking for competitors within a half-mile radius from the subject property and then expands as necessary. Geographic proximity is in fact so important that YieldStar has a default radius that limits its search for competing properties to no more than 5 miles in urban settings, and to no more than 10 miles in suburban settings. RealPage has an internal process for escalating any proposed peer property that is more than 15 miles away.

(a) RealPage-Defined Submarkets Identify Relevant Geographic Markets

204. RealPage defines geographic submarkets in the ordinary course of business. Each submarket reflects the geographic area, defined by a set of zip codes, that features similar properties that compete for the same pool of potential renters. In constructing submarkets, which are generally larger than its neighborhoods, RealPage considers major roads, city and county boundaries, and school districts. RealPage also considers socioeconomic factors and apartment market characteristics, such as the age of properties and rental rates.

205. Even within a city, apartment demand varies significantly based on factors such as employment. Supply may also vary widely as existing properties and new construction may be located in different parts of a city. A former RealPage chief economist explained that because ''real estate is very local . . . you typically want to take a . . . more narrow view if you can on what's going on in any given submarket.'' [10]

206. The multifamily industry recognizes submarkets as an important geographic area for analyzing competition and pools of renters. Multiple industry analysts offer data by submarkets. A revenue management director at Greystar testified about a submarket that ''everybody in our industry uses this term.'' She further stated that submarkets are a standard categorization system, used by RealPage and others, including to benchmark a subject property's performance with comparable properties. A revenue manager at Cushman & Wakefield circulated a scorecard comparing performance to the submarket, and exclaimed that ''we're perfectly aligned with the submarket'' on rent roll.

207. A revenue management executive at Willow Bridge testified that submarkets identify specific, smaller areas of a city where renters look to live to be close to schools or work. This executive testified that submarkets typically identify the area within which a renter is comparing apartment options. This landlord tracks other properties' rents in a subject property's submarket to make sure the subject property remains competitive, and if rents in a submarket increased, then the landlord expected that its property in that submarket would also raise its rents.

208. Appendix A lists RealPage-defined submarkets that identify relevant local markets in which the agreements among RealPage and landlords to share nonpublic, competitively sensitive information for use in pricing conventional multifamily rentals have harmed, or are likely to harm, competition and thus renters.

209. The RealPage-defined submarkets identified in Appendix A are relevant markets in which the agreements between RealPage and AIRM and YieldStar users to align pricing has harmed, or is likely to harm, competition and thus renters. In each of these markets, the penetration rate for AIRM and YieldStar ranges from at least around 26% to 69%, and for AIRM, YieldStar, and OneSite ranges from at least around 30% to 78%.[11] In each of these markets, the landlords using AIRM or YieldStar and/or sharing competitively sensitive information collectively have market power.

210. Appendix B identifies submarkets by bedroom count that are relevant markets in which the agreements between RealPage and landlords, and agreements among landlords, to share nonpublic, competitively sensitive information for use in pricing conventional multifamily rentals have harmed, or are likely to harm, competition and thus renters.

211. The markets identified in Appendix B are relevant markets in which the agreements between RealPage and AIRM and YieldStar users to align pricing collectively have harmed, or are likely to harm, competition and thus renters. In each of these markets, the penetration rate for AIRM and YieldStar ranges from at least around 26% to 79%, and for AIRM, YieldStar, and OneSite ranges from at least around 30% to over 80%. In each of these markets, the landlords using AIRM or YieldStar and/or sharing competitively sensitive information collectively have market power.

(b) Core-Based Statistical Areas (CBSAs) are Relevant Geographic Markets

212. A core-based statistical area (CBSA) is also a relevant geographic market. A CBSA is a geographic area based on a county or group of counties. A CBSA has at least one core of at least 10,000 individuals. A CBSA includes adjacent counties that have a high degree of social and economic integration with the core, as measured by commuting ties. A CBSA includes both metropolitan statistical areas and micropolitan statistical areas. A CBSA includes the set of reasonable conventional multifamily rental alternatives to which a renter would turn in response to a small but significant, nontransitory price increase.

213. RealPage itself tracks CBSAs in the ordinary course of business and refers to them as ''markets.''

214. Table 1 identifies relevant markets in which the agreements between RealPage and landlords, and agreements among landlords, to share nonpublic, competitively sensitive information for use in pricing conventional multifamily rentals collectively have harmed, or are likely to harm, competition and/or consumers. In each of these markets, the penetration rate for AIRM and YieldStar ranges from at least around 26% to 37%, and for AIRM, YieldStar, and OneSite ranges from at least around 35% to 45%. Three of these markets are located in North Carolina.

TABLE 1—CORE-BASED STATISTICAL AREA (CBSA) MARKETS

Core-Based Statistical Area (CBSA) Markets	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Atlanta-Sandy Springs-Roswell, GA	Yes	Yes

[10] RealPage also tracks data at a more granular level than a submarket, called a neighborhood.

[11] Including penetration rates for RealPage's Business Intelligence and Performance Analytics with Benchmarking products, which landlord users agree to share nonpublic data with RealPage that RealPage then uses in AIRM and YieldStar, would increase the data penetration rates subject to unlawful agreements for these and all other relevant conventional multifamily rental housing markets identified in the Complaint.

TABLE 1—CORE-BASED STATISTICAL AREA (CBSA) MARKETS—Continued

Core-Based Statistical Area (CBSA) Markets	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Austin-Round Rock, TX	Yes	Yes
Charleston-North Charleston, SC	.....	Yes
Charlotte-Concord-Gastonia, NC–SC	Yes	Yes
Dallas-Fort Worth-Arlington, TX	Yes	Yes
Denver-Aurora-Lakewood, CO	Yes	Yes
Durham-Chapel Hill, NC	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	.....	Yes
Orlando-Kissimmee-Sanford, FL	Yes	Yes
Raleigh, NC	Yes	Yes

215. The markets identified in Table 1 are relevant markets in which the agreements between RealPage and AIRM and YieldStar users to align pricing collectively have harmed, or are likely to harm, competition and thus renters.

216. Table 2 identifies relevant CBSAs by bedroom counts that are relevant markets in which the agreements between RealPage and landlords, and agreements among landlords, to share nonpublic, competitively sensitive information for use in pricing conventional multifamily rentals collectively have harmed, or are likely to harm, competition and/or consumers. In each of these markets, the penetration rate for AIRM and YieldStar ranges from at least around 27% to 42%, and for AIRM, YieldStar, and OneSite ranges from at least around 33% to 45%.

TABLE 2—CORE-BASED STATISTICAL AREA (CBSA) MARKETS BY BEDROOM COUNT

Core-Based Statistical Area (CBSA) markets	Number of beds.	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Atlanta-Sandy Springs-Roswell, GA	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	2	Yes	Yes
Austin-Round Rock, TX	1	Yes	Yes
Austin-Round Rock, TX	2	Yes	Yes
Charleston-North Charleston, SC	1	Yes	Yes
Charleston-North Charleston, SC	2	.....	Yes
Charlotte-Concord-Gastonia, NC–SC	1	Yes	Yes
Charlotte-Concord-Gastonia, NC–SC	2	Yes	Yes
Dallas-Fort Worth-Arlington, TX	1	Yes	Yes
Dallas-Fort Worth-Arlington, TX	2	Yes	Yes
Denver-Aurora-Lakewood, CO	1	Yes	Yes
Denver-Aurora-Lakewood, CO	2	Yes	Yes
Durham-Chapel Hill, NC	1	Yes	Yes
Durham-Chapel Hill, NC	2	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	2	.....	Yes
Orlando-Kissimmee-Sanford, FL	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	2	Yes	Yes
Raleigh, NC	1	Yes	Yes
Raleigh, NC	2	Yes	Yes

217. The markets identified in Table 2 are relevant markets in which the agreements between RealPage and AIRM and YieldStar users to align pricing collectively have harmed, or are likely to harm, competition and thus renters.

218. Even assuming available land and no regulatory constrictions, local markets for conventional multifamily rental housing feature substantial barriers to entry. Landlords seeking to respond to rising rental prices by expanding supply, rather than simply acquiring an existing property, typically face substantial lead times to construct a new multifamily property. Additionally, there are significant upfront capital costs, including to fund expenditures on building material and labor, that are recuperated over time, which may require landlords to secure financing.

B. Commercial Revenue Management Software Market

219. RealPage has monopoly power in the market for commercial revenue management software for conventional multifamily housing rentals in the United States, with a durable market share over 80%, according to internal documents and other information.

1. Product Market

220. Commercial revenue management software for conventional multifamily housing rentals is a relevant antitrust product market.

221. Other methods for pricing conventional multifamily housing units are not reasonable substitutes for commercial revenue management software. RealPage and others in the industry recognize that revenue management software companies for multifamily housing units compete primarily against each other and not manual or do-it-yourself pricing methods.

222. Internal documents from RealPage refer specifically to commercial revenue management for multifamily housing and recognize RealPage's substantial market share. For example, a 2021 strategy presentation described RealPage as ''the market leader in commercial revenue

management for multifamily [housing] with 45 of the 50 Top NMHC Owner and Operators'' all using RealPage's revenue management products.

223. A presentation to RealPage's board in 2022 noted that ''[RealPage] has gained [the] pole position in Revenue Management largely through the success of AI Revenue Management, which has become RealPage's leading differentiating product.'' Additionally, the presentation described how ''Revenue Management is experiencing strong growth driven by AIRM'' due to its ''PMS agnostic approach'' which gives RealPage the ability to aggregate data from its clients resulting in ''revenue management [that] has achieved a market share of 95% of the top 50 owners and operators.''

224. RealPage acknowledges its market power and durable market position. A 2023 RealPage presentation reviewing the use of artificial intelligence in property technology noted that ''RealPage is already the de facto market leader in certain key areas at leveraging AI for multifamily proptech'' and shows ''revenue management'' as the area where it is the furthest ahead.'' Later, the same presentation noted that RealPage's current offer for revenue management is ''best-in-class'' and that ''[n]o other company is cross-pollinating their pricing tools with data in a way similar to [RealPage].'' As early as 2019, a RealPage presentation for clients stated that RealPage ''has around 80% of the Revenue Management market share.'' That share has proved durable over time. In 2023, during a sales pitch to a property owner, a RealPage representative noted that ''[RealPage] has 80% to 85% of the market share with the closest competitor around 12% (<750K units).''

225. In late 2021, a RealPage employee preparing competitor intelligence explained to RealPage's chief economist that RealPage ''dominate[d]'' revenue management. He added that RealPage ''dominate[d]'' Yardi and Entrata, which are the next two largest commercial revenue management competitors.

226. RealPage's monopoly power is protected by barriers to entry, including the unlawful collection and use of competitors' nonpublic transactional data on millions of multifamily units.

227. Landlords also recognize RealPage's substantial market share and market power over commercial revenue management software. In 2024, a landlord revenue management executive testified that manual pricing does not compete with AIRM. The same landlord pitched YieldStar to its owner clients by explaining that ''it's evident manual pricing cannot solve at the level a revenue management tool can.''

228. In a 2023 pricing dispute with a large landlord, RealPage refused to lower the price for its AIRM software. In response, an employee employed by the landlord noted that it was no surprise they would not decrease their price, remarking that ''[h]ere is the joy of a monopoly on a product category.'' In 2021, a different landlord commented that ''the entire industry is feeling the monopolizing effects of RealPage right now and everyone is hungry for a new product.'' A third landlord noted during AIRM renewal negotiations in 2022 that it had no options besides RealPage, with a senior executive stating about RealPage, ''too bad they have a monopoly going here!'' Also in 2022, a fourth landlord, in the face of RealPage pushing a 400% increase in annual revenue management costs over a five-year period, bemoaned the ''limited competition in the market around revenue management tools'' and how ''the industry desperately needs a solid competitor,'' and then discussed a plan to ''incubate a viable alternative to AIRM in the future.'' In 2024, that alternative had less than one half of one percent market share.

2. Geographic Market

229. The United States is a relevant geographic market for commercial revenue management software. RealPage sells its commercial revenue management software in the United States and tracks its business in the United States in the ordinary course of business. RealPage sets its subscription prices on a nationwide basis. Further, RealPage can deploy its commercial revenue management software, which may use inputs from properties located throughout the country, in any U.S. state. Landlords in the United States purchase commercial revenue management software from RealPage to set rental prices for renters in the United States. Many landlords have centralized revenue management teams that set nationwide revenue management policies and conduct revenue management trainings for their employees across the United States.

VII. Jurisdiction, Venue, and Commerce

230. The United States brings this action pursuant to Section 4 of the Sherman Act, 15 U.S.C. 4, to prevent and restrain RealPage's violations of Sections 1 and 2 of the Sherman Act, 15 U.S.C. 1, 2.

231. The Attorneys General assert these claims based on their independent authority to bring this action pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, and common law, to obtain injunctive and other equitable relief based on RealPage's anticompetitive practices in violation of Sections 1 and 2 of the Sherman Act, 15 U.S.C. 1, 2.

232. The Attorneys General are the chief legal officers of their respective States. They have authority to bring actions to protect the economic well-being of their States and their residents, and to seek injunctive relief to remedy and protect against harm resulting from violations of the antitrust laws.

233. This Court has subject matter jurisdiction over this action under Section 4 of the Sherman Act, 15 U.S.C. 4, and 28 U.S.C. 1331, 1337(a), and 1345.

234. The Court has personal jurisdiction over RealPage, Inc. (''RealPage''); venue is proper in this District under Section 12 of the Clayton Act, 15 U.S.C. 22, and under 28 U.S.C. 1391 because RealPage transacts business and resides within this District.

235. RealPage is a privately-owned company organized and existing under the laws of the State of Delaware and is headquartered in Richardson, Texas. It is registered to do business in the State of North Carolina as a foreign corporation offering software solutions for the multifamily housing industry and software as a service.

236. RealPage engages in, and its activities substantially affect, interstate trade and commerce. RealPage provides a range of products and services that are marketed, distributed, and offered to consumers throughout the United States and across state lines.

237. The Court has personal jurisdiction over Camden Property Trust (''Camden''); venue is proper in this District under Section 12 of the Clayton Act, 15. U.S.C. 22, and under 28 U.S.C. 1391 because Camden transacts business and resides within this District.

238. Camden is a publicly-traded multifamily company organized under the laws of the State of Delaware and is headquartered in Houston, Texas. Camden is registered to do business in the State of North Carolina. Camden owns or manages at least one multifamily rental property using AIRM within this District.

239. Camden engages in, and its activities substantially affect, interstate trade and commerce. Camden owns or manages multifamily rental units across the United States, including within this District. Camden's rental properties are marketed and offered to consumers throughout the United States and across state lines.

240. The Court has personal jurisdiction over Cortland Management, LLC (''Cortland''); venue is proper in this District under Section 12 of the Clayton Act, 15. U.S.C. 22, and under 28 U.S.C. 1391 because Cortland transacts business and resides within this District.

241. Cortland is a privately-owned company organized under the laws of the State of Delaware and is headquartered in Atlanta, Georgia. Cortland is responsible for the management of multifamily rental housing properties, either directly owned by an affiliated entity or other third-party owners of multifamily housing properties. Cortland is registered to do business in the State of North Carolina. Cortland owns or manages multiple multifamily rental properties within this District, which use (or recently used) AIRM. Cortland has a registered agent for service of process in this District.

242. Cortland engages in, and its activities substantially affect, interstate trade and commerce. Cortland owns or manages multifamily rental units across the United States, including within this District. Cortland's rental properties are marketed and offered to consumers throughout the United States and across state lines.

243. The Court has personal jurisdiction over Cushman & Wakefield, Inc. (''Cushman & Wakefield'') and Pinnacle Property Management Services, LLC (''Pinnacle''); venue is proper in this District under Section 12 of the Clayton Act, 15 U.S.C. 22, and under 28 U.S.C. 1391 because Cushman & Wakefield, including its subsidiary Pinnacle, transacts business and resides within this District.

244. Cushman & Wakefield is organized under the laws of the State of New York and is headquartered in Chicago, Illinois. Cushman & Wakefield's multifamily rental property business is operated through its subsidiary Pinnacle, and also under the Cushman & Wakefield name since acquiring Pinnacle in March 2020. Pinnacle is organized under the laws of the State of Delaware and is headquartered in Frisco, Texas. Pinnacle is registered to do business in the State of North Carolina. Cushman & Wakefield U.S., Inc. is also registered to do business in the State of North Carolina. Pinnacle owns or manages multiple multifamily rental properties using YieldStar within this District.

245. Cushman & Wakefield engages in, and its activities substantially affect, interstate trade and commerce. Through Pinnacle, Cushman & Wakefield owns or manages multifamily rental units across the United States, including within this District. Cushman & Wakefield provides a range of multifamily property and revenue management services that are marketed and offered to consumers throughout the United States and across state lines.

246. The Court has personal jurisdiction over Greystar Real Estate Partners, LLC (''Greystar''); venue is proper in this District under Section 12 of the Clayton Act, 15 U.S.C. 22, and under 28 U.S.C. 1391 because Greystar transacts business and resides within the District.

247. Greystar is a privately-owned company organized under the laws of the State of Delaware and is headquartered in Charleston, South Carolina. A Greystar management services entity is registered to do business in the State of North Carolina. Greystar owns or manages multiple multifamily rental properties using AIRM within this District.

248. Greystar engages in, and its activities substantially affect, interstate trade and commerce. Through its subsidiaries, including Greystar Management Services, LLC, Greystar North America Holdings, LLC, and GREP Washington, LLC, Greystar owns or manages multifamily rental units across the United States, including within this District. Greystar provides a range of products and services that are marketed and offered to consumers throughout the United States and across state lines.

249. The Court has personal jurisdiction over LivCor, LLC (''LivCor''); venue is proper in this District under Section 12 of the Clayton Act, 15 U.S.C. 22, and under 28 U.S.C. 1391 because LivCor transacts business and resides within this District.

250. LivCor is a privately-owned company organized under the laws of the State of Delaware and is headquartered in Chicago, Illinois. It is registered to do business in the State of North Carolina as a foreign corporation engaging in ownership and investment in real property and related services. LivCor owns or provides asset management services at least one multifamily rental property using AIRM within this District.

251. LivCor engages in, and its activities substantially affect, interstate trade and commerce. LivCor owns or provides asset management services for multifamily rental units across the United States, including within this District. LivCor provides multifamily asset management services that are marketed and offered to consumers throughout the United States and across state lines.

252. The Court has personal jurisdiction over Willow Bridge Property Company LLC (''Willow Bridge''); venue is proper in this District under 28 U.S.C. 1391 and Section 12 of the Clayton Act, 15 U.S.C. 22 because Willow Bridge transacts business and resides within this District.

253. Willow Bridge is a privately-owned company organized under the laws of the State of Texas and is headquartered in Dallas, Texas. Willow Bridge is registered to do business in the State of North Carolina as a foreign corporation offering services for the multifamily real estate industry. Willow Bridge owns or manages multiple multifamily rental properties using AIRM within this District.

254. Willow Bridge engages in, and its activities substantially affect, interstate trade and commerce. Willow Bridge owns or manages multifamily rental units across the United States, including within this District. Willow Bridge's rental properties are marketed and offered to consumers throughout the United States and across state lines.

255. The Durham-Chapel Hill CBSA is partially or entirely within the Middle District of North Carolina.

256. RealPage tracks the number of rental housing units that use its commercial revenue management software products, including AIRM and YieldStar, by market (*i.e.,* a CBSA) and submarket, and several of these markets and submarkets are entirely or partially within North Carolina. These RealPage-defined markets include Raleigh/Durham, NC; Charlotte-Concord-Gastonia, NC-SC; Greensboro/Winston-Salem, NC; Wilmington, NC; Fayetteville, NC; and Asheville, NC. The submarkets include Southwest Durham, Northwest Durham/Downtown, East Durham, and Chapel Hill/Carrboro, all of which are located entirely or partially within this District.

257. Defendant Landlords each own or manage one or more properties in one or more relevant markets within the Middle District of North Carolina for which they, along with other landlords and RealPage, currently agree (or have in the past agreed) to share information and align pricing by using AIRM or YieldStar to generate rental pricing using pooled, competitively sensitive information.

258. A substantial part of the activities and conduct giving rise to the claims asserted in this Complaint occurred within this District. As alleged in paragraphs 208–211 above and Appendices A and B below, relevant local geographic markets in which competition and renters have been harmed by RealPage's anticompetitive

conduct include the RealPage-defined submarkets in Raleigh/Durham. As alleged in paragraphs 214–217 above, relevant geographic markets in which competition and renters have been harmed by RealPage's anticompetitive conduct include the Durham-Chapel Hill CBSA.

VIII. Violations Alleged

First Claim for Relief: Violation of Section 1 of the Sherman Act by Unlawfully Sharing Information for Use in Competitors' Pricing

(By All Plaintiffs Against RealPage, Cushman & Wakefield, Greystar, LivCor, and Pinnacle; By All Plaintiffs Except Washington Against Camden and Willow Bridge; By the United States, Colorado, and North Carolina Against Cortland)

259. Plaintiffs incorporate the allegations of paragraphs 1 through 258 above.

260. Each landlord using AIRM and YieldStar, including each Defendant Landlord, has agreed with RealPage to provide RealPage daily nonpublic, competitively sensitive data. RealPage invites each landlord to share this information so that it can be pooled to generate pricing recommendations for the landlord and its competitors. Each of these landlords, including Defendant Landlords, uses (or has used) RealPage software, knowing or learning that RealPage will use this data to train its models and provide floor plan price recommendations and unit-level pricing not only for the landlord, but for the landlord's competitors (and vice versa). Landlords are therefore joining together in a way that deprives the market of fully independent centers of decision-making on pricing.

261. Each landlord using OneSite, Business Intelligence, or Performance Analytics with Benchmarking has agreed with RealPage to provide RealPage daily nonpublic, competitively sensitive data. RealPage invites each landlord to share this information, and each of these landlords understands that RealPage will use this data in RealPage's other products, including revenue management products that provide pricing recommendations and prices to competing landlords.

262. The transactional data these landlords agree to provide to RealPage, and indirectly to each other, includes current, forward-looking, granular, and highly competitively sensitive information. It includes information on effective rents, rent discounts, occupancy rates, availability, lease dates, lease terms, unit amenities, and unit layouts. Landlords also shared information on guest cards and lease applications.

263. Landlords, including Defendant Landlords and other landlords that compete with each other in the relevant markets alleged, have agreed with one another, through RealPage and directly, to exchange nonpublic, competitively sensitive data, both through RealPage's revenue management software and by other means. The other means include RealPage user groups, direct communications, market surveys, and other intermediaries. The information exchanged includes future pricing plans, current pricing and occupancy rates, pricing discounts, and guest traffic.

264. RealPage uses this nonpublic, competitively sensitive data to train its AIRM models and provide floor plan price recommendations and unit-level pricing to AIRM- and YieldStar-using landlords. AIRM and YieldStar are designed to increase prices as much as possible and minimize price decreases.

265. RealPage engages in a variety of conduct to increase compliance with the output of its products and the objectives it touts.

266. The sharing of nonpublic, competitively sensitive data with RealPage, and its use in AIRM and YieldStar, is anticompetitive. It harms or is likely to harm the competitive process and results, or is likely to result, in harm to renters and prospective renters in at least the relevant antitrust markets identified in this complaint.

267. In each relevant market, RealPage and participating landlords collectively have sufficient market power, including market and data penetration, to harm the competitive process and renters.

268. AIRM and YieldStar do not benefit the competitive process or renters. Any theoretical benefits are outweighed by harm to the competitive process and to renters.

269. Less restrictive alternatives are available to RealPage and the market. RealPage has recently altered AIRM or YieldStar for some clients to remove those clients' access to competitors' nonpublic data in at least certain portions of the software. RealPage has the ability to make changes to remove broader access to competitors' nonpublic data in AIRM and YieldStar. RealPage has the capability to modify its software products to eliminate competitive defects. LRO does not require the same type and quantity of nonpublic, transactional data pulled from competitors' property management software.[12] RealPage has stopped offering LRO to new clients and made plans to discontinue LRO for legacy clients by the end of 2024.

Second Claim for Relief: Violation of Section 1 of the Sherman Act Through Agreements to Align Pricing

(By All Plaintiffs Against RealPage, Cushman & Wakefield, Greystar, LivCor, and Pinnacle; By All Plaintiffs Except Washington Against Camden and Willow Bridge; By the United States, Colorado, and North Carolina Against Cortland)

270. Plaintiffs incorporate the allegations of paragraphs 1 through 268 above.

271. Each landlord, including Defendant Landlords, that licenses AIRM or YieldStar has agreed with RealPage to use the software as it has been designed. This includes providing nonpublic, competitively sensitive transactional data to RealPage, but more broadly is an agreement to use AIRM or YieldStar as the means to price the landlord's rental units. The landlord agrees to review AIRM or YieldStar floor plan price recommendations, use AIRM or YieldStar to set a scheduled floor plan rent, and use the AIRM or YieldStar pricing matrix to price units to renters.

272. AIRM and YieldStar are designed to ''raise the tide'' for all landlords, including AIRM- and YieldStar-using landlords. AIRM and YieldStar have the likely effect of aligning users' pricing processes, strategies, and pricing responses.

273. These landlords understand this effect, and it is a reason why they sign up for and use AIRM or YieldStar and discuss their usage with one another in user group meetings and other settings.

274. RealPage engages in a variety of conduct to increase compliance with the output of its products and the objectives it touts.

275. RealPage's user group meetings and its revenue management certification program facilitate landlords' agreements with RealPage to align pricing.

276. Taken together, the agreements between each AIRM or YieldStar landlord and RealPage to use AIRM or YieldStar, respectively, harm or are likely to harm the competitive process and renters.

277. The agreement by a landlord to use AIRM or YieldStar is an agreement to align users' pricing processes, strategies, and pricing responses.

[12] Landlords may nevertheless use LRO in ways that may likely harm competition, as illustrated in paragraphs 59–60 and 100 above.

Collectively, these agreements between landlords using AIRM or YieldStar and RealPage are harmful to the competitive process and to renters.

278. In each relevant submarket and CBSA, RealPage and participating AIRM or YieldStar landlords collectively have sufficient market power, including market and data penetration, to harm the competitive process and renters.

279. AIRM and YieldStar do not benefit the competitive process or renters. Any theoretical benefits are outweighed by harm to the competitive process and to renters, and less restrictive alternatives are available to RealPage and these landlords.

Third Claim for Relief: Violation of Section 2 of the Sherman Act Through Monopolization of the Commercial Revenue Management Software Market

(By All Plaintiffs Against RealPage)

280. Plaintiffs incorporate the allegations of paragraphs 1 through 279 above.

281. Commercial revenue management software for conventional multifamily housing rentals in the United States is a relevant antitrust market, and RealPage has monopoly power in that market.

282. RealPage has unlawfully monopolized the commercial revenue management market through unlawful exclusionary conduct. RealPage has amassed a massive reservoir of competitively sensitive data from competing landlords and used that data to sell AIRM and YieldStar. RealPage has ensured that rivals cannot compete on the merits unless they enter into similar agreements with landlords, offer to share competitively sensitive information among rival landlords, and engage in actions to increase compliance. As a result of its exclusionary conduct, RealPage has been able to obstruct rival software providers from competing via revenue management products that do not harm the competitive process in addition to cementing its massive data and scale advantage that keeps increasing due to self-reinforcing feedback effects.

283. RealPage's anticompetitive acts have harmed the competitive process and reduced feasible and less restrictive alternatives for landlords, which alternatives thereby pose less risk of competitive harm to renters.

284. RealPage's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by RealPage's anticompetitive and unlawful conduct.

Fourth Claim for Relief, in the Alternative: Violation of Section 2 of the Sherman Act Through Attempted Monopolization of the Commercial Revenue Management Software Market

(By All Plaintiffs Against RealPage)

285. Plaintiffs incorporate the allegations of paragraphs 1 through 284 above.

286. Commercial revenue management software for conventional multifamily housing rentals in the United States is a relevant antitrust market.

287. RealPage has attempted to monopolize that market through unlawful exclusionary conduct enhanced by its self-reinforcing data and scale advantages. By amassing its massive reservoir of competitively sensitive data from competing landlords and the follow-on benefits that scale and its feedback effects provide in terms of blunting competition among landlords, RealPage's conduct excludes commercial revenue management rivals from competing on the merits in a lawful manner. As such, it has increased, maintained, or protected RealPage's power.

288. RealPage's anticompetitive acts have harmed the competitive process and reduced feasible and less restrictive alternatives for landlords, which alternatives thereby pose less risk of competitive harm to renters.

289. As inferred from the anticompetitive conduct described in Sections IV and V, *supra,* RealPage has acted with a specific intent to monopolize, and to eliminate effective competition in, the commercial revenue management software market in the United States. There is a dangerous probability that, unless restrained, RealPage will succeed in monopolizing the commercial revenue management software market in violation of Section 2 of the Sherman Act.

Fifth Claim for Relief: Violation of North Carolina Law

290. Plaintiff State of North Carolina incorporates the allegations of Paragraphs 1 through 289 above.

291. Defendants engaged in the conduct alleged above while operating their businesses in North Carolina markets, including, but not limited to, the markets alleged in paragraphs 214, 216, 256, and Appendices A and B. Defendants' anticompetitive conduct has affected commerce in North Carolina to a substantial degree by harming the competitive process and renters across the State including, but not limited to, in the North Carolina markets identified in paragraphs 214, 216, 256, and Appendices A and B.

292. Defendants' acts as alleged in the First and Second claims for reliefs stated in paragraphs 259–279 above, violate the North Carolina Unfair or Deceptive Trade Practices Act in that they constitute contracts in restraint of trade or commerce in North Carolina, and/or acts and contracts in restraint of trade or commerce which violate the principles of the common law. N.C.G.S. §§ 75–1, 75–2.

293. Defendant Real Page's acts as alleged in the Third and Fourth claims for relief stated in paragraphs 280–289, above, violate the North Carolina Unfair or Deceptive Trade Practices Act, N.C.G.S. § 75–1 *et seq.,* in that they constitute unlawful monopolization of a part of trade or commerce in North Carolina. N.C.G.S. § 75–2.1. Plaintiff State of North Carolina seeks the following remedies available for claims under federal law and claims under N.C.G.S. §§ 75–1, 75–2, and 75–2.1, without limitation:

a. Injunctive and other equitable relief pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, N.C.G.S. § 75–14, and the common law of North Carolina;

b. Civil penalties pursuant to N.C.G.S. § 75–15.2, which provides a penalty of up to $5,000 per violation;

c. Costs of suit, including expert witness fees, costs of investigation, and attorney's fees pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26 and N.C.G.S. § 75–16.1; and

d. Other remedies as the court may deem appropriate under the facts and circumstances of the case.

Sixth Claim for Relief: Violation of California Law

295. The State of California incorporates the allegations of Paragraphs 1 through 289 above.

296. Defendants' practices, as alleged above, violate the Sherman Act sections 1 and 2 and therefore constitute unlawful business practices under California's Unfair Competition Law (''UCL''), Cal. Bus. & Prof. Code § 17200, *et seq.*

297. Plaintiff State of California seeks the following:

a. injunctive relief and penalties pursuant to sections 17203 and 17206 of the UCL,

b. costs of suit, including expert witness fees, costs of investigation, and attorney's fees pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, and

c. other remedies as the court may deem appropriate under the facts and circumstances of the case.

Seventh Claim for Relief: Violation of Colorado Law

298. Plaintiff State of Colorado repeats and re-alleges and incorporates by reference Paragraphs 1 through 289 in this Complaint as if fully set forth herein.

299. The acts alleged in the Complaint violate the Colorado Antitrust Act, § 6–4–101 et. seq., including C.R.S. § 6–4–104 and C.R.S. § 6–4–105. These violations substantially affect the people of Colorado and have impacts within the State of Colorado.

300. Each of the unlawful agreements, arrangements, or acts alleged herein constitute at least one distinct violation of the Colorado Antitrust Act within the meaning of C.R.S. § 6–4–113.

301. Defendants' acts alleged herein constitute a continuous pattern and practice of behavior within the meaning of C.R.S. § 6–4–113(2)(c).

302. Defendants' acts alleged herein were willful within the meaning of C.R.S. § 6–4–113(2)(d).

303. The State of Colorado seeks the following remedies under federal law and the Colorado Antitrust Act, including, without limitation:

a. Injunctive and other equitable relief pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26 and C.R.S. § 6–4–112;

b. Civil penalties pursuant to C.R.S. § 6–4–113 for each violation of the Colorado Antitrust Act;

c. Costs and attorneys' fees, pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, and C.R.S. § 6–4–112(5); and

d. Other remedies as the Court may deem appropriate based on the facts properly alleged and proven.

Eighth Claim for Relief: Violation of Connecticut Law

304. Plaintiff State of Connecticut, acting by and through its Attorney General pursuant to Conn. Gen. Stat. § 35–44a, incorporates the allegations of paragraphs 1 through 289 above. The State of Connecticut brings its state and federal law claims for relief against all Defendants except Cortland.

305. The acts alleged in the Complaint also constitute violations of the Connecticut Antitrust Act, Conn. Gen. Stat. § 35–24 *et seq.* These violations had impacts within the State of Connecticut and substantially affected the citizens of Connecticut.

306. Plaintiff State of Connecticut seeks all remedies available under federal law and the Connecticut Antitrust Act, including, without limitation, the following:

a. Civil penalties pursuant to Conn. Gen. Stat. § 35–38, which provides that in any action instituted by the Attorney General, any person who has been held to have violated any of the provisions of the Connecticut Antitrust Act shall forfeit and pay to the state a civil penalty of not more than one million dollars for each violation;

b. Injunctive and other equitable relief pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, Conn. Gen. Stat. §§ 35–34, 35–44a;

c. Costs and fees including, without limitation, costs of investigation, litigation, expert witness fees, and attorney's fees pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, Conn. Gen. Stat. §§ 35–34, 35–44a; and

d. Other remedies as the Court may deem appropriate under the facts and circumstances of the case.

Ninth Claim for Relief: Violation of Illinois Law

307. Plaintiff State of Illinois, acting by and through its Attorney General, incorporates the allegations of paragraphs 1 through 289 above. The State of Illinois brings its state and federal law claims for relief against all Defendants except Cortland.

308. The acts alleged in the Complaint violate the Illinois Antitrust Act, 740 ILCS 10/1 et seq, including 740 ILCS 10/3(1), 740 ILCS 10/3(2), and 740 ILCS 10/3(3). These violations substantially affect the people of Illinois and have impacts within the State of Illinois.

309. The State of Illinois seeks all available remedies under federal law and the Illinois Antitrust Act, including, without limitation:

a. Injunctive and other equitable relief pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26; and 740 ILCS 10/7;

b. Civil penalties pursuant to 740 ILCS 10/7(4) for each violation of the Illinois Antitrust Act;

c. Disgorgement, damages, and/or other equitable or monetary relief pursuant to federal law including Section 4 of the Sherman Act, 15 U.S.C. 4, Section 4c of the Clayton Act, 15 U.S.C. 15c and state law including 740 ILCS 10/7, and treble damages for injuries sustained, directly or indirectly, by individuals residing in Illinois to their property, pursuant to the State of Illinois' parens patriae authority under 740 ILCS 10/7(2);

d. Costs and attorneys' fees, pursuant to Section 4c of the Clayton Act, 15 U.S.C. 15c, Section 16 of the Clayton Act, 15 U.S.C. 26, 740 ILCS 10/7(2); and

e. Other remedies as the Court may deem appropriate on the basis of the facts properly alleged and proven.

Tenth Claim for Relief: Violation of Massachusetts Law

310. Plaintiff Commonwealth of Massachusetts repeats, realleges, and incorporates the allegations of paragraphs 1 through 289 above as if fully set forth herein. The Commonwealth of Massachusetts brings its state and federal law claims for relief against all Defendants except Cortland.

311. The acts alleged in the aforementioned paragraphs of this Complaint, including but not limited to unlawful agreements in restraint of trade and unlawful monopolization, constitute unfair methods of competition and/or unfair or deceptive acts or practices in trade or commerce in violation of the Massachusetts Consumer Protection Act, M.G.L c. 93A § 2 *et seq.*

312. Defendants knew or should have known that their conduct violated the Massachusetts Consumer Protection Act, M.G.L c. 93A § 2 *et seq.*

313. Plaintiff Commonwealth of Massachusetts is entitled to and seeks the following relief under M.G.L. c. 93A § 4:

a. Injunctive and other equitable relief pursuant to M.G.L. c. 93A § 4;

b. Civil penalties of up to $5,000 per each violation committed by the Defendants pursuant to M.G.L. c. 93A § 4;

c. Costs and fees including, without limitation, costs of investigation, litigation, and attorneys' fees pursuant to M.G.L. c. 93A § 4; and

d. Other remedies as the court may deem appropriate under the facts and circumstances of the case.

314. The Commonwealth of Massachusetts notified the Defendants of this intended action at least five days prior to the commencement of this action and gave the Defendants an opportunity to confer in accordance with M.G. L. c. 93A § 4.

Eleventh Claim for Relief: Violation of Oregon Law

315. Plaintiff State of Oregon, acting by and through its Attorney General, incorporates the allegations of paragraphs 1 through 289 above. The State of Oregon brings its state and federal law claims for relief against all Defendants except Cortland.

316. The acts alleged in the Complaint also constitute violations of the Oregon Antitrust Law, Oregon Revised Statutes (''ORS'') 646.705 to ORS 646.836. These violations had impacts within the State of Oregon and substantially affected the people of Oregon.

317. The State of Oregon appears in its sovereign or quasi-sovereign

capacities and under its statutory, common law, and equitable powers, and as parens patriae on behalf of natural persons residing in the State of Oregon pursuant to ORS 646.775(1). The State of Oregon seeks all remedies available under federal law and the Oregon Antitrust Law, including, without limitation, the following:

a. Disgorgement and/or other equitable relief pursuant to federal law including Section 4 of the Sherman Act, 15 U.S.C. 4, and state law pursuant to ORS 646.770, and ORS 646.775;

b. Injunctive and other equitable relief pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, ORS 646.760, ORS 646.770, and ORS 646.775;

c. Civil penalties pursuant to ORS 646.760(1) which provides that a court may assess for the benefit of the state a civil penalty of not more than $1,000,000 for each violation of the Oregon Antitrust Law,

d. Costs of suit, including expert witness fees, costs of investigation, and attorney's fees pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, ORS 646.760, ORS 646.770, ORS 646.775; and

e. Other remedies as the court may deem appropriate under the facts and circumstances of the case.

Twelfth Claim for Relief: Violation of Tennessee Law

318. Plaintiff State of Tennessee incorporates the allegations of paragraphs 1 through 289 above. The State of Tennessee brings its state and federal law claims for relief against all Defendants except Cortland.

319. Defendants engaged in the conduct described above, individually and collectively, to thwart competition for multifamily housing in Tennessee. This anticompetitive conduct in Tennessee harmed thousands of multifamily renters across the state.

320. Defendants' business practices have caused a reduction in competition in relevant Tennessee markets, including, but not limited to, in the markets identified in paragraphs 214 and 216 and Appendices A and B, and, as a result, Tennesseans have suffered anticompetitive harms.

321. Accordingly, Defendants' actions violate the Tennessee Trade Practices Act, Tenn. Code Ann. § 47–25–101, as amended.

322. Defendant RealPage engaged in the conduct described above to maintain its monopoly and exclude competing commercial revenue management software competitors.

323. Accordingly, Defendant RealPage's actions violate the Tennessee Trade Practices Act, Tenn. Code Ann. § 47–25–102, as amended.

324. This conduct has affected Tennessee trade and commerce to a substantial degree.

325. To remedy this anticompetitive conduct, the Tennessee Attorney General and Reporter seeks all remedies available to which it is entitled under federal law and claims under Tenn. Code Ann. §§ 47–25–101, 102, and 106, as amended, including, without limitation, the following:

a. injunctive or other equitable relief; reasonable attorney fees, costs, and expenses, pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26, Tenn. Code Ann. § 47–25–106(b), and the common law of Tennessee;

b. civil penalties pursuant to Tenn. Code Ann. § 47–25–106(g);

c. costs of suit, including expert witness fees, costs of investigation, and attorney's fees pursuant to Section 16 of the Clayton Act, 15 U.S.C. 26 and Tenn. Code Ann. § 47–25–106(b); and

d. other legal and equitable remedies as the court may deem appropriate and the interest of justice may require under the facts and circumstances of the case.

Thirteenth Claim for Relief: Violation of Washington Law

326. The State of Washington incorporates the allegations in Paragraphs 1 through 289, except for the portions of paragraphs 95, 96, 97, 117, 131, 171, and 228 that Washington was unable to review due to confidentiality redactions. Washington reserves the right to adopt the portions of those paragraphs which are later disclosed.

327. Washington brings its federal and state law claims for relief against Defendants RealPage, Cushman & Wakefield, Pinnacle, Greystar, and LivCor (''Washington Defendants'').

328. Washington Defendants engaged in the conduct alleged above while operating their businesses in Washington. This anticompetitive conduct in Washington harmed the competitive process and renters across the State including in, but not limited to, the markets identified in Appendices A and B.

329. The acts alleged in the paragraphs incorporated by the State of Washington also constitute antitrust violations of the Washington Consumer Protection Act under Wash. Rev. Code § 19.86.030, which declares unlawful every contract, combination, or conspiracy in restraint of trade or commerce.

330. The acts alleged in the paragraphs incorporated by the State of Washington also constitute antitrust violations of the Washington Consumer Protection Act under Wash. Rev. Code § 19.86.040, which declares monopolization or attempts to monopolize unlawful.

331. Washington seeks the following remedies available under the Washington Consumer Protection Act and federal law including, without limitation, the following:

a. That the Court adjudge and decree that conduct alleged in the complaint to be unlawful and in violation of the Washington Consumer Protection Act, Wash. Rev. Code § 19.86.030 and § 19.86.040;

b. Injunctive and other equitable relief pursuant to Wash. Rev. Code § 19.86.080;

c. Damages including treble damages; disgorgement; and/or restitution and any appropriate interest pursuant to federal law including Sherman Act, 15 U.S.C. 4, 15c and pursuant to state law including Wash. Rev. Code § 19.86.080;

d. Civil penalties pursuant to Wash. Rev. Code § 19.86.140;

e. Costs and attorney's fees and any appropriate interest on those fees and costs pursuant to Sherman Act, 15 U.S.C. 15c and/or pursuant to Wash. Rev. Code § 19.86.080; and

f. Other remedies, including pre-judgement interest, as the court may deem appropriate under the facts and circumstances of the case.

IX. Request for Relief

332. To remedy these illegal acts, Plaintiffs request that the Court:

a. Adjudge and decree that Defendants have acted unlawfully to restrain trade in conventional multifamily rental housing markets across the United States in violation of Section 1 of the Sherman Act, 15 U.S.C. 1;

b. Adjust and decree that RealPage has acted unlawfully to monopolize, or attempt to monopolize, the commercial revenue management software market in the United States in violation of Section 2 of the Sherman Act, 15 U.S.C. 2;

c. Enjoin Defendants from continuing to engage in the anticompetitive practices described herein and from engaging in any other practices with the same purpose and effect as the challenged practices;

d. Enter any other preliminary or permanent relief necessary and appropriate to restore competitive conditions in the markets affected by Defendants' unlawful conduct;

e. Enter any additional relief the Court finds just and proper; and

f. Award Plaintiffs an amount equal to their costs, including reasonable attorneys' fees, incurred in bringing this action.

X. Demand for a Jury Trial

333. Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiffs demand a trial by jury of all issues properly triable to a jury in this case.

Dated this 7th day of January, 2025.

Respectfully submitted,

FOR PLAINTIFF UNITED STATES OF AMERICA:

DOHA MEKKI
Acting Assistant Attorney General
RYAN DANKS
Director of Civil Enforcement
CATHERINE K. DICK
Acting Director of Litigation
GEORGE C. NIERLICH
Deputy Director of Civil Enforcement
AARON HOAG
Chief
Technology & Digital Platforms Section
DANIELLE HAUCK
Assistant Chief
Technology & Digital Platforms Section
ADAM SEVERT
Assistant Chief
Technology & Digital Platforms Section

HENRY C. SU
Senior Litigation Counsel

DAVID A. GEIGER
SARAH M. BARTELS
MARKUS A. BRAZILL
JESSICA BUTLER-ARKOW
GRANT M. FERGUSSON
IAN HOFFMAN
JOHN J. HOGAN
CLAIRE M. MADDOX
ARSHIA NAJAFI
KRIS ANTHONY PÉREZ HICKS
JARIEL A. RENDELL
CHRISTINE SOMMER
ANDREW TISINGER
Attorneys
United States Department of Justice
Antitrust Division
450 Fifth Street NW, Suite 7100
Washington, DC 20530
Telephone: (202) 307–6200
Email: *henry.su@usdoj.gov*
* LEAD ATTORNEY TO BE NOTICED

FOR PLAINTIFF STATE OF NORTH CAROLINA:

JEFF JACKSON
Attorney General of North Carolina
DANIEL P. MOSTELLER
Associate Deputy Attorney General

KUNAL J. CHOKSI
Special Deputy Attorney General
N.C. Bar. No. 55666
JESSICA V. SUTTON
Special Deputy Attorney General
N.C. Bar No. 41652
North Carolina Department of Justice
114 W Edenton Street
Raleigh, NC 27603
Telephone: 919–716–6032
Email: *kchoksi@ncdoj.gov*

Attorneys for Plaintiff State of North Carolina

FOR PLAINTIFF STATE OF CALIFORNIA:

ROB BONTA
Attorney General of California
PAULA BLIZZARD
Senior Assistant Attorney General
NATALIE MANZO
Supervising Deputy Attorney General

DOAN-PHUONG (PAMELA) PHAM
QUYEN TOLAND
Deputy Attorneys General
Office of the Attorney General
California Department of Justice
300 South Spring Street, Suite 1702
Los Angeles, CA 90013
Tel: (213) 269–6000
Email: *Pamela.Pham@doj.ca.gov*

Attorneys for Plaintiff State of California

FOR PLAINTIFF STATE OF COLORADO:

PHILIP J. WEISER
Attorney General

ELIZABETH W. HEREFORD
Assistant Attorney General
BRYN WILLIAMS
First Assistant Attorney General
Colorado Department of Law
Office of the Attorney General
Ralph L. Carr Judicial Center
1300 Broadway, 7th Floor
Denver, CO 80203
Telephone: (720) 508–6000
Email: *Bryn.williams@coag.gov*

Attorneys for Plaintiff State of Colorado

FOR PLAINTIFF STATE OF CONNECTICUT:

WILLIAM TONG
Attorney General of Connecticut
JEREMY PEARLMAN
Associate Attorney General
NICOLE DEMERS
Deputy Associate Attorney General

JULIÁN A. QUIÑONES REYES
Assistant Attorney General
Office of the Connecticut Attorney General
165 Capitol Avenue
Hartford, CT 06106
Telephone: (860) 808–5030
Email: *Julian.Quinones@ct.gov*

Attorney for Plaintiff State of Connecticut

FOR PLAINTIFF STATE OF ILLINOIS:

KWAME RAOUL
Attorney General of Illinois

DANIEL BETANCOURT, Assistant Attorney General
JENNIFER M. CORONEL, Assistant Attorney General
PAUL J. HARPER, Assistant Attorney General
Office of the Illinois Attorney General
115 S. LaSalle St., Floor 23
Chicago, IL 60603
Tel: (773) 758–4634
Email: *jennifer.coronel@ilag.gov*

Attorneys for Plaintiff State of Illinois
Notices of Special Appearance forthcoming

FOR PLAINTIFF COMMONWEALTH OF MASSACHUSETTS:

ANDREA JOY CAMPBELL
Attorney General

KATHERINE W. KREMS
Assistant Attorney General
JENNIFER E. GREANEY
Assistant Attorney General, Deputy Chief
Antitrust Division
Office of the Massachusetts Attorney General
One Ashburton Place
18th Floor
Boston, Massachusetts 02108
(617) 963–2189
Katherine.Krems@mass.gov
Jennifer.Greaney@mass.gov

Attorneys for Plaintiff Commonwealth of Massachusetts
Notices of Special Appearance forthcoming

FOR PLAINTIFF STATE OF MINNESOTA:

KEITH ELLISON
Attorney General of Minnesota

KATHERINE A. MOERKE
ELIZABETH ODETTE
SARAH DOKTORI
Assistant Attorneys General
Office of the Minnesota Attorney General
445 Minnesota Street, Suite 600
St. Paul, MN 55101–2130
katherine.moerke@ag.state.mn.us
Telephone: (651) 757–1288
elizabeth.odette@ag.state.mn.us
Telephone: (651) 728–7208
sarah.doktori@ag.state.mn.us
Telephone: (651) 583–6694

Attorneys for Plaintiff State of Minnesota

FOR PLAINTIFF STATE OF OREGON:

DAN RAYFIELD
Attorney General of Oregon

Timothy D. Smith
Attorney-in-Charge
Antitrust, False Claims, & Privacy Section
Oregon Department of Justice
100 SW Market St, Portland OR 97201
503.798.3297 | *tim.smith@doj.oregon.gov*

Attorneys for Plaintiff State of Oregon

FOR PLAINTIFF STATE OF TENNESSEE:

JONATHAN SKRMETTI
Attorney General of Tennessee

S. ETHAN BOWERS
Senior Assistant Attorney General
DANIEL LYNCH
Assistant Attorney General
Office of the Tennessee Attorney General
P.O. Box 20207
Nashville, Tennessee 37202
6.15.837.5582 | *Ethan.Bowers@ag.tn.gov*

Attorneys for State of Tennessee

FOR PLAINTIFF STATE OF WASHINGTON:

ROBERT W. FERGUSON
Attorney General

BRIAN H. ROWE
RACHEL A. LUMEN
SARAH SMITH–LEVY
KENDALL SCOTT COWLES
Assistant Attorneys General
800 Fifth Avenue, Suite 2000
Seattle, WA 98104–3188
(206) 464–7744
brian.rowe@atg.wa.gov
rachel.lumen@atg.wa.gov
sarah.e.smith-levy@atg.wa.gov
kendall.scottcowles@atg.wa.gov

Attorney for Plaintiff State of Washington

Appendix A: Submarkets

Area	Submarket	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Anaheim-Santa Ana-Irvine, CA	South Orange County	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Alpharetta/Cumming	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Briarcliff	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Buckhead	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Chamblee/Brookhaven	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Decatur	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Downtown Atlanta	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Duluth	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Dunwoody	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Kennesaw/Acworth	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Midtown Atlanta	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Norcross	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Atlanta	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Cobb/Woodstock	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Gwinnett County	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Roswell	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Sandy Springs	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Smyrna	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	South Cobb County/Douglasville	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southeast Gwinnett County	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southeast Marietta	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southwest Atlanta	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Vinings	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	West Atlanta	Yes	Yes
Austin-Round Rock, TX	Arboretum	Yes	Yes
Austin-Round Rock, TX	Cedar Park	Yes	Yes
Austin-Round Rock, TX	Downtown/University	Yes	Yes
Austin-Round Rock, TX	East Austin	Yes	Yes
Austin-Round Rock, TX	Far South Austin	Yes	Yes
Austin-Round Rock, TX	Far West Austin	Yes	Yes
Austin-Round Rock, TX	Near North Austin	Yes	Yes
Austin-Round Rock, TX	North Central Austin	Yes	Yes
Austin-Round Rock, TX	Northwest Austin	Yes	Yes
Austin-Round Rock, TX	Pflugerville/Wells Branch	Yes	Yes
Austin-Round Rock, TX	Round Rock/Georgetown	Yes	Yes
Austin-Round Rock, TX	South Austin	Yes	Yes
Austin-Round Rock, TX	Southwest Austin	Yes	Yes
Baltimore-Columbia-Towson, MD	Columbia/North Laurel	Yes	Yes
Birmingham-Hoover, AL	Southeast Birmingham	Yes	Yes
Boston-Cambridge-Newton, MA-NH	Chelsea/Revere/Charlestown	.....	Yes
Boston-Cambridge-Newton, MA-NH	East Middlesex County	.....	Yes
Boston-Cambridge-Newton, MA-NH	Quincy	.....	Yes
Boston-Cambridge-Newton, MA-NH	West Norfolk County	.....	Yes
Charleston-North Charleston, SC	Downtown/Mount Pleasant/Islands	Yes	Yes
Charleston-North Charleston, SC	West Ashley	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Ballantyne	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Huntersville/Cornelius	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Matthews/Southeast Charlotte	.....	Yes
Charlotte-Concord-Gastonia, NC-SC	Myers Park	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	North Charlotte	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	South Charlotte	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Southwest Charlotte	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	UNC Charlotte	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Uptown/South End	Yes	Yes
Chicago-Naperville-Elgin, IL-IN-WI	The Loop	Yes	Yes
Colorado Springs, CO	North Colorado Springs	Yes	Yes
Dallas-Plano-Irving, TX	Addison/Bent Tree	Yes	Yes
Dallas-Plano-Irving, TX	Allen/McKinney	Yes	Yes
Dallas-Plano-Irving, TX	Carrollton/Farmers Branch	Yes	Yes
Dallas-Plano-Irving, TX	Central/East Plano	Yes	Yes
Dallas-Plano-Irving, TX	East Dallas	Yes	Yes
Dallas-Plano-Irving, TX	Frisco	Yes	Yes
Dallas-Plano-Irving, TX	Grand Prairie	Yes	Yes
Dallas-Plano-Irving, TX	Intown Dallas	Yes	Yes
Dallas-Plano-Irving, TX	Las Colinas/Coppell	Yes	Yes
Dallas-Plano-Irving, TX	Lewisville/Flower Mound	Yes	Yes
Dallas-Plano-Irving, TX	North Irving	Yes	Yes
Dallas-Plano-Irving, TX	North Oak Cliff/West Dallas	Yes	Yes
Dallas-Plano-Irving, TX	Oak Lawn/Park Cities	Yes	Yes
Dallas-Plano-Irving, TX	Richardson	Yes	Yes
Dallas-Plano-Irving, TX	Rockwall/Rowlett/Wylie	Yes	Yes

Area	Submarket	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Dallas-Plano-Irving, TX	The Colony/Far North Carrollton	Yes	Yes
Dallas-Plano-Irving, TX	West Plano	Yes	Yes
Denver-Aurora-Lakewood, CO	Broomfield	Yes	Yes
Denver-Aurora-Lakewood, CO	Downtown/Highlands/Lincoln Park	Yes	Yes
Denver-Aurora-Lakewood, CO	Highlands Ranch	Yes	Yes
Denver-Aurora-Lakewood, CO	Littleton	Yes	Yes
Denver-Aurora-Lakewood, CO	Northeast Denver	Yes	Yes
Denver-Aurora-Lakewood, CO	Parker/Castle Rock	Yes	Yes
Denver-Aurora-Lakewood, CO	South Lakewood	Yes	Yes
Denver-Aurora-Lakewood, CO	Southeast Aurora/East Arapahoe County	Yes	Yes
Denver-Aurora-Lakewood, CO	Southeast Denver	Yes	Yes
Denver-Aurora-Lakewood, CO	Tech Center	Yes	Yes
Denver-Aurora-Lakewood, CO	Thornton/Northglenn	Yes	Yes
Denver-Aurora-Lakewood, CO	Westminster	Yes	Yes
Fort Lauderdale-Pompano Beach-Deerfield Beach, FL.	Plantation/Davie/Weston	Yes	Yes
Fort Worth-Arlington, TX	Grapevine/Southlake	Yes	Yes
Fort Worth-Arlington, TX	Northeast Fort Worth/North Richland Hills		Yes
Hartford-West Hartford-East Hartford, CT	Southeast Hartford/Middlesex County		Yes
Houston-The Woodlands-Sugar Land, TX	Bear Creek	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Downtown/Montrose/River Oaks	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Far West Houston	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Friendswood/Pearland	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Galleria/Uptown	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Greater Heights/Washington Avenue	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Greenway/Upper Kirby	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Katy	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Memorial	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Sugar Land/Stafford	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	The Woodlands	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	West University/Medical Center/Third Ward	Yes	Yes
Jacksonville, FL	Baymeadows	Yes	Yes
Jacksonville, FL	Upper Southside	Yes	Yes
Kansas City, MO-KS	Lee's Summit/Blue Springs/Raytown	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Henderson	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Northwest Las Vegas	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Summerlin/The Lakes	Yes	Yes
Los Angeles-Long Beach-Glendale, CA	Downtown Los Angeles	Yes	Yes
Memphis, TN-MS-AR	Cordova/Bartlett	Yes	Yes
Memphis, TN-MS-AR	Germantown/Collierville	Yes	Yes
Mobile/Daphne, AL	North Mobile	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	Central Nashville	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	East Nashville	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	Franklin/Brentwood	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	South Nashville	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	Southeast Nashville	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN	West Nashville		Yes
Orlando-Kissimmee-Sanford, FL	Altamonte Springs/Apopka	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Casselberry/Winter Springs/Oviedo	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Central Orlando	Yes	Yes
Orlando-Kissimmee-Sanford, FL	East Orange County	Yes	Yes
Orlando-Kissimmee-Sanford, FL	East Orlando	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Kissimmee/Osceola County	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Sanford/Lake Mary	Yes	Yes
Orlando-Kissimmee-Sanford, FL	South Orange County	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Southwest Orlando	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Winter Park/Maitland	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	Chandler	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	Deer Valley	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	North Glendale	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	South Phoenix	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Aloha/West Beaverton	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Central Portland	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Hillsboro	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Lake Oswego/Tualatin/Wilsonville	Yes	Yes
Raleigh/Durham, NC	Central Raleigh	Yes	Yes
Raleigh/Durham, NC	Chapel Hill/Carrboro	Yes	Yes
Raleigh/Durham, NC	East Durham	Yes	Yes
Raleigh/Durham, NC	Far North Raleigh	Yes	Yes
Raleigh/Durham, NC	Near North Raleigh	Yes	Yes
Raleigh/Durham, NC	North Cary/Morrisville	Yes	Yes
Raleigh/Durham, NC	Northeast Raleigh	Yes	Yes
Raleigh/Durham, NC	Northwest Durham/Downtown		Yes

Area	Submarket	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Raleigh/Durham, NC	Northwest Raleigh	Yes	Yes
Raleigh/Durham, NC	South Cary/Apex	Yes	Yes
Raleigh/Durham, NC	Southwest Durham	Yes	Yes
Reno, NV	South Reno	Yes	Yes
Richmond, VA	Northwest Richmond	Yes	Yes
Richmond, VA	Tuckahoe/Westhampton	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Corona		Yes
Riverside-San Bernardino-Ontario, CA	Rancho Cucamonga/Upland	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Temecula/Murrieta	Yes	Yes
Salt Lake City/Ogden/Clearfield, UT	Midvale/Sandy/Draper	Yes	Yes
Salt Lake City/Ogden/Clearfield, UT	Southwest Salt Lake City	Yes	Yes
San Antonio-New Braunfels, TX	Far North Central San Antonio	Yes	Yes
San Antonio-New Braunfels, TX	Far Northwest San Antonio	Yes	Yes
San Antonio-New Braunfels, TX	North Central San Antonio		Yes
San Antonio-New Braunfels, TX	Northwest San Antonio	Yes	Yes
San Diego-Carlsbad, CA	Downtown San Diego/Coronado		Yes
San Diego-Carlsbad, CA	Northeast San Diego	Yes	Yes
Seattle-Bellevue-Everett, WA	Downtown Seattle		Yes
Seattle-Bellevue-Everett, WA	Federal Way/Des Moines		Yes
Seattle-Bellevue-Everett, WA	Redmond		Yes
Seattle-Bellevue-Everett, WA	Renton	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Carrollwood/Citrus Park	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Central Tampa	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Town and Country/Westchase	Yes	Yes
Tucson, AZ	Casas Adobes/Oro Valley	Yes	Yes
Tucson, AZ	Catalina Foothills	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Germantown	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Loudoun County	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Manassas/Far Southwest Suburbs	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Navy Yard/Capitol South	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Northeast DC	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Reston/Herndon	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Tysons Corner/Falls Church/Merrifield	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	West Alexandria	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	West Fairfax County	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Woodbridge/Dale City	Yes	Yes

Appendix B: Submarkets by Bedroom Count

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Anaheim-Santa Ana-Irvine, CA	South Orange County	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Alpharetta/Cumming	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Briarcliff	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Buckhead	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Chamblee/Brookhaven	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Decatur	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Downtown Atlanta	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Duluth	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Dunwoody	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Kennesaw/Acworth	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Midtown Atlanta	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Norcross	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Atlanta	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Cobb/Woodstock	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Gwinnett County	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Roswell	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Sandy Springs	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Smyrna	1	Yes	Yes

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Atlanta-Sandy Springs-Roswell, GA	South Cobb County/Douglasville	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southeast Gwinnett County	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southeast Marietta	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southwest Atlanta	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Vinings	1	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	West Atlanta	1	Yes	Yes
Austin-Round Rock, TX	Arboretum	1	Yes	Yes
Austin-Round Rock, TX	Cedar Park	1	Yes	Yes
Austin-Round Rock, TX	Downtown/University	1	Yes	Yes
Austin-Round Rock, TX	East Austin	1	Yes	Yes
Austin-Round Rock, TX	Far South Austin	1	Yes	Yes
Austin-Round Rock, TX	Far West Austin	1	Yes	Yes
Austin-Round Rock, TX	Near North Austin	1	Yes	Yes
Austin-Round Rock, TX	North Central Austin	1	Yes	Yes
Austin-Round Rock, TX	Northwest Austin	1	Yes	Yes
Austin-Round Rock, TX	Pflugerville/Wells Branch	1	Yes	Yes
Austin-Round Rock, TX	Round Rock/Georgetown	1	Yes	Yes
Austin-Round Rock, TX	South Austin	1	Yes	Yes
Austin-Round Rock, TX	Southwest Austin	1	Yes	Yes
Baltimore-Columbia-Towson, MD	Columbia/North Laurel	1	Yes	Yes
Birmingham-Hoover, AL	Southeast Birmingham	1	Yes	Yes
Boston-Cambridge-Newton, MA-NH	Chelsea/Revere/Charlestown	1		Yes
Boston-Cambridge-Newton, MA-NH	East Middlesex County	1	Yes	Yes
Boston-Cambridge-Newton, MA-NH	Quincy	1	Yes	Yes
Boston-Cambridge-Newton, MA-NH	West Norfolk County	1		Yes
Charleston-North Charleston, SC	Downtown/Mount Pleasant/Islands	1	Yes	Yes
Charleston-North Charleston, SC	West Ashley	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Ballantyne	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Huntersville/Cornelius	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Matthews/Southeast Charlotte	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Myers Park	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	North Charlotte	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	South Charlotte	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Southwest Charlotte	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	UNC Charlotte	1	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Uptown/South End	1	Yes	Yes
Chicago-Naperville-Elgin, IL-IN-WI	The Loop	1	Yes	Yes
Colorado Springs, CO	North Colorado Springs	1	Yes	Yes
Dallas-Plano-Irving, TX	Addison/Bent Tree	1	Yes	Yes
Dallas-Plano-Irving, TX	Allen/McKinney	1	Yes	Yes
Dallas-Plano-Irving, TX	Carrollton/Farmers Branch	1	Yes	Yes
Dallas-Plano-Irving, TX	Central/East Plano	1	Yes	Yes
Dallas-Plano-Irving, TX	East Dallas	1	Yes	Yes
Dallas-Plano-Irving, TX	Frisco	1	Yes	Yes
Dallas-Plano-Irving, TX	Grand Prairie	1	Yes	Yes
Dallas-Plano-Irving, TX	Intown Dallas	1	Yes	Yes
Dallas-Plano-Irving, TX	Las Colinas/Coppell	1	Yes	Yes
Dallas-Plano-Irving, TX	Lewisville/Flower Mound	1	Yes	Yes
Dallas-Plano-Irving, TX	North Irving	1	Yes	Yes
Dallas-Plano-Irving, TX	North Oak Cliff/West Dallas	1	Yes	Yes
Dallas-Plano-Irving, TX	Oak Lawn/Park Cities	1	Yes	Yes
Dallas-Plano-Irving, TX	Richardson	1	Yes	Yes
Dallas-Plano-Irving, TX	Rockwall/Rowlett/Wylie	1	Yes	Yes
Dallas-Plano-Irving, TX	The Colony/Far North Carrollton	1	Yes	Yes
Dallas-Plano-Irving, TX	West Plano	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Broomfield	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Downtown/Highlands/Lincoln Park	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Highlands Ranch	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Littleton	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Northeast Denver	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Parker/Castle Rock	1	Yes	Yes
Denver-Aurora-Lakewood, CO	South Lakewood	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Southeast Aurora/East Arapahoe County	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Southeast Denver	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Tech Center	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Thornton/Northglenn	1	Yes	Yes
Denver-Aurora-Lakewood, CO	Westminster	1	Yes	Yes
Fort Lauderdale-Pompano Beach-Deerfield Beach, FL.	Plantation/Davie/Weston	1	Yes	Yes
Fort Worth-Arlington, TX	Grapevine/Southlake	1	Yes	Yes
Fort Worth-Arlington, TX	Northeast Fort Worth/North Richland Hills.	1	Yes	Yes
Hartford-West Hartford-East Hartford, CT	Southeast Hartford/Middlesex County	1		Yes

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Houston-The Woodlands-Sugar Land, TX	Bear Creek	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Downtown/Montrose/River Oaks	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Far West Houston	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Friendswood/Pearland	1		Yes
Houston-The Woodlands-Sugar Land, TX	Galleria/Uptown	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Greater Heights/Washington Avenue	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Greenway/Upper Kirby	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Katy	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Memorial	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Sugar Land/Stafford	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	The Woodlands	1	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	West University/Medical Center/Third Ward.	1	Yes	Yes
Jacksonville, FL	Baymeadows	1	Yes	Yes
Jacksonville, FL	Upper Southside	1	Yes	Yes
Kansas City, MO-KS	Lee's Summit/Blue Springs/Raytown	1	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Henderson	1	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Northwest Las Vegas	1	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Summerlin/The Lakes	1	Yes	Yes
Los Angeles-Long Beach-Glendale, CA	Downtown Los Angeles	1	Yes	Yes
Memphis, TN-MS-AR	Cordova/Bartlett	1	Yes	Yes
Memphis, TN-MS-AR	Germantown/Collierville	1	Yes	Yes
Mobile/Daphne, AL	North Mobile	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	Central Nashville	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	East Nashville	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	Franklin/Brentwood	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	South Nashville	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	Southeast Nashville	1	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	West Nashville	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Altamonte Springs/Apopka	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Casselberry/Winter Springs/Oviedo	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Central Orlando	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	East Orange County	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	East Orlando	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Kissimmee/Osceola County	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Sanford/Lake Mary	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	South Orange County	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Southwest Orlando	1	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Winter Park/Maitland	1	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	Chandler	1	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	Deer Valley	1	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	North Glendale	1	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	South Phoenix	1	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Aloha/West Beaverton	1	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Central Portland	1	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Hillsboro	1	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Lake Oswego/Tualatin/Wilsonville	1	Yes	Yes
Raleigh/Durham, NC	Central Raleigh	1	Yes	Yes
Raleigh/Durham, NC	Chapel Hill/Carrboro	1		Yes
Raleigh/Durham, NC	East Durham	1	Yes	Yes
Raleigh/Durham, NC	Far North Raleigh	1		Yes
Raleigh/Durham, NC	Near North Raleigh	1	Yes	Yes
Raleigh/Durham, NC	North Cary/Morrisville	1	Yes	Yes
Raleigh/Durham, NC	Northeast Raleigh	1	Yes	Yes
Raleigh/Durham, NC	Northwest Durham/Downtown	1	Yes	Yes
Raleigh/Durham, NC	Northwest Raleigh	1	Yes	Yes
Raleigh/Durham, NC	South Cary/Apex	1	Yes	Yes
Raleigh/Durham, NC	Southwest Durham	1	Yes	Yes
Reno, NV	South Reno	1	Yes	Yes
Richmond, VA	Northwest Richmond	1	Yes	Yes
Richmond, VA	Tuckahoe/Westhampton	1	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Corona	1	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Rancho Cucamonga/Upland	1	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Temecula/Murrieta	1	Yes	Yes
Salt Lake City/Ogden/Clearfield, UT	Midvale/Sandy/Draper	1	Yes	Yes
Salt Lake City/Ogden/Clearfield, UT	Southwest Salt Lake City	1	Yes	Yes
San Antonio-New Braunfels, TX	Far North Central San Antonio	1	Yes	Yes

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
San Antonio-New Braunfels, TX	Far Northwest San Antonio	1	Yes	Yes
San Antonio-New Braunfels, TX	North Central San Antonio	1	Yes	Yes
San Antonio-New Braunfels, TX	Northwest San Antonio	1	Yes	Yes
San Diego-Carlsbad, CA	Downtown San Diego/Coronado	1	Yes	Yes
San Diego-Carlsbad, CA	Northeast San Diego	1	Yes	Yes
Seattle-Bellevue-Everett, WA	Downtown Seattle	1	Yes	Yes
Seattle-Bellevue-Everett, WA	Federal Way/Des Moines	1		Yes
Seattle-Bellevue-Everett, WA	Redmond	1	Yes	Yes
Seattle-Bellevue-Everett, WA	Renton	1	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Carrollwood/Citrus Park	1	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Central Tampa	1	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Town and Country/Westchase	1	Yes	Yes
Tucson, AZ	Casas Adobes/Oro Valley	1	Yes	Yes
Tucson, AZ	Catalina Foothills	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Germantown	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Loudoun County	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Manassas/Far Southwest Suburbs	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Navy Yard/Capitol South	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Northeast DC	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Reston/Herndon	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Tysons Corner/Falls Church/Merrifield	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	West Alexandria	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	West Fairfax County	1	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Woodbridge/Dale City	1	Yes	Yes
Anaheim-Santa Ana-Irvine, CA	South Orange County	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Alpharetta/Cumming	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Briarcliff	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Buckhead	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Chamblee/Brookhaven	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Decatur	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Downtown Atlanta	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Duluth	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Dunwoody	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Kennesaw/Acworth	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Midtown Atlanta	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Norcross	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Atlanta	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Cobb/Woodstock	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Northeast Gwinnett County	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Roswell	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Sandy Springs	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Smyrna	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	South Cobb County/Douglasville	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southeast Gwinnett County	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southeast Marietta	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Southwest Atlanta	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	Vinings	2	Yes	Yes
Atlanta-Sandy Springs-Roswell, GA	West Atlanta	2	Yes	Yes
Austin-Round Rock, TX	Arboretum	2	Yes	Yes
Austin-Round Rock, TX	Cedar Park	2	Yes	Yes
Austin-Round Rock, TX	Downtown/University	2	Yes	Yes
Austin-Round Rock, TX	East Austin	2	Yes	Yes
Austin-Round Rock, TX	Far South Austin	2	Yes	Yes
Austin-Round Rock, TX	Far West Austin	2	Yes	Yes
Austin-Round Rock, TX	Near North Austin	2	Yes	Yes
Austin-Round Rock, TX	North Central Austin	2	Yes	Yes
Austin-Round Rock, TX	Northwest Austin	2	Yes	Yes
Austin-Round Rock, TX	Pflugerville/Wells Branch	2	Yes	Yes
Austin-Round Rock, TX	Round Rock/Georgetown	2	Yes	Yes
Austin-Round Rock, TX	South Austin	2	Yes	Yes
Austin-Round Rock, TX	Southwest Austin	2	Yes	Yes
Baltimore-Columbia-Towson, MD	Columbia/North Laurel	2	Yes	Yes
Birmingham-Hoover, AL	Southeast Birmingham	2	Yes	Yes

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Boston-Cambridge-Newton, MA-NH	East Middlesex County	2	Yes	Yes
Charleston-North Charleston, SC	Downtown/Mount Pleasant/Islands	2	Yes	Yes
Charleston-North Charleston, SC	West Ashley	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Ballantyne	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Huntersville/Cornelius	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Myers Park	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	North Charlotte	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	South Charlotte	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Southwest Charlotte	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	UNC Charlotte	2	Yes	Yes
Charlotte-Concord-Gastonia, NC-SC	Uptown/South End	2	Yes	Yes
Chicago-Naperville-Elgin, IL-IN-WI	The Loop	2	.....	Yes
Colorado Springs, CO	North Colorado Springs	2	Yes	Yes
Dallas-Plano-Irving, TX	Addison/Bent Tree	2	Yes	Yes
Dallas-Plano-Irving, TX	Allen/McKinney	2	Yes	Yes
Dallas-Plano-Irving, TX	Carrollton/Farmers Branch	2	.....	Yes
Dallas-Plano-Irving, TX	Central/East Plano	2	Yes	Yes
Dallas-Plano-Irving, TX	East Dallas	2	Yes	Yes
Dallas-Plano-Irving, TX	Frisco	2	Yes	Yes
Dallas-Plano-Irving, TX	Grand Prairie	2	Yes	Yes
Dallas-Plano-Irving, TX	Intown Dallas	2	Yes	Yes
Dallas-Plano-Irving, TX	Las Colinas/Coppell	2	Yes	Yes
Dallas-Plano-Irving, TX	Lewisville/Flower Mound	2	Yes	Yes
Dallas-Plano-Irving, TX	North Irving	2	.....	Yes
Dallas-Plano-Irving, TX	North Oak Cliff/West Dallas	2	Yes	Yes
Dallas-Plano-Irving, TX	Oak Lawn/Park Cities	2	Yes	Yes
Dallas-Plano-Irving, TX	Richardson	2	Yes	Yes
Dallas-Plano-Irving, TX	Rockwall/Rowlett/Wylie	2	Yes	Yes
Dallas-Plano-Irving, TX	The Colony/Far North Carrollton	2	Yes	Yes
Dallas-Plano-Irving, TX	West Plano	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Broomfield	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Downtown/Highlands/Lincoln Park	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Highlands Ranch	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Littleton	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Northeast Denver	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Parker/Castle Rock	2	Yes	Yes
Denver-Aurora-Lakewood, CO	South Lakewood	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Southeast Aurora/East Arapahoe County	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Southeast Denver	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Tech Center	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Thornton/Northglenn	2	Yes	Yes
Denver-Aurora-Lakewood, CO	Westminster	2	Yes	Yes
Fort Lauderdale-Pompano Beach-Deerfield Beach, FL.	Plantation/Davie/Weston	2	Yes	Yes
Fort Worth-Arlington, TX	Grapevine/Southlake	2	Yes	Yes
Fort Worth-Arlington, TX	Northeast Fort Worth/North Richland Hills.	2	.....	Yes
Hartford-West Hartford-East Hartford, CT	Southeast Hartford/Middlesex County	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Bear Creek	2	.....	Yes
Houston-The Woodlands-Sugar Land, TX	Downtown/Montrose/River Oaks	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Far West Houston	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Friendswood/Pearland	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Galleria/Uptown	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Greater Heights/Washington Avenue	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Greenway/Upper Kirby	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Memorial	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	Sugar Land/Stafford	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	The Woodlands	2	Yes	Yes
Houston-The Woodlands-Sugar Land, TX	West University/Medical Center/Third Ward.	2	Yes	Yes
Jacksonville, FL	Baymeadows	2	Yes	Yes
Jacksonville, FL	Upper Southside	2	Yes	Yes
Kansas City, MO-KS	Lee's Summit/Blue Springs/Raytown	2	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Henderson	2	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Northwest Las Vegas	2	Yes	Yes
Las Vegas-Henderson-Paradise, NV	Summerlin/The Lakes	2	Yes	Yes
Los Angeles-Long Beach-Glendale, CA	Downtown Los Angeles	2	Yes	Yes
Memphis, TN-MS-AR	Cordova/Bartlett	2	Yes	Yes
Memphis, TN-MS-AR	Germantown/Collierville	2	Yes	Yes
Mobile/Daphne, AL	North Mobile	2	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	Central Nashville	2	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	East Nashville	2	Yes	Yes

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Nashville-Davidson—Murfreesboro—Franklin, TN.	Franklin/Brentwood	2	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	South Nashville	2	Yes	Yes
Nashville-Davidson—Murfreesboro—Franklin, TN.	Southeast Nashville	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Altamonte Springs/Apopka	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Casselberry/Winter Springs/Oviedo	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Central Orlando	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	East Orange County	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	East Orlando	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Kissimmee/Osceola County	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Sanford/Lake Mary	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	South Orange County	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Southwest Orlando	2	Yes	Yes
Orlando-Kissimmee-Sanford, FL	Winter Park/Maitland	2	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	Chandler	2	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	Deer Valley	2	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	North Glendale	2	Yes	Yes
Phoenix-Mesa-Scottsdale, AZ	South Phoenix	2	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Aloha/West Beaverton	2	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Central Portland	2	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Hillsboro	2	Yes	Yes
Portland-Vancouver-Hillsboro, OR-WA	Lake Oswego/Tualatin/Wilsonville	2	Yes	Yes
Raleigh/Durham, NC	Central Raleigh	2	Yes	Yes
Raleigh/Durham, NC	Chapel Hill/Carrboro	2	Yes	Yes
Raleigh/Durham, NC	East Durham	2	Yes	Yes
Raleigh/Durham, NC	Far North Raleigh	2	Yes	Yes
Raleigh/Durham, NC	Near North Raleigh	2	Yes	Yes
Raleigh/Durham, NC	North Cary/Morrisville	2	Yes	Yes
Raleigh/Durham, NC	Northeast Raleigh	2	Yes	Yes
Raleigh/Durham, NC	Northwest Raleigh	2	Yes	Yes
Raleigh/Durham, NC	South Cary/Apex	2	Yes	Yes
Raleigh/Durham, NC	Southwest Durham	2	Yes	Yes
Reno, NV	South Reno	2	Yes	Yes
Richmond, VA	Northwest Richmond	2	Yes	Yes
Richmond, VA	Tuckahoe/Westhampton	2	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Corona	2	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Rancho Cucamonga/Upland	2	Yes	Yes
Riverside-San Bernardino-Ontario, CA	Temecula/Murrieta	2	Yes	Yes
Salt Lake City/Ogden/Clearfield, UT	Midvale/Sandy/Draper	2	Yes	Yes
Salt Lake City/Ogden/Clearfield, UT	Southwest Salt Lake City	2	Yes	Yes
San Antonio-New Braunfels, TX	Far North Central San Antonio	2	Yes	Yes
San Antonio-New Braunfels, TX	Far Northwest San Antonio	2	Yes	Yes
San Antonio-New Braunfels, TX	North Central San Antonio	2	.....	Yes
San Antonio-New Braunfels, TX	Northwest San Antonio	2	.....	Yes
San Diego-Carlsbad, CA	Downtown San Diego/Coronado	2	Yes	Yes
San Diego-Carlsbad, CA	Northeast San Diego	2	Yes	Yes
Seattle-Bellevue-Everett, WA	Downtown Seattle	2	Yes	Yes
Seattle-Bellevue-Everett, WA	Federal Way/Des Moines	2	.....	Yes
Seattle-Bellevue-Everett, WA	Renton	2	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Carrollwood/Citrus Park	2	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Central Tampa	2	Yes	Yes
Tampa-St. Petersburg-Clearwater, FL	Town and Country/Westchase	2	Yes	Yes
Tucson, AZ	Casas Adobes/Oro Valley	2	Yes	Yes
Tucson, AZ	Catalina Foothills	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Germantown	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Loudoun County	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Manassas/Far Southwest Suburbs	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Navy Yard/Capitol South	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Northeast DC	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Reston/Herndon	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Tysons Corner/Falls Church/Merrifield	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	West Alexandria	2	Yes	Yes

Area	Submarket	Number of beds	YS/AIRM 30% or more	YS/AIRM/OneSite 30% or more
Washington-Arlington-Alexandria, DC-VA-MD-WV.	West Fairfax County	2	Yes	Yes
Washington-Arlington-Alexandria, DC-VA-MD-WV.	Woodbridge/Dale City	2	Yes	Yes

United States District Court for the Middle District of North Carolina

UNITED STATES OF AMERICA, Plaintiff, v. *RealPage, Inc.* Defendant.

No. 1:24–cv–00710–WLO–JLW

Proposed Final Judgment

Whereas, Plaintiff, United States of America, filed its Complaint on August 23, 2024, as amended on January 7, 2025;

And whereas, the United States and Defendant RealPage, Inc., have consented to entry of this Final Judgment without the taking of testimony, without trial or adjudication of any issue of fact or law, and without this Final Judgment constituting any evidence against or admission by any party relating to any issue of fact or law;

And whereas, Defendant agrees to undertake certain actions and refrain from certain conduct to remedy the loss of competition alleged in the Complaint;

And whereas, Defendant represents that the relief required by this Final Judgment can and will be made and that Defendant will not later raise a claim of hardship or difficulty as grounds for asking the Court to modify any provision of this Final Judgment;

Now therefore, it is *ordered, adjudged, and decreed:*

I. Jurisdiction

The Court has jurisdiction over the subject matter of and each of the parties to this action. The Complaint states claims upon which relief may be granted against Defendant under Sections 1 and 2 of the Sherman Act (15 U.S.C. 1, 2).

II. Definitions

As used in this Final Judgment:

A. ''RealPage'' or ''Defendant'' means Defendant RealPage, Inc., a Delaware corporation with its headquarters in Richardson, Texas, its successors and assigns, and its subsidiaries, divisions, groups, affiliates, partnerships, and joint ventures, and their directors, officers, managers, agents, and employees.

B. ''Active Lease(s)'' means the lease agreement that is in effect for a unit on any given date. Whether a lease agreement is an Active Lease is based on its end date as entered by a Property Manager or Property Owner, provided, however, that leases reflected in a snapshot or backup of a database that has been aged at least 16 months prior to the date of implementation of a model will not be deemed Active Leases as defined here.

C. ''AIRM'' means AI Revenue Management, a RealPage Revenue Management Product.

D. ''AI Demand Model'' means the model used in AIRM to predict the likelihood that a prospective tenant will apply for a unit at a Subject Property.

E. ''AI Supply I Model'' means the model used in AIRM to predict the likelihood that an expiring lease at the Subject Property will be renewed, rather than terminated, before a renewal rent offer has been approved by the Property Manager or Property Owner.

F. ''AI Supply II Model'' means the model used in AIRM to predict the likelihood that an expiring lease at the Subject Property will be renewed, rather than terminated, after a renewal rent offer has been approved by the Property Manager or Property Owner.

G. ''Auto Accept'' means a feature or mechanism of a Revenue Management Product that, when enabled by a user or licensee of a Revenue Management Product, automatically accepts or implements the Revenue Management Product's recommended price if it satisfies a set of pricing parameters (including as to maximum increase or decrease in rent) for a Floor Plan.

H. ''Competitively Sensitive Information'' means property-specific data or information (whether past, present, or prospective) that: (i) individually or when aggregated with such data or information from other properties, could be reasonably used to determine current or future rental supply, demand, or pricing for a property or a property's units, including executed rents, rental price concessions or discounts, guest traffic, guest applications, occupancy or vacancy, lease terms or lease expirations; (ii) relates to a Property Owner's or Property Manager's use of settings or user-specified parameters within Revenue Management Products with respect to the Property Owner's or Property Manager's property or properties; or (iii) relates to a Property Owner's or Property Manager's rental pricing amount, formula, or strategy, including rental price concessions or discounts with respect to the Property Owner's or Property Manager's property or properties.

I. ''Cooperation Subject Matter'' means the claims alleged in *United States et al.* v. *RealPage et al.* (currently docketed as No. 1:24–cv–00710 in the Middle District of North Carolina).

J. ''Core-Based Statistical Area'' or ''CBSA'' means a geographic area, as defined by the federal Office of Management and Budget, consisting of the counties or equivalent entities associated with at least one urban center (core) of at least 10,000 individuals, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties.

K. ''Floor Plan'' means a grouping of units for a Subject Property that share similar characteristics, such as square footage and the number of bedrooms and bathrooms.

L. ''Governor Guardrail'' means a feature or mechanism in the Runtime Operation of RealPage's Revenue Management Product that limits the RealPage Revenue Management Product's increase or decrease of the previous day's Floor Plan price recommendation by a certain percentage.

M. ''Including'' means including, but not limited to.

N. ''Market Range Chart'' means a chart or other visual representation that identifies, for a Subject Property's Floor Plan, a market minimum rent and a market maximum rent based on other properties' Floor Plan pricing.

O. ''Market Rank'' means a Subject Property variable that reflects that property's average rent level compared to distribution of rents in a market.

P. ''Market Rent'' means any variable that includes rent from Unaffiliated Properties.

Q. ''Market Response Curve'' means a curve that represents the price elasticity model for a Floor Plan.

R. ''Market Surveys'' means collections of Nonpublic Data compiled by RealPage including through call arounds, emails, texts, surveys, or similar communicative means from Property Managers or Property Owners.

S. ''Model Training'' means any process of analyzing data, including by machine learning or regression analysis,

to create or adjust a model (including a Random Forest model) or algorithm used in Revenue Management Product(s) to improve the accuracy of the model's or algorithm's predictions. Model Training includes the training of a model or algorithm to predict supply or demand at a particular property, which is then used during Runtime Operation.

T. ''Nonpublic Data'' means any Competitively Sensitive Information that is not Public Data.

U. ''Owner Inputted Data'' means any data about an Unaffiliated Property that a licensee or user inputs into a RealPage Revenue Management Product.

V. ''Person'' means any natural person, corporate entity, partnership, association, joint venture, or trust.

W. ''Pricing Advisor'' means a RealPage employee, contractor, or agent who supports or otherwise works with licensees or users of Revenue Management Product(s) and who participates in any way, including by providing advice or guidance, in (i) a Property Manager or Property Owner's determination of price or desired occupancy for a Floor Plan or unit, (ii) review of or recommendations about the price for a Floor Plan or unit, or (iii) software settings or parameters of Revenue Management Product(s).

X. ''Pricing Ceiling'' means, for a Floor Plan, the top of the pricing range as shown on the Market Range Chart or the Market Response Curve.

Y. ''Pricing Floor'' means, for a Floor Plan, the bottom of the pricing range as shown in the Market Range Chart or the Market Response Curve.

Z. ''Property Manager(s)'' means any Person, or a Person's agent, who manages (but does not own) a multifamily rental property.

AA. ''Property Owner(s)'' means any Person, or a Person's agent (not including Property Managers), that (directly or indirectly) owns or controls a multifamily rental property regardless of whether they also manage that rental property; multifamily rental properties have the same Property Owner if they are (directly or indirectly) owned or controlled by the same Person.

BB. ''Pseudocode'' means any plain or natural language description of the steps taken by an algorithm or other software program.

CC. ''Public Data'' means information (including information on a rental unit's asking price, publicly offered concessions, amenities, and availability) that is readily accessible to the general public, such as on the property's website, at a physical building, in brochures, or on an internet listing service. Public Data includes information on a rental unit's asking price, concessions, amenities, and availability provided by a Property Manager or a Property Owner to any natural person who reasonably presents himself as a prospective renter. Public Data does not include any Competitively Sensitive Information obtained through any communication between RealPage and one or more Property Managers or Property Owners or from any other Person, unless such information is also readily accessible to the general public.

DD. ''RealPage RMS Meeting(s)'' means RealPage steering committees, subcommittees, user groups, or Idea Exchange relating to Revenue Management Products, or variations of or communications related to such meetings, attended by more than one Property Owner or Property Manager that licenses or uses a RealPage Revenue Management Product. For avoidance of doubt, a RealPage RMS Meeting does not include any individualized communications between RealPage and a Property Manager or Property Owner to which RealPage provides products or services.

EE. ''Revenue Management Product(s)'' means any software or service, including software as a service, that generates rental prices or rental pricing recommendations for multifamily rental properties.

FF. ''Runtime Operation'' means any action taken by a Revenue Management Product while it runs, including generating rental prices or rental pricing recommendations for any unit or set of units at a Subject Property. Runtime Operation does not include Model Training.

GG. ''Settled Antitrust Claims'' means any civil federal antitrust claim brought by the United States and arising from Defendant's conduct that occurred before the filing of the Complaint in this action and that relates to Revenue Management Products, including RealPage Revenue Management Products that use Competitively Sensitive Information.

HH. ''Sold-out Guardrail'' means the operation of RealPage's Revenue Management Product that increases the recommended rental price for a Floor Plan when the Floor Plan reaches its target occupancy.

II. ''States'' means the states, commonwealths, and territories of the United States of America, as well as the District of Columbia.

JJ. ''Subject Property'' means a property for which a Revenue Management Product provides price recommendations or prices.

KK. ''Surrogate Data'' means data from a property other than the Subject Property that is used by the Revenue Management Product to supplement the Transactional Data for a Floor Plan.

LL. ''Synthetic Curve'' means a demand or supply curve created by Defendant or Defendant's agents without the use of Transactional Data or Nonpublic Data of any kind.

MM. ''Third Party'' means any Person other than RealPage.

NN. ''Transactional Data'' means a Subject Property's current and historical data, including lease data (including lease term, final transacted lease price, and discounts) and tenant demand (including inquiries and applications by potential future tenants).

OO. ''Unaffiliated Property'' or ''Unaffiliated Properties'' means a property or multiple properties whose Property Owner(s) are different than the Property Owner of a Subject Property.

PP. ''Unaffiliated Property Data'' means Nonpublic Data (other than Owner Inputted Data) belonging to individual Property Owners of multiple Subject Properties that together constitute Unaffiliated Properties.

III. Applicability

This Final Judgment applies to Defendant, as defined above, Defendant's officers, agents, servants, employees, and attorneys, and all other persons in active concert or participation with Defendant who receive actual notice of this Final Judgment.

IV. Prohibitions Regarding Nonpublic Data

A. Within 180 days after entry of the Stipulation and Order, Defendant must:

1. cease using current or historical Unaffiliated Property Data in the Runtime Operation of any Revenue Management Product, except as provided in Paragraph IV.C and E;

2. notify all Property Managers and Property Owners that license or use Defendant's Revenue Management Product(s) that Defendant may not seek Unaffiliated Property Data for use in Runtime Operation;

3. not use current, forward-looking, or historical Unaffiliated Property Data or Owner Inputted Data in Model Training for Revenue Management Products; *provided however,* that, Defendant may use historical or backward-looking Unaffiliated Property Data that is at least 12 months old and not from Active Leases;

4. limit any use in Revenue Management Products of Unaffiliated Property Data related to rental prices, subject to Paragraph IV.A.3 and except

as provided in IV.C, to training solely of the AI Supply II Model, so that such Unaffiliated Property Data cannot be used in Revenue Management Products for any other purpose, including to calculate a Market Rent or Market Rank;

5. cease using any models in Revenue Management Products trained on Unaffiliated Property Data that restrict or filter Nonpublic Data by geography or that can identify geographic effects at a granularity more specific than nationwide; *provided however,* that Defendant may identify geographic effects at a granularity no more specific than statewide in training the AI Demand Model, AI Supply I Model and AI Supply II Model; and

6. retrain applicable models in its Revenue Management Products so that data used to train all models is restricted to data that complies with Paragraph IV.A.3–5.

B. Within 180 days after entry of the Stipulation and Order, Defendant must not share, publish, disclose, or otherwise provide or make accessible in a Revenue Management Product (including in Runtime Operation) to any licensee of a Revenue Management Product any Unaffiliated Property Data or Owner Inputted Data inputted by another Property Owner, or a Property Manager acting on the Property Owner's behalf, regardless of form, aggregation, anonymization, or age of the Unaffiliated Property Data or Owner Inputted Data except as permitted in Paragraph IV.E.

C. Within 180 days after entry of the Stipulation and Order, Defendant must not use the same Synthetic Curve within the same CBSA for Unaffiliated Properties or use Unaffiliated Property Data to supplement Floor Plan data in Revenue Management Product(s). Provided, however, that Defendant may use Unaffiliated Property Data to supplement a Floor Plan's Transactional Data if, and only if, there is no comparable Surrogate Data available from the same reasonably identifiable Property Owner, and only until the Subject Property has achieved two years of its own Transactional Data. Defendant must obtain the Unaffiliated Property Data used pursuant to this Paragraph IV.C from a property outside of the CBSA of the Subject Property, and Defendant cannot use such data for different Unaffiliated Properties in the same CBSA as the Subject Property. Defendant must not disclose the location or the identity of the Property Owner, Property Manager, or any Unaffiliated Property whose Nonpublic Data is used to supplement a Floor Plan's Transactional Data.

D. Defendant must not conduct, commission, solicit, or otherwise knowingly accept Nonpublic Data through Market Surveys (i) for use in Revenue Management Product(s) or (ii) otherwise for purposes of recommending a Subject Property's Floor Plan pricing, unit level pricing, or occupancy levels.

E. Defendant must not use, share, publish, disclose or otherwise provide to Unaffiliated Properties, (i) in Revenue Management Product(s) or (ii) otherwise for purposes of recommending a Subject Property's Floor Plan pricing, unit level pricing, or occupancy levels, data or information on rental occupancy, availability, or prices collected through Market Surveys conducted, commissioned, or otherwise obtained by Defendant after September 30, 2024.

F. Nothing in this Final Judgment prohibits or limits Defendant's collection of data or information from a Property Owner, or a Property Manager on behalf of the Property Owner, for use that is consistent with the terms of this Final Judgment.

V. Prohibitions Regarding Revenue Management Product Features

A. Within 180 days after entry of the Stipulation and Order, Defendant must not offer any Revenue Management Product that:

1. includes any Auto Accept feature that does not require a licensee or user to individually set parameters (including as to a maximum increase or decrease in rent);

2. includes any Governor Guardrail that does not have symmetrical upper and lower bounds for the recommended change in rental price, by a percentage to be determined and adjusted by the licensee or user;

3. reduces the target number of leases, except to round up or down to the nearest whole number of leases when calculating expected revenue;

4. generates rental price recommendations under the Sold-out Guardrail using anything other than the Subject Property's own information, including historical position; or

5. prohibits, disincentivizes, or impedes in any way a user's or licensee's ability to reject or override any price recommendation; *provided,* however, that nothing in this Final Judgment prohibits a Property Owner or a Property Manager from maintaining records within Defendant's Revenue Management Product(s) regarding decisions for rejecting or overriding any price recommendation.

B. Beginning 180 days after entry of the Stipulation and Order, any Revenue Management Product Defendant offers must allow the licensee or user to set parameters that permit pricing recommendations to go below the Pricing Floor to the same extent such pricing recommendations exceed the Pricing Ceiling.

C. Upon entry of the Stipulation and Order, Defendant may not require or provide any incentives, including economic incentives, to any licensee or user of RealPage's Revenue Management Products to accept any recommended rental prices or range of prices or incentivize any RealPage employee or agent to solicit, request, or get a licensee or user to accept any recommended rental prices or range of prices.

D. Upon entry of the Stipulation and Order, Defendant may not implement any Revenue Management Product feature that uses or relies on Unaffiliated Property Data in a manner inconsistent with this Final Judgment.

VI. Additional Prohibitions

A. Within 60 days of the entry of the Stipulation and Order, Pricing Advisors must not disclose, share with, or otherwise disseminate Unaffiliated Property Data or Owner Inputted Data (i) in Revenue Management Product(s) or (ii) otherwise for purposes of recommending a Subject Property's Floor Plan pricing, unit level pricing, or occupancy levels.

B. Defendant must not through RealPage RMS Meetings discuss or facilitate discussions about market analysis or trends based on Nonpublic Data or Owner Inputted Data or pricing strategies. Provided, however, and for avoidance of doubt, this Paragraph VI.B does not prohibit (i) RealPage from discussing its products' functionality or software-related technical issues, or (ii) Pricing Advisors from having individualized discussions with individual licensees or users of RealPage Revenue Management Products about setting rental prices and software settings if those discussions are based solely on Public Data or that licensee's or user's Nonpublic Data.

VII. Appointment of a Monitor

A. Upon application of the United States, which Defendant may not oppose, the Court will appoint a Monitor selected by the United States in its sole discretion and approved by the Court. Defendant may propose a pool of three candidates for the Monitor appointment to the United States and the United States may consider Defendant's perspectives on the proposed candidates or any other candidates identified by the United States. The United States will retain the right, in its sole discretion, either to

select the Monitor from among the three candidates proposed by Defendant or to select a different candidate. Once approved, the court-appointed Monitor should be considered by the United States and Defendant to be an arm and representative of the Court.

B. The Monitor will have the power and authority to monitor Defendant's compliance with the terms of this Final Judgment and the Stipulation and Order entered by the Court and will have other powers as the Court deems appropriate. The Monitor will have no responsibility or obligation for the operation of Defendant's business. No attorney-client relationship will be formed between Defendant and the Monitor.

C. The Monitor will have the authority to take such steps as, in the judgment of the Monitor and the United States, may be necessary to accomplish the Monitor's responsibilities. The Monitor may seek information from Defendant's personnel, including in-house counsel, compliance personnel, and internal auditors. Defendant must establish a policy, annually communicated to all employees, that employees may disclose any information to the Monitor without reprisal for such disclosure. Defendant must not retaliate against any employee or Third Party for disclosing information to the Monitor.

D. Defendant may not object to actions taken by the Monitor in fulfillment of the Monitor's responsibilities under any Order of the Court on any ground other than malfeasance by the Monitor. Disagreements between the Monitor and Defendant related to the scope of the Monitor's responsibilities do not constitute malfeasance. Objections by Defendant must be conveyed in writing to the United States and the Monitor within 20 calendar days of the Monitor's action that gives rise to Defendant's objection, or the objection is waived.

E. The Monitor will serve at the cost and expense of Defendant pursuant to a written agreement, on terms and conditions, including confidentiality requirements and conflict of interest certifications, approved by the United States in its sole discretion. If the Monitor and Defendant are unable to reach such a written agreement within 14 calendar days of the Court's appointment of the Monitor, or if the United States, in its sole discretion, declines to approve the proposed written agreement, the United States, in its sole discretion, may take appropriate action, including making a recommendation to the Court, which may set the terms and conditions for the Monitor's work, including compensation, costs, and expenses.

F. The Monitor may hire, at the cost and expense of Defendant, any agents and consultants that are reasonably necessary in the Monitor's judgment to assist with the Monitor's duties. These agents or consultants will be directed by, and solely accountable to, the Monitor and will serve on terms and conditions, including confidentiality requirements and conflict-of-interest certifications, approved by the United States in its sole discretion. Within three business days of hiring any agents or consultants, the Monitor must provide written notice of the hiring and the rate of compensation to Defendant and the United States.

G. The compensation of the Monitor and agents or consultants retained by the Monitor must be on reasonable and customary terms commensurate with the individuals' experience and responsibilities.

H. The Monitor must account for all costs and expenses incurred.

I. Defendant's failure to promptly pay the Monitor's accounted-for costs and expenses, including for agents and consultants, will constitute a violation of this Final Judgment and may result in sanctions ordered by the Court. If Defendant makes a timely objection in writing to the United States to any part of the Monitor's accounted-for costs and expenses, Defendant must establish an escrow account into which Defendant must pay the disputed costs and expenses until the dispute is resolved.

J. Defendant must use best efforts to cooperate fully with the Monitor and to assist the Monitor to monitor Defendant's compliance with its obligations under this Final Judgment and the Stipulation and Order. Subject to reasonable protection for trade secrets, other confidential research, development, or commercial information, or any applicable privileges, Defendant must provide the Monitor and agents or consultants retained by the Monitor with full and complete access to all personnel (current and former), agents, consultants, books, records, and facilities. Defendant may not take any action to interfere with or to impede accomplishment of the Monitor's responsibilities.

K. The Monitor must investigate and report on Defendant's compliance with this Final Judgment and the Stipulation and Order, including as follows, and will have other powers as the Court deems appropriate: (i) to obtain and review Defendant's books, records, and documents relating to Defendant's compliance with the Final Judgment; (ii) to interview Defendant's officers, employees, and agents; (iii) to obtain, or inspect at a location chosen by the United States in its sole discretion, the code and Pseudocode for RealPage's Revenue Management Products; (iv) to obtain documents showing how the models for RealPage's Revenue Management Products are trained; (v) to obtain documents showing how RealPage's Revenue Management Products determine prices for multifamily rental property units during its Runtime Operation; (vi) to obtain documents showing whether Nonpublic Data is being used or shared, including compliance with Paragraph IV.A; and (vii) to make annual written reports to the United States, with the first report due six months after the Monitor's work plan is approved under Paragraph VII.L, which process will include such monitoring and verification throughout the monitorship period as necessary to establish that Defendant has complied with the obligations in this Final Judgment.

L. Within 30 calendar days after appointment of the Monitor by the Court, and on a yearly basis thereafter, the Monitor must provide to the United States and Defendant a proposed written work plan. Defendant may provide comments on the proposed written work plan to the United States and the Monitor within 14 calendar days after receipt of the proposed written work plan, after which the Monitor must produce a final work plan to the United States and Defendant, for approval by the United States in its sole discretion. Any disputes between Defendant and the Monitor with respect to any written work plan will be decided by the United States in its sole discretion. The United States retains the right, in its sole discretion, to require changes or additions to a work plan at any time.

M. The Monitor may communicate *ex parte* with the Court when, in the Monitor's judgment, such communication is reasonably necessary to the Monitor's duties under this Final Judgment, including if Defendant fails to pay the Monitor's costs and expenses in a timely manner or otherwise violate this Final Judgment.

N. The Monitor will serve for a term of three years beginning on the date that the Monitor's written work plan is finalized pursuant to Paragraph VII.L, unless the United States, in its sole discretion, determines a different period—not to exceed an additional 18 months (which need not be consecutive to the original three-year monitor term)—is appropriate.

O. If the United States determines that the Monitor is not acting diligently or in

a reasonably cost-effective manner, or if the Monitor resigns or becomes unable to accomplish the Monitor's duties, the United States may recommend that the Court appoint a substitute.

P. To the extent there are multiple monitors in related Final Judgments against other defendants in *United States* v. *RealPage et al.* (currently docketed as 1:24–cv–00710 in the Middle District of North Carolina), the United States, in its sole discretion, will consider whether it is appropriate for efficiency purposes to appoint the same monitor in related Final Judgments.

VIII. Antitrust Compliance Program

A. Within 30 days of entry of the Stipulation and Order, Defendant must submit a written antitrust compliance policy for approval by the United States in its sole discretion that complies with the obligations set forth in this Final Judgment. Defendant must annually train all employees with responsibility for developing, implementing, maintaining, selling, advising on, or otherwise involved in Revenue Management Product(s)or features in the United States, including Pricing Advisors, on this written policy.

B. Within 30 days of entry of the Stipulation and Order, Defendant must designate an antitrust compliance officer. Defendant must identify to the United States the antitrust compliance officer's name, business address, telephone number, and email address. Within forty-five (45) days of a vacancy in Defendant's antitrust compliance officer position, Defendant must appoint a replacement and must identify to the United States the replacement's name, business address, telephone number, and email address. Defendant's initial and replacement appointments of an antitrust compliance officer are subject to the approval of the United States in its sole discretion. Defendant is responsible for all costs and expenses related to the antitrust compliance officer. The antitrust compliance officer will be responsible for:

1. auditing on a bi-annual basis compliance with Paragraph V.A–B;

2. attending and monitoring, or arranging for the attendance or monitoring by another individual trained in antitrust law, any RealPage RMS Meeting;

3. performing bi-annual audits to ensure that Surrogate Data has been eliminated from a Subject Property's database if the Subject Property has achieved at least two years of historical Transactional Data, pursuant to Paragraph IV.C;

4. implementing and enforcing Defendant's antitrust compliance policy and annual training required by Paragraph VIII.A; and

5. reporting any communication regarding RealPage RMS Meetings pursuant to Paragraph VIII.D.

C. On an annual basis beginning 180 calendar days after entry of the Stipulation and Order, Defendant must:

1. submit to the United States a certification from Defendant's General Counsel attesting under penalty of perjury that (i) Defendant has established and maintained the antitrust compliance policy and annual training required by Paragraph VIII.A; (ii) Defendant has complied with the attestation requirement in Paragraph VIII.C.3; (iii) Defendant has complied with the requirements in Sections IV and V;

2. submit to the United States a certification from the antitrust compliance officer attesting under penalty of perjury that (i) Defendant has taken reasonable steps to comply with Paragraph IV.A.3; (ii) the antitrust compliance officer has attended, or arranged the attendance of another individual trained in antitrust law at, all RealPage RMS Meetings; (iii) RealPage RMS Meetings have complied with the restrictions described in Paragraph VI.B; (iv) the antitrust compliance officer has reported all communications pursuant to Paragraph VIII.D; and (v) the antitrust compliance officer has performed bi-annual audits to ensure compliance with Paragraphs VIII.B; and

3. require all Pricing Advisors to attest under penalty of perjury that they have complied with the requirements in Paragraph VI.A.

D. If any participant in a RealPage RMS Meeting discusses or facilitates discussions regarding topics prohibited by Section VI.B, the antitrust compliance officer, designated pursuant to Paragraph VIII.B, must provide to the United States and to the Monitor the following information about the RealPage RMS Meeting within 30 days:

1. the date, time, location, and a description of the meeting's content;

2. all participants, including denoting all participants who discussed or facilitated discussion of present or future market conditions, pricing, discounts, occupancy, renewal rates, or use of concessions;

3. a description of any document shown at the meeting, which Defendant must also produce to the United States;

4. a description of all documents received or provided by Defendant during the meeting, which Defendant must also produce to the United States; and

5. a description of all chats, recordings, or documents associated with the meeting, including agendas and meeting minutes, which Defendant must also produce to the United States.

IX. Compliance Inspection

A. For the purposes of determining or securing compliance with this Final Judgment or related orders such as the Stipulation and Order or determining whether this Final Judgment should be modified or vacated, upon written request of an authorized representative of the Assistant Attorney General for the Antitrust Division and reasonable notice to Defendant, Defendant must permit, from time to time and subject to legally recognized privileges, authorized representatives, including agents retained by the United States:

1. to have access during Defendant's business hours to inspect and copy, or at the option of the United States, to require Defendant to provide electronic copies of all books, ledgers, accounts, records, data, and documents wherever located, in the possession, custody, or control of Defendant relating to any matters contained in this Final Judgment; and

2. to interview, either informally or on the record, Defendant's officers, employees, or agents, wherever located, who may have their individual counsel present, relating to any matters contained in this Final Judgment. The interviews must be subject to the reasonable convenience of the interviewee and without restraint or interference by Defendant;

3. to obtain documents sufficient to show how RealPage's Revenue Management Product is trained and how it determines prices for multifamily rental property units during its Runtime Operation; and

4. to obtain, or inspect at a location at the Division's discretion and subject to necessary safeguards to protect confidentiality, the code and Pseudocode of RealPage's Revenue Management Product.

B. Upon the written request of an authorized representative of the Assistant Attorney General for the Antitrust Division, Defendant must submit written reports or respond to written interrogatories, under oath if requested, relating to any matters contained in this Final Judgment.

X. Cooperation

A. Subject to reaching a settlement with all States that, as of the entry of the Stipulation and Order, are plaintiffs in *United States et al.* v. *RealPage et al.* (currently docketed as No. 1:24–cv–00710 in the Middle District of North Carolina), Defendant must cooperate fully and truthfully with the United

States in any civil investigation or civil litigation the United States brings or has brought relating to the Cooperation Subject Matter. Defendant must use its best efforts to ensure that all current and former officers, directors, employees, and agents also fully and promptly cooperate with the United States. Defendant's cooperation must include:

1. making up to 25 employees available for voluntary interviews for up to 100 hours total at the request of the United States relating to the Cooperation Subject Matter and considering reasonable requests for interviews of additional employees;

2. providing full and truthful written or oral testimony in deposition, trial, or other proceeding relating to the Cooperation Subject Matter and making witnesses available to the United States upon reasonable notice before any such testimony;

3. providing proffers, which may be made by counsel for Defendant, describing Defendant's knowledge of, and evidence relating to, the Cooperation Subject Matter;

4. within 30 days of receiving a written request (whether formal or informal) from the United States for documents, information, or other material relating to the Cooperation Subject Matter (or whatever additional time the Division grants in its sole discretion), produce to the United States all responsive documents, information, and other materials, wherever located, not protected under the attorney-client privilege or the work-product doctrine, in the possession, custody, or control of Defendant or its agents, as well as a log of any responsive documents, information, or other materials that were not provided, including an explanation of the basis for withholding such materials, and authenticating or otherwise assisting with establishing the evidentiary foundation of any documents Defendant produced or produces to the United States; and

5. taking all steps necessary to preserve all documents, information, and other materials relating to the Cooperation Subject Matter until the United States provides written notice to Defendant that its obligation to do so has expired.

B. Subject to Defendant's full, truthful, and continuing cooperation, as required under Paragraph X.A, Defendant is fully and finally discharged and released from the Settled Antitrust Claims.

C. Nothing in this Section affects Defendant's obligation to respond to any formal discovery requests in litigation or a civil investigative demand issued by the United States.

XI. Public Disclosure

A. No information or documents obtained pursuant to any provision in this Final Judgment, including reports the Monitor provides to the United States pursuant to Paragraph VII.K, may be divulged by the United States or the Monitor to any person other than an authorized representative of the executive branch of the United States, except in the course of legal proceedings to which the United States is a party, including grand-jury proceedings, or as otherwise required by law.

B. In the event that the Monitor receives a subpoena, court order, or other court process seeking production of information or documents obtained pursuant to any provision in this Final Judgment, including reports the Monitor provides to the United States pursuant to Paragraph VII.K, the Monitor must notify the United States and Defendant immediately and prior to any disclosure, so that Defendant may address such potential disclosure and, if necessary, pursue alternative legal remedies, including if deemed appropriate by Defendant, intervention in the related proceedings.

C. In the event of a request by a Third Party, pursuant to the Freedom of Information Act, 5 U.S.C. 552, for disclosure of information obtained pursuant to any provision of this Final Judgment, the United States will act in accordance with that statute and the Department of Justice regulations at 28 CFR part 16, including the provision on confidential commercial information, at 28 CFR 16.7. Defendant, when submitting information to the Antitrust Division, should designate the confidential commercial information portions of all applicable documents and information under 28 CFR 16.7. Designations of confidentiality expire 10 years after submission, ''unless the submitter requests and provides justification for a longer designation period.'' See 28 CFR 16.7(b).

D. If at the time that Defendant furnishes information or documents to the United States pursuant to any provision of this Final Judgment, Defendant represents and identifies in writing information or documents for which a claim of protection may be asserted under Rule 26(c)(1)(G) of the Federal Rules of Civil Procedure, and Defendant marks each pertinent page of such material ''Subject to claim of protection under Rule 26(c)(1)(G) of the Federal Rules of Civil Procedure,'' the United States must give Defendant 10 calendar days' notice before divulging the material in any legal proceeding (other than a grand jury proceeding).

XII. Retention of Jurisdiction

The Court retains jurisdiction to enable any party to this Final Judgment to apply to the Court at any time for further orders and directions as may be necessary or appropriate to carry out or construe this Final Judgment, to modify any of its provisions, to enforce compliance, and to punish violations of its provisions.

XIII. Enforcement of Final Judgment

A. If at any time during the five-year period following entry of this Final Judgment, the United States determines in its sole discretion that the Final Judgment has failed to fully redress the violations alleged in the Complaint, then the United States may re-open this proceeding to seek additional relief. Such additional relief may be ordered by this Court upon a finding by a preponderance of the evidence that there is a reasonable probability that the proposed Final Judgment did not fully redress the violations alleged in the Complaint.

B. The United States retains and reserves all rights to enforce the provisions of this Final Judgment, including the right to seek an order of contempt from the Court. In a civil contempt action, a motion to show cause, or a similar action brought by the United States relating to an alleged violation of this Final Judgment, the United States may establish a violation of this Final Judgment and the appropriateness of a remedy therefor by a preponderance of the evidence, and Defendant waives any argument that a different standard of proof should apply.

C. This Final Judgment should be interpreted to give full effect to the procompetitive purposes of the antitrust laws and to restore the competition the United States alleges was harmed by the challenged conduct. Defendant may be held in contempt of, and the Court may enforce, any provision of this Final Judgment that, as interpreted by the Court in light of these procompetitive principles and applying ordinary tools of interpretation, is stated specifically and in reasonable detail, whether or not it is clear and unambiguous on its face. In any such interpretation, the terms of this Final Judgment should not be construed against either party as the drafter.

D. In an enforcement proceeding in which the Court finds that Defendant has violated this Final Judgment, the United States may apply to the Court for an extension of this Final Judgment, together with other relief that may be appropriate. In connection with a

successful effort by the United States to enforce this Final Judgment against Defendant, whether litigated or resolved before litigation, Defendant must reimburse the United States for the fees and expenses of its attorneys, as well as all other costs including experts' fees, incurred in connection with that effort to enforce this Final Judgment, including in the investigation of the potential violation.

E. For a period of four years following the expiration of this Final Judgment, if the United States has evidence that Defendant violated this Final Judgment before it expired, the United States may file an action against Defendant in this Court requesting that the Court order: (1) Defendant to comply with the terms of this Final Judgment for an additional term of at least four years following the filing of the enforcement action; (2) all appropriate contempt remedies; (3) additional relief needed to ensure Defendant complies with the terms of this Final Judgment; and (4) fees or expenses as called for by this Section.

XIV. Expiration of Final Judgment

Unless the Court grants an extension, this Final Judgment will expire seven years from the date of its entry, except that after four years from the date of its entry, this Final Judgment may be terminated upon notice by the United States to the Court and Defendant that continuation of this Final Judgment is no longer necessary or in the public interest.

XV. Reservation of Rights

This Final Judgment terminates only the claims stated in the Complaint against Defendant and does not affect other charges or claims the United States may file. The United States retains all rights to investigate or prosecute, under all applicable laws, any other claims against the Defendant that may be brought in the future. The entry of this Final Judgment does not limit the ability of any non-settling attorney general of any State to bring or maintain any action under federal or state law against Defendant.

Nothing in this Final Judgment impairs or limits any authority of a State or local government to impose different or additional requirements on the use of Nonpublic Data by statute, regulation, or ordinance, or affects Defendant's obligations under state or local law.

XVI. Public Interest Determination

Entry of this Final Judgment is in the public interest. The parties have complied with the requirements of the Antitrust Procedures and Penalties Act, 15 U.S.C. 16, including by making available to the public copies of this Final Judgment and the Competitive Impact Statement, public comments thereon, and any response to comments by the United States. Based upon the record before the Court, which includes the Competitive Impact Statement and, if applicable, any comments and response to comments filed with the Court, entry of this Final Judgment is in the public interest.

Date:

[Court approval subject to procedures of Antitrust Procedures and Penalties Act, 15 U.S.C. 16]

United States District Judge

United States District Court for the Middle District of North Carolina

UNITED STATES OF AMERICA, Plaintiff, v. *REALPAGE, INC.,* Defendant.

No. 1:24–cv–00710–WLO–JLW

Competitive Impact Statement

The United States has obtained a settlement with RealPage that protects American renters by prohibiting the use of competitively sensitive information in RealPage's software to set rental prices, and by ending anticompetitive practices to align pricing among competing landlords. In accordance with the Antitrust Procedures and Penalties Act, 15 U.S.C. 16(b)–(h) (the ''APPA'' or ''Tunney Act''), the United States files this Competitive Impact Statement related to the proposed Final Judgment as to Defendant RealPage, which has been filed in this civil antitrust proceeding (ECF No. 159–1).

I. Nature and Purpose of the Proceeding

On August 23, 2024, the United States, along with co-plaintiff States, filed a civil antitrust Complaint (the ''Complaint'') against RealPage, Inc. (''RealPage''). On January 7, 2025, the United States and its co-plaintiff States amended the Complaint to add six property management companies as Defendants.

RealPage licenses three revenue management products to property management companies and property owners (collectively, ''landlords''). These software products are AI Revenue Management (''AIRM''), YieldStar, and Lease Rent Options (''LRO''). RealPage's revenue management products are used by landlords to determine how to price floor plans and units in conventional multifamily rental housing, *i.e.,* multiunit apartments that they manage and lease.[13]

The Complaint alleges that RealPage, along with six landlords, violated Section 1 of the Sherman Act, 15 U.S.C. 1, by unlawfully agreeing to share and use competitively sensitive information for the properties that each landlord manages and leases. RealPage uses nonpublic, competitively sensitive data to train its algorithmic models (''models'') that AIRM leverages, and to provide floor plan price recommendations and unit-level pricing to landlords when they are running AIRM or YieldStar. The sharing and use of nonpublic, competitively sensitive information harms or is likely to harm the competitive process, renters, and prospective renters.

The Complaint further alleges that RealPage and the landlords that use AIRM and YieldStar violated Section 1 of the Sherman Act, 15 U.S.C. 1, by unlawfully agreeing to use RealPage's software to align pricing among competing landlords. RealPage entered into individual agreements with landlords to use AIRM or YieldStar. By agreeing to use AIRM or YieldStar as it has been designed by RealPage, competing landlords align their pricing processes, strategies, and pricing responses, *e.g.,* how they go about setting rents, pricing amenities, and managing occupancy levels in local rental markets. As alleged in the Complaint, both RealPage and landlords knew that the software was designed to align pricing. They used the phrase ''a rising tide rises [sic] all ships'' to explain that AIRM and YieldStar would move prices in a ''similar manner'' to how the top and bottom of the market moved. *See* Am. Compl. ¶ 33. Collectively, these agreements harm the competitive process and actual and prospective renters.

Finally, the Complaint alleges that RealPage violated Section 2 of the Sherman Act, 15 U.S.C. 2, by monopolizing or attempting to monopolize the commercial revenue management software market for conventional multifamily rental housing. Through its licensing agreements with landlords that use its software products, RealPage has amassed a massive reservoir of competitively sensitive data from competing landlords. RealPage has ensured that other providers of revenue management products cannot compete on the merits unless they enter into similar agreements with landlords, thereby obstructing them from

[13] As stated in the Complaint, the conventional multifamily rental housing market includes apartments available to the general public for lease in properties that have five or more living units. It does not include student housing, affordable housing, age-restricted or senior housing, or military housing. (Am. Compl. ¶ 183).

competing with products that do not harm the competitive process.

On November 24, 2025, the United States filed a proposed Final Judgment and a Stipulation and Order (''Stipulation and Order'') (ECF Nos. 159 & 159–1), which are designed to remedy the loss of competition alleged in the Complaint due to RealPage's conduct.

The proposed Final Judgment, which is explained more fully below, imposes a number of requirements and restrictions on RealPage that address the United States' concerns regarding RealPage's anticompetitive conduct alleged in the Complaint.

First, the proposed Final Judgment imposes restrictions on how RealPage can use competitively sensitive data from landlords. The proposed Final Judgment identifies two discrete phases of how RealPage's revenue management products operate: runtime operation and model training. Runtime operation is a landlord's use of the software to provide pricing recommendations and prices for the specific floor plans and units in a particular rental property. Model training is any process of analyzing data to create a model or algorithm, including the models that RealPage uses to predict supply and demand, which is then used in the runtime operation. Subject to limited exceptions, RealPage will not be allowed to use nonpublic data from competing properties in runtime operation. In training the models, RealPage will be limited to using backward-looking data that has been aged at least 12 months and is not from active leases, *i.e.,* a unit with a rental agreement that is in effect.

Second, the proposed Final Judgement restricts RealPage's ability to source and share nonpublic information between landlords. The proposed Final Judgement imposes significant limitations on RealPage's ability to use, share, publish, disclose or provide competitors' nonpublic data to a landlord, including through RealPage's revenue management products or its pricing advisors. Relatedly, RealPage must not conduct any market surveys, the collection of potentially competitively sensitive nonpublic data through call arounds, emails, or other methods, for use in its revenue management products or to recommend a rental price or occupancy level during the term of the proposed Final Judgment. Finally, RealPage must not discuss or facilitate discussions among landlords about market analyses or trends based on nonpublic data, or about pricing strategies.

Third, the proposed Final Judgement limits RealPage's ability to use models trained using nonpublic, competitively sensitive information to determine price and supply below a certain geographic level. RealPage may not train AI Demand, AI Supply I, and AI Supply II with a geographic variable narrower than a state. RealPage may not use nonpublic, competitively sensitive data to train any future models with a geographic variable narrower than the nation.

Fourth, RealPage must modify or ensure that certain software features are designed to address the allegations in the Complaint. For example, RealPage may not prohibit or impede a landlord's ability to reject or override a recommended price. Similarly, any software feature that automatically accepts recommended prices must require that a landlord individually sets the parameters regarding that acceptance. Any limit on price increases and decreases must be symmetrical, and a landlord must individually determine the limits.

Fifth, RealPage must adopt and comply with a series of compliance measures. A monitor will be appointed for a term of three years, which the United States may extend by up to 18 months if it deems appropriate. RealPage will also adopt a written antitrust compliance policy and train its employees on the policy. RealPage must allow the United States to inspect its documents and to interview its employees to ensure compliance with the Final Judgment.

Finally, RealPage must provide cooperation to the United States in this civil proceeding (*United States et al.* v. *RealPage et al.*) with respect to the United States' Section 1 claims against the remaining landlord defendants.

Under the terms of the Stipulation and Order, RealPage must abide by and comply with the provisions of the proposed Final Judgment until it is entered by the Court or until the time for all appeals of any Court ruling declining entry of the proposed Final Judgment has expired.

The United States and RealPage have stipulated that the proposed Final Judgment may be entered by the Court after compliance with the APPA. Entry of the proposed Final Judgment will terminate this action with respect to RealPage, except that the Court will retain jurisdiction to construe, modify, or enforce the provisions of the proposed Final Judgment and to punish violations thereof by RealPage.

II. Description of Events Giving Rise to the Alleged Sherman Act Violations

RealPage, headquartered in Richardson, Texas, is the largest provider of commercial revenue management software for conventional multifamily rental housing in the United States. Currently, RealPage offers three revenue management products: AIRM, YieldStar, and LRO. RealPage's software calculates a recommended rental price for floor plans and a rental price for units for landlords across the United States.

RealPage provides landlords who use its revenue management products with pricing recommendations and pricing based on competitors' competitively sensitive data. When they are running, AIRM and YieldStar leverage confidential, competitively sensitive data collected from landlords as critical inputs to generate price recommendations for competing landlords. These data include rental applications, executed new leases, renewal offers and acceptances, and occupancy estimates and projections. The data are pulled from property management software, such as RealPage's OneSite product, that landlords use to collect and track rental payments, manage leases, track property maintenance requests, perform accounting functions, and perform other property management functions. By contrast, LRO relies on data that a landlord manually inputs into the software. The sensitive nature of this information may vary by user. The data inputted by a licensee or user into LRO could potentially be—and has historically included—nonpublic, competitively sensitive information.

Widespread adoption and use of RealPage's revenue management products lead to pricing decisions by competing landlords that are based on recommendations coming from a common pricing model that is powered by competitively sensitive, nonpublic data, which harms the ability of renters to obtain a competitive price for their housing. The use of competitors' competitively sensitive data in this manner harms current and prospective renters as well as the competitive process itself.

AIRM and YieldStar, additionally, incorporate certain product features that, as alleged in the Complaint, align pricing of competing landlord users. For example, AIRM and YieldStar incorporate special rules, called ''guardrails,'' that override the ordinary functioning of the model in ways that tend to push rival landlords' rental prices higher than would occur in a competitive market.

In addition to information sharing that occurs through the running of the software, the Complaint alleges that competitively sensitive information was shared during RealPage revenue

management software meetings (''RealPage RMS meetings'') attended by competing landlord users of AIRM and YieldStar. During these meetings, competing landlords discussed pricing strategies and market trends based on nonpublic, competitively sensitive data.

In summary, the Complaint alleges that RealPage unlawfully used nonpublic, competitively sensitive information in software for pricing competitors' rental units; that RealPage designed its software to align pricing between competitors; and that by unlawfully using nonpublic, competitively sensitive information, RealPage has also unlawfully monopolized the commercial revenue management software market for conventional multifamily rental housing.

III. Explanation of the Proposed Final Judgment

The relief required by the proposed Final Judgment is designed to remedy the loss of competition in the conventional multifamily rental housing markets alleged in the Complaint by significantly limiting RealPage from sharing competitively sensitive, nonpublic information, directly or indirectly, with competing landlords, and from offering software features that would align pricing between competing landlords. Additionally, the proposed Final Judgment is designed to remedy the loss of competition in the commercial revenue management software market for conventional multifamily rental housing by enabling competing revenue management software that does not illegally use confidential, competitively sensitive data to more effectively compete against RealPage's software. The terms described below are designed to ensure that RealPage ends its anticompetitive conduct and prevent RealPage from engaging in the same or similar conduct in the future.

A. Prohibitions Regarding Nonpublic Data

The proposed Final Judgment imposes restrictions on how RealPage uses nonpublic data in its revenue management software during runtime operation and in model training. Determining the appropriate parameters for the use of nonpublic data requires an industry- and fact-specific analysis. The agreed-upon terms in this settlement are guided by the specific facts and claims at issue here, including: (1) the specific characteristics of and competitive dynamics in the conventional multifamily rental housing industry; (2) how the data are used in the industry and the applicable software; and (3) the principle that firms should not make pricing decisions using insight drawn from their competitors' nonpublic, competitively sensitive data.

1. Prohibitions Regarding Use of Nonpublic Data in Runtime Operation

Paragraph IV.A.1 generally prohibits RealPage from using competing landlords' data in the runtime operation of its revenue management software. Runtime operation refers to the process by which the software generates a recommended price for a floor plan or a unit-level price in a particular multifamily rental property. In other words, this is the execution of a model, including the application of a model to property-specific data, to generate a pricing recommendation. Runtime operation does not include the training of an underlying model. This Paragraph ensures that the software's floor plan price recommendation or unit-level price, as determined during the runtime operation, is solely based on a property owner's own nonpublic data or data available to the general public. The prohibition will help to restore competition between landlords.

Paragraph IV.B generally prohibits RealPage from sharing, publishing, disclosing, or otherwise providing or making accessible any nonpublic, competitively sensitive data in its revenue management products, including in their runtime operations. This Paragraph covers not only other landlords' data shared with RealPage but also any data from a competing property that a landlord might have obtained and entered in the software from a source other than RealPage. Relatedly, Paragraph IV.A.2 requires RealPage to notify landlords that RealPage is not seeking nonpublic, competitively sensitive information from competing properties.

Paragraph IV.C also limits RealPage's use of surrogate data or synthetic curves. Surrogate data refers to data used when a property does not have at least two years of its own transactional history or enough units within a given floor plan to run RealPage's software. Synthetic curves are demand or supply curves created by RealPage without the use of transactional data or nonpublic data of any kind. Surrogate data and synthetic curves are used to construct market response curves—analogous to market demand curves—when a property does not have enough of its own property data. The restrictions in Paragraph IV.C prevent competing properties with different owners from using the same surrogate data or curves to determine prices and thereby prevent a meaningful means of pricing alignment.

The proposed Final Judgment allows for two exceptions to the prohibition of using data from other landlords in the runtime operations of RealPage's revenue management products. First, Paragraph IV.C allows RealPage to use nonpublic data from a property with a different owner as surrogate data only if: (1) a subject property does not have at least two years of its own transactional data and (2) the subject property owner does not have two years' worth of comparable data from a different property it owns. If these conditions are met, RealPage may supplement a floor plan's history with comparable surrogate data from a property with a different owner but only if that property is in a different Core-Based Statistical Area (''CBSA'').[14] RealPage may not use the same surrogate data for properties with different owners in the same CBSA. This narrow exception is designed to avoid any anticompetitive effect from competing properties using the same nonpublic data while allowing smaller or less established property owners to use RealPage's revenue management software and borrow surrogate data from properties in a different CBSA.

Paragraph IV.E provides a second exception to RealPage's use of nonpublic data in its runtime operation: data collected through market surveys that were conducted before September 30, 2024. A market survey is a practice whereby RealPage and landlords, through call arounds, emails or other methods, collect potentially competitively sensitive, nonpublic data from competing landlords to use in the software's runtime operation for competing properties. Under Paragraph IV.D, RealPage agrees not to conduct any new market surveys during the duration of the Final Judgment. Before September 30, 2024, RealPage's software used data collected through market surveys to determine a floor plan's market position. The Final Judgment permits limited use of the pre-September 30, 2024, aged, nonpublic data to minimize disruption to the operation of certain aspects of the software that do not pose threats to competition.

The prohibitions in the proposed Final Judgment and described above are designed to ensure that, going forward, use of RealPage's revenue management products will not constrain independent

[14] One way that the Complaint defines local rental markets is in terms of ''Core-Based Statistical Areas'' as used by the federal Office of Management and Budget. (Am. Compl. ¶¶ 212–218, 278).

decision making or reduce competition in the conventional multifamily rental housing industry.

2. Prohibitions Regarding Use of Nonpublic Data in Model Training

Paragraphs IV.A.3–6 set forth restrictions and obligations on what nonpublic data RealPage may use in training its models for revenue management products. Model training is any process of analyzing data, including by machine learning or regression analysis, to create or adjust a model or algorithm to improve the accuracy of the model's or algorithm's predictions. Models are trained using data to define and refine the rules or instructions by which they operate. The proposed Final Judgment permits limited use of nonpublic, property-specific data in model training.

RealPage relies on three models in AIRM: AI Demand, AI Supply I, and AI Supply II. AI Demand predicts the likelihood that a prospective tenant will apply for a unit at a specific property. The AI Supply models predict the likelihood that an expiring lease will be renewed rather than terminated. AI Supply I predicts the likelihood of renewal before a renewal rent offer has been approved by the landlord, while AI Supply II predicts the likelihood of renewal using an approved renewal rent offer. Each of RealPage's models is one of multiple inputs used to determine, during runtime operation, the supply and demand at a particular property.

Paragraph IV.A.3 prohibits RealPage from using current, forward-looking, or historical nonpublic data in training its revenue management software models, unless the data are at least 12 months old and not from active leases. According to the U.S. Bureau of Labor Statistics, 12 months is the most common lease length with only about 7% of leases being over 12-months.[15] Aging the data for at least 16 months will exclude virtually all active leases to be used in training the model. Working from this premise, under the proposed Final Judgment lease data that has been aged at least 16 months will not be deemed data from an active lease.

The combination of these requirements prevents RealPage from using current, forward-looking, or certain historical nonpublic data in training the models, minimizing any competitive concerns related to the use of this nonpublic information to determine how the models are trained.

[15] U.S. Bureau of Labor Statistics, *Spotlight on Statistics: Housing Leases in the U.S. Rental Market* (September 2022), *https://www.bls.gov/spotlight/2022/housing-leases-in-the-u-s-rental-market/home.htm.*

Paragraph IV.A.4 of the proposed Final Judgment restricts RealPage from using rental price data in training its model, including a prohibition on using nonpublic data to calculate a market rent or market rank (*i.e.,* the property's relative position to its competitors based on average rent). There is one exception that allows RealPage to use rental prices, subject to these requirements described above, in training its AI Supply II model. The AI Supply II model predicts the likelihood of renewal of an expiring lease at a particular property after a renewal offer has been approved by the landlord. It relies on rent renewal offers (*i.e.,* rental prices), which are nonpublic by nature.

Paragraph IV.A.5 prohibits RealPage's current or future models from being used in a manner that restricts or filters nonpublic data by geography or that can identify geographic effects that are narrower than nationwide. This will limit RealPage's ability to create new regional, state-wide, or local models by using geographic variables narrower than nationwide. The proposed Final Judgment permits RealPage to continue using state and regional variables in training its current models: AI Demand, AI Supply I, and AI Supply II. Because of the nature of these three models and because states tend to be larger than the largest local market (CBSAs) alleged in the Complaint, the United States determined that anticompetitive conduct in the alleged local markets due to this exception is not likely.

Paragraph IV.A.6 requires RealPage to retrain its models, should it be necessary, in accordance with the restrictions described above.

B. Prohibitions Regarding Revenue Management Software Features

The Complaint alleges that some of RealPage's revenue management software features align pricing between competing landlords. Paragraphs V.A–C are designed to address alignment of pricing through use of common nonpublic data or through software design.

Paragraphs V.A–C require RealPage to refrain from implementing existing product features in its revenue management products unless certain conditions are met. Paragraph V.D bars RealPage from implementing in the future any feature that relies on competing landlords' data.

Paragraph V.A.1 requires any auto-accept feature in a RealPage revenue management product (a feature that allows recommended prices to be automatically implemented) to be able to be configured individually by licensees or users. Paragraph V.A.4 requires that RealPage not use data from a particular property's competitors when the sold-out guardrail is active for that property. The sold-out guardrail is an operation in the software that increases the recommended rental price for a floor plan when the property's floor plan reaches its target occupancy. Thus, a landlords' own data—not competitors' nonpublic, competitively sensitive data—will dictate the recommended price for a landlord's units.

Paragraph V.A.3 addresses how RealPage may alter the target number of leases for each floor plan. This feature determines the number of units that should be rented out at a given point in time to reach sustainable capacity—the target number of units per floor plan that a landlord wants to lease—by the end of the leasing window. Therefore, altering the target leases for a floor plan can directly influence the recommended price. Paragraph V.A.3 prohibits RealPage from artificially reducing the number of target leases.

The Complaint alleges that RealPage's software did not recommend prices below a price floor, a value determined by a property's competitors. RealPage allowed price recommendations to go above the price ceiling, a value also determined by competitors' nonpublic, competitively sensitive data. Paragraphs IV.A.1 and V.B address these allegations. Paragraph IV.A.1, discussed above, prohibits RealPage from using nonpublic, competitively sensitive data in runtime operation, including in determining the price ceiling and floor. Paragraph V.B requires RealPage to allow prices to go below the price floor by the same percentage as it allows the price to go above the price ceiling. This eliminates the disparity between the ''hard floor'' and ''soft ceiling'' identified in the Complaint. In addition, the maximum percentage by which the price can fluctuate must be set by the landlord, not RealPage. This will promote independent decision making from each landlord based only on the public data available to them. It also allows renters to benefit from market fluctuations, preventing RealPage from favoring price increases over price decreases.

Paragraph V.C prohibits RealPage from requiring landlords, or providing them with any incentives, to accept any recommended rental prices or range of prices. This restriction promotes landlords' independent decision making.

Paragraph V.D prohibits RealPage from implementing additional features that rely on nonpublic, competitively

sensitive data that are inconsistent with the terms of the Final Judgment.

C. Additional Prohibitions

Paragraph VI.A specifically prohibits pricing advisors, RealPage employees who consult on software configurations and revenue management, from disclosing nonpublic, competitively sensitive data from other property owners while assisting a user or licensee with setting rental prices or occupancy levels. Paragraph VI.B prohibits RealPage from discussing or facilitating discussions in RMS meetings about market analyses or market trends based on nonpublic data, or about pricing strategies.

D. Appointment of a Monitor

The proposal Final Judgment requires that RealPage be subject to an appointed compliance monitor selected by the United States in its sole discretion. The monitor will assess RealPage's compliance with the Final Judgment, in particular RealPage's use of nonpublic data in its revenue management products, RealPage's compliance with the requirements regarding product features in its revenue management products, and RealPage's compliance with discussions using nonpublic data outside of the software.

Paragraph VII.B provides the monitor with authority to investigate RealPage's compliance with the Final Judgment. Per Paragraph VII.C, the monitor will have the authority to take steps necessary to accomplish the monitor's responsibilities. These steps may include interviewing RealPage employees and collecting RealPage documents. The monitor will also provide an annual report to the United States setting forth RealPage's efforts to comply with its obligations under the Final Judgment.

The monitor will serve at RealPage's expense, on such terms and conditions as the United States approves in its sole discretion. RealPage will be required to assist the compliance monitor in fulfilling his or her obligations. The monitor will serve for three years from the approval of the workplan. The United States has the ability, in its sole discretion, to extend the term of the monitor by up to 18 months which need not be consecutive to the original three-year term.

E. Compliance Terms

Pursuant to Paragraph IX.A, RealPage must provide the United States with access to RealPage's books, records, data, and documents, including communications with other property management companies, to enable the United States to assess RealPage's compliance with the terms of the Final Judgment. RealPage must also permit the United States to interview RealPage's officers, employees, or agents relating to any matters contained in this Final Judgment. Additionally, Paragraph IX.A. provides that RealPage must, upon request, provide the United States with documents describing how RealPage's software is trained and how it determines prices for properties, as well as changes to these processes. RealPage must also allow the United States to inspect RealPage's software code and pseudocode of that software for independent verification.

Paragraph VIII.B requires RealPage's antitrust compliance officer to implement and enforce RealPage's antitrust compliance policy and annual training, audit compliance with the software feature requirements, attend any RealPage RMS meetings, and audit the use of surrogate data, per Paragraph IV.C. Paragraph VIII.C requires RealPage to submit an annual certification from its General Counsel that RealPage has established and maintained this annual antitrust compliance policy and training, that pricing advisors have attested under penalty of perjury that they have not shared nonpublic, competitively sensitive data per Paragraph VI.A, and that RealPage has complied with the restrictions regarding use of nonpublic data and with certain product features, described above.

Finally, Paragraph VIII.D requires RealPage to notify the United States and the monitor should anyone during the RealPage RMS meetings discuss pricing strategies or market trends.

F. Cooperation

Under the terms of the proposed Final Judgment, and subject to RealPage reaching settlement with certain States, RealPage must cooperate with the United States relating to the United States' claims against the remaining property management company defendants included in the Complaint. This required cooperation includes voluntary interviews with at least 25 RealPage employees for up to 100 hours. In addition, RealPage must provide cooperation to the United States by making witnesses available before trial, providing testimony, proffering evidence, and producing documents and other information.

G. Other Provisions

The proposed Final Judgment also contains provisions designed to promote compliance with and make enforcement of the Final Judgment more effective. Paragraph XIII.A allows the United States to seek additional relief if during the five-year period following the entry of the Final Judgment, the United States determines in its sole discretion that the Final Judgment has failed to fully redress the violations alleged in the Complaint. Paragraph XIII.B provides that the United States retains and reserves all rights to enforce the Final Judgment, including the right to seek an order of contempt from the Court. Under the terms of this paragraph, RealPage has agreed that in any civil contempt action, any motion to show cause, or any similar action brought by the United States regarding an alleged violation of the Final Judgment, the United States may establish the violation and the appropriateness of any remedy by a preponderance of the evidence and that RealPage has waived any argument that a different standard of proof should apply. This provision aligns the standard for compliance with the Final Judgment with the standard of proof that applies to the underlying offense addressed by the Final Judgment.

Paragraph XIII.C provides additional clarification regarding the interpretation of the provisions of the proposed Final Judgment. Pursuant to Paragraph XIII.C of the proposed Final Judgment, RealPage agrees that it will abide by the proposed Final Judgment and that it may be held in contempt of the Court for failing to comply with any provision of the proposed Final Judgment that is stated specifically and in reasonable detail, as interpreted in light of its procompetitive purpose.

Paragraph XIII.D provides that if the Court finds in an enforcement proceeding that RealPage has violated the Final Judgment, the United States may apply to the Court for an extension of the Final Judgment, together with such other relief as may be appropriate. In addition, to compensate American taxpayers for any costs associated with investigating and enforcing violations of the Final Judgment, Paragraph XIII.D provides that in any successful effort by the United States to enforce the Final Judgment against RealPage, whether litigated or resolved before litigation, RealPage must reimburse the United States for attorneys' fees, experts' fees, and other costs incurred in connection with that effort to enforce this Final Judgment, including the investigation of the potential violation.

Paragraph XIII.E states that the United States may file an action against RealPage for violating the Final Judgment for up to four years after the Final Judgment has expired or been terminated. This provision is meant to address circumstances such as when evidence that a violation of the Final

Judgment occurred during the term of the Final Judgment is not discovered until after the Final Judgment has expired or been terminated, or when there is not sufficient time for the United States to complete an investigation of an alleged violation until after the Final Judgment has expired or been terminated. This provision therefore makes clear that, for four years after the Final Judgment has expired or been terminated, the United States may still challenge a violation that occurred during the term of the Final Judgment.

Finally, Section XIV of the proposed Final Judgment provides that the Final Judgment will expire seven years from the date of its entry, except that after four years from the date of its entry, the Final Judgment may be terminated upon notice by the United States to the Court and to RealPage that continuation of the Final Judgment is no longer necessary or in the public interest.

IV. Remedies Available to Potential Private Plaintiffs

Section 4 of the Clayton Act, 15 U.S.C. 15, provides that any person who has been injured as a result of conduct prohibited by the antitrust laws may bring suit in federal court to recover three times the damages the person has suffered, as well as costs and reasonable attorneys' fees. Entry of the proposed Final Judgment neither impairs nor assists the bringing of any private antitrust damage action. Under the provisions of Section 5(a) of the Clayton Act, 15 U.S.C. 16(a), the proposed Final Judgment has no prima facie effect in any subsequent private lawsuit that may be brought against RealPage.

V. Procedures Available for Modification of the Proposed Final Judgment

The United States and RealPage have stipulated that the proposed Final Judgment may be entered by the Court after compliance with the provisions of the APPA, provided that the United States has not withdrawn its consent. The APPA conditions entry upon the Court's determination that the proposed Final Judgment is in the public interest.

The APPA provides a period of at least 60 days preceding the effective date of the proposed Final Judgment within which any person may submit to the United States written comments regarding the proposed Final Judgment. Any person who wishes to comment should do so within 60 days of the date of publication of this Competitive Impact Statement in the **Federal Register**, or within 60 days of the first date of publication in a newspaper of the summary of this Competitive Impact Statement, whichever is later. All comments received during this period will be considered by the U.S. Department of Justice, which remains free to withdraw its consent to the proposed Final Judgment at any time before the Court's entry of the Final Judgment. The comments and the responses of the United States will be filed with the Court. In addition, the comments and the United States' responses will be published in the **Federal Register** unless the Court agrees that the United States instead may publish them on the U.S. Department of Justice, Antitrust Division's internet website.

Written comments should be submitted in English to: Danielle Hauck, Acting Chief, Technology and Digital Platforms Section, Antitrust Division, United States Department of Justice, 450 Fifth St. NW, Suite 7100, Washington, DC 20530.

The proposed Final Judgment provides that the Court retains jurisdiction over this action, and the parties may apply to the Court for any order necessary or appropriate for the modification, interpretation, or enforcement of the Final Judgment.

VI. Alternatives to the Proposed Final Judgment

As an alternative to the proposed Final Judgment, the United States considered a full trial on the merits against RealPage. The United States could have continued its litigation against RealPage and brought the case to trial, seeking relief including an injunction against RealPage's sharing of competitively sensitive, nonpublic data with competing landlords, an injunction against RealPage imposing product features in its revenue management products that may have the effect of aligning prices, and an injunction preventing RealPage from facilitating communications in RealPage meetings regarding market trends or pricing strategies. The United States concludes that entry of the proposed Final Judgment is in the public interest insofar as it avoids the time, expense, and uncertainty of a full trial on the merits.

VII. Standard of Review Under the APPA for the Proposed Final Judgment

Under the Clayton Act and APPA, proposed Final Judgments, or ''consent decrees,'' in antitrust cases brought by the United States are subject to a 60-day comment period, after which the Court shall determine whether entry of the proposed Final Judgment ''is in the public interest.'' 15 U.S.C. 16(e)(1). In making that determination, the Court, in accordance with the statute as amended in 2004, is required to consider:

> (A) the competitive impact of such judgment, including termination of alleged violations, provisions for enforcement and modification, duration of relief sought, anticipated effects of alternative remedies actually considered, whether its terms are ambiguous, and any other competitive considerations bearing upon the adequacy of such judgment that the court deems necessary to a determination of whether the consent judgment is in the public interest; and
>
> (B) the impact of entry of such judgment upon competition in the relevant market or markets, upon the public generally and individuals alleging specific injury from the violations set forth in the complaint including consideration of the public benefit, if any, to be derived from a determination of the issues at trial.

15 U.S.C. 16(e)(1)(A) & (B). In considering these statutory factors, the Court's inquiry is necessarily a limited one as the government is entitled to ''broad discretion to settle with the defendant within the reaches of the public interest.'' *United States* v. *Microsoft Corp.,* 56 F.3d 1448, 1461 (D.C. Cir. 1995); *United States* v. *U.S. Airways Grp., Inc.,* 38 F. Supp. 3d 69, 75 (D.D.C. 2014) (explaining that the ''court's inquiry is limited'' in Tunney Act settlements); *United States* v. *InBev N.V./S.A.,* No. 08–1965 (JR), 2009 U.S. Dist. LEXIS 84787, at *3 (D.D.C. Aug. 11, 2009) (noting that a court's review of a proposed Final Judgment is limited and only inquires ''into whether the government's determination that the proposed remedies will cure the antitrust violations alleged in the complaint was reasonable, and whether the mechanisms to enforce the final judgment are clear and manageable''); *United States* v. *Charleston Area Med. Ctr., Inc.,* No. CV 2:16–3664, 2016 WL 6156172, at *2 (S.D.W. Va. Oct. 21, 2016) (explaining that in evaluating whether the proposed final judgment is in the public interest, the inquiry is ''a narrow one.''); *United States* v. *Mountain Health Care,* 1:02–CV–288–T, 2003 WL 22359598, at *7 (W.D.N.C. 2003) (''[W]ith respect to the adequacy of the relief secured by the decree, a court may not 'engage in an unrestricted evaluation of what relief would best serve the public.' '') *citing United States* v. *BNS Inc.,* 858 F.2d 456, 462–63 (9th Cir. 1988)).

As the United States Court of Appeals for the D.C. Circuit has held, under the APPA a court considers, among other things, the relationship between the remedy secured and the specific allegations in the government's Complaint, whether the proposed Final

Judgment is sufficiently clear, whether its enforcement mechanisms are sufficient, and whether it may positively harm third parties. *See Microsoft,* 56 F.3d at 1458–62; *United States* v. *Math Works,* No. 02–888–A, 2003 WL 1922140, *17 (E.D. Va. 2003). With respect to the adequacy of the relief secured by the proposed Final Judgment, a court may not ''make de novo determination of facts and issues.'' *United States* v. *W. Elec. Co.,* 993 F.2d 1572, 1577 (D.C. Cir. 1993) (quotation marks omitted); *see also Microsoft,* 56 F.3d at 1460–62; *United States* v. *Alcoa, Inc.,* 152 F. Supp. 2d 37, 40 (D.D.C. 2001); *United States* v. *Enova Corp.,* 107 F. Supp. 2d 10, 16 (D.D.C. 2000); *InBev,* 2009 U.S. Dist. LEXIS 84787, at *3. Instead, ''[t]he balancing of competing social and political interests affected by a proposed antitrust decree must be left, in the first instance, to the discretion of the Attorney General.'' *W. Elec. Co.,* 993 F.2d at 1577 (quotation marks omitted). ''The court should also bear in mind the *flexibility* of the public interest inquiry: the court's function is not to determine whether the resulting array of rights and liabilities is the one that will *best* serve society, but only to confirm that the resulting settlement is within the *reaches* of the public interest.'' *Microsoft,* 56 F.3d at 1460 (quotation marks omitted); *see also United States* v. *Deutsche Telekom AG,* No. 19–2232 (TJK), 2020 WL 1873555, at *7 (D.D.C. Apr. 14, 2020); *Math Works,* 2003 WL 1922140 at *18; *Mountain Health Care,* 2003 WL 22359598, at *7. More demanding requirements would ''have enormous practical consequences for the government's ability to negotiate future settlements,'' contrary to congressional intent. *Microsoft,* 56 F.3d at 1456. ''The Tunney Act was not intended to create a disincentive to the use of the consent decree.'' *Id.*

The United States' predictions about the efficacy of the remedy are to be afforded deference by the Court. *See, e.g., Microsoft,* 56 F.3d at 1461 (recognizing courts should give ''due respect to the Justice Department's . . . view of the nature of its case''); *United States* v. *Iron Mountain, Inc.,* 217 F. Supp. 3d 146, 152–53 (D.D.C. 2016) (''In evaluating objections to settlement agreements under the Tunney Act, a court must be mindful that [t]he government need not prove that the settlements will perfectly remedy the alleged antitrust harms[;] it need only provide a factual basis for concluding that the settlements are reasonably adequate remedies for the alleged harms.'' (internal citations omitted)); *United States* v. *Republic Servs., Inc.,* 723 F. Supp. 2d 157, 160 (D.D.C. 2010) (noting ''the deferential review to which the government's proposed remedy is accorded''); *United States* v. *Archer-Daniels-Midland Co.,* 272 F. Supp. 2d 1, 6 (D.D.C. 2003) (''A district court must accord due respect to the government's prediction as to the effect of proposed remedies, its perception of the market structure, and its view of the nature of the case.''). The ultimate question is whether ''the remedies [obtained by the Final Judgment are] so inconsonant with the allegations charged as to fall outside of the 'reaches of the public interest.' '' *Microsoft,* 56 F.3d at 1461.

Moreover, the Court's role under the APPA is limited to reviewing the remedy in relationship to the violations that the United States has alleged in its Complaint, and does not authorize the Court to ''construct [its] own hypothetical case and then evaluate the decree against that case.'' *Microsoft,* 56 F.3d at 1459; *see also U.S. Airways,* 38 F. Supp. 3d at 75 (noting that the court must simply determine whether there is a factual foundation for the government's decisions such that its conclusions regarding the proposed settlements are reasonable); *InBev,* 2009 U.S. Dist. LEXIS 84787, at *20 (''[T]he 'public interest' is not to be measured by comparing the violations alleged in the complaint against those the court believes could have, or even should have, been alleged''); *Math Works,* 2003 WL 1922140 at *18; *Mountain Health Care* 2003 WL 22359598, at *8. Because the ''court's authority to review the decree depends entirely on the government's exercising its prosecutorial discretion by bringing a case in the first place,'' it follows that ''the court is only authorized to review the decree itself,'' and not to ''effectively redraft the complaint'' to inquire into other matters that the United States did not pursue. *Microsoft,* 56 F.3d at 1459–60.

In its 2004 amendments to the APPA, Congress made clear its intent to preserve the practical benefits of using judgments proposed by the United States in antitrust enforcement, Public Law 108–237 § 221, and added the unambiguous instruction that ''[n]othing in this section shall be construed to require the court to conduct an evidentiary hearing or to require the court to permit anyone to intervene.'' 15 U.S.C. 16(e)(2); *see also U.S. Airways,* 38 F. Supp. 3d at 76 (indicating that a court is not required to hold an evidentiary hearing or to permit intervenors as part of its review under the Tunney Act). This language explicitly wrote into the statute what Congress intended when it first enacted the Tunney Act in 1974. As Senator Tunney explained: ''[t]he court is nowhere compelled to go to trial or to engage in extended proceedings which might have the effect of vitiating the benefits of prompt and less costly settlement through the consent decree process.'' 119 Cong. Rec. 24,598 (1973) (statement of Sen. Tunney). ''A court can make its public interest determination based on the competitive impact statement and response to public comments alone.'' *U.S. Airways,* 38 F. Supp. 3d at 76 (citing *Enova Corp.,* 107 F. Supp. 2d at 17).

VIII. Determinative Documents

There are no determinative materials or documents within the meaning of the APPA that were considered by the United States in formulating the proposed Final Judgment.

Dated: November 24, 2025

Respectfully submitted,
FOR PLAINTIFF
UNITED STATES OF AMERICA:

Henry C. Su
David A. Geiger
Danielle G. Hauck
John J. Hogan
Kris A. Perez Hicks
Attorneys
United States Department of Justice Antitrust Division
Technology and Digital Platforms Section
450 Fifth St. NW, Suite 7100
Washington, DC 20530
Telephone: (202) 307–6200
Email: *henry.su@usdoj.gov*

[FR Doc. 2025–21966 Filed 12–4–25; 8:45 am]

BILLING CODE 4410–11–P



FEDERAL REGISTER

Vol. 90 Friday,
No. 232 December 5, 2025

Part III

Federal Communications Commission

47 CFR Part 25
Space Modernization for the 21st Century; Proposed Rule

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 25

[SB Docket No. 25–306; FCC 25–69; FR ID 319249]

Space Modernization for the 21st Century

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In the Notice of Proposed Rulemaking (NPRM), the Federal Communications Commission (Commission or we) proposes to overhaul and modernize the Commission's space and earth station licensing process to help ''ensure that new space-based industries, space exploration capabilities, and cutting-edge defense systems are pioneered in America rather than by our adversaries.'' In particular, the NPRM proposes to develop a ''licensing assembly line'' designed so applications can be routed along different paths and segmented for review based on specific aspects of a request. This new process would set the stage for ongoing efficiency gains and would provide greater predictability and flexibility for applicants. In this way, we expect—like actual assembly lines—that the space review processes can be dramatically accelerated while improving the quality of the Commission's space licensing work.

DATES: Comments on the Notice of Proposed Rulemaking (NPRM) are due January 20, 2026. Reply Comments are due February 18, 2026.

ADDRESSES: You may submit comments, identified by SB Docket No. 25–306, by any of the following methods:

☐ *FCC Website: https://apps.fcc.gov/ecfs.* Follow the instructions for submitting comments.

☐ *People with Disabilities:* Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: *FCC504@fcc.gov* or phone: 202–418–0530 or TTY: 202–418–0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Carolyn Mahoney, 202–418–7168, *Carolyn.Mahoney@fcc.gov* or Brandon Padgett, 202–418–1377, *Brandon.Padgett@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's NPRM, FCC 25–69, adopted October 28, 2025, and released October 29, 2025. The document is available for public inspection online at *https://docs.fcc.gov/public/attachments/FCC-25-69A1.pdf.* The document is also available for inspection and copying during business hours in the FCC Reference Center, 45 L Street NE, Washington, DC 20554. To request materials in accessible formats for people with disabilities, send an email to *FCC504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

Procedural Matters

Comment Filing Requirements

Interested parties may file comments and reply comments on or before the dates indicated in the **DATES** section above. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).

- *Electronic Filers.* Comments may be filed electronically using the internet by accessing the ECFS: *https://www.fcc.gov/ecfs.*
- *Paper Filers.* Parties who file by paper must include an original and one copy of each filing.
- Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
- Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express, must be sent to 45 L Street NE, Washington, DC 20554.
- *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice) or TTY: 202–418–0432.
- *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be publicly available online via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

Ex Parte Presentations

Pursuant to § 1.1200(a), this proceeding will be treated as a ''permit-but-disclose'' proceeding in accordance with the Commission's *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with § 1.1206(b). In proceedings governed by § 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.,* .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Regulatory Flexibility Analysis

The Regulatory Flexibility Act of 1980, as amended (RFA), requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that ''the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.'' Accordingly, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA)

concerning the possible impact of the rule and policy changes contained in the NPRM on small entities. The IRFA is set forth in Appendix B of the Commission document, *https://docs.fcc.gov/public/attachments/FCC-25-69A1.pdf.* The Commission invites the general public, in particular small businesses, to comment on the IRFA. Comments must be filed by the deadlines for comments indicated on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA.

Paperwork Reduction Act

The NPRM may contain new or proposed modified information collections. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on any information collections contained in this document, as required by the Paperwork Reduction Act of 1995, 44 U.S.C. 3501–3521. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

OPEN Government Data Act

The OPEN Government Data Act requires agencies to make ''public data assets'' available under an open license and as ''open Government data assets,'' *i.e.,* in machine readable, open format, unencumbered by use restrictions other than intellectual property rights, and based on an open standard that is maintained by a standards organization. This requirement is to be implemented ''in accordance with guidance by the Director'' of the OMB. The term ''public data asset'' means ''a data asset, or part thereof, maintained by the federal government that has been, or may be, released to the public, including any data asset, or part thereof, subject to disclosure under the Freedom of Information Act (FOIA).'' A ''data asset'' is ''a collection of data elements or data sets that may be grouped together,'' and ''data'' is ''recorded information, regardless of form or the media on which the data is recorded.''

Providing Accountability Through Transparency Act

Consistent with the Providing Accountability Through Transparency Act, Public Law 118–9, a summary of this document will be available on *https://www.fcc.gov/proposed-rulemakings.*

Synopsis

I. Introduction

1. Across the United States, the space economy is booming and American companies are building to ensure our nation leads into the final frontier. To assure our nation's continued space leadership, the United States must be the place where the world's space industry builds, operates, and licenses. In a recent Executive Order, the President set our nation on a course ''to ensure that new space-based industries, space exploration capabilities, and cutting-edge defense systems are pioneered in America rather than by our adversaries.'' And the Administration has called for investments in space as a key priority to ''assure America's continued space dominance.''

2. To achieve these goals and to be the nation of choice for space excellence, the United States must also have a modern, efficient space licensing system that enables innovation and exploration. That is why with the Notice of Proposed Rulemaking (NPRM) we are launching a proceeding to modernize the Commission's space and earth station licensing rules to meet the needs of the space economy for today and tomorrow. We expect that modernizing our rules will support the vibrant space economy so that the United States can achieve what the President called for in his 2025 Address to Joint Session of Congress when he said, ''We are going to conquer the vast frontiers of science, and we are going to lead humanity into space and plant the American flag on the planet Mars and even far beyond. And through it all, we are going to rediscover the unstoppable power of the American spirit, and we are going to renew unlimited promise of the American dream.''

3. With these goals in view, our proposal in the NPRM designs a ''licensing assembly line'' to process space and earth station applications with great efficiency and at the speed and scale required by the 21st century space economy. Like a physical assembly line, we seek to move standardized application materials in direct paths from one stage of the review process to the next in a highly predictable way. Given the nature of our licensing duties, our assembly line will be designed so applications can be routed along different paths and segmented for review based on specific aspects of a request. By modernizing processes in our rules, we aim to set the stage for increasing automation over time. In this way, we expect—like actual assembly lines—that the space review processes can become more efficient and dramatically accelerated while improving the quality of the Commission's licensing work for the American people.

II. Background and Objectives

4. In the early years of the Commission's work licensing space-based communications, the industry encompassed a small number of entities, many of which were quasi-governmental and largely focused on geostationary Earth orbit (GEO) deployments. In the 1990s and 2000s, there were cycles of investment and excitement, including increased interest in non-geostationary orbit (NGSO) systems, but many of these proposals met financial or technical challenges. The idea of a satellite broadband service that could fully connect rural areas and even compete with terrestrial offerings seemed impossible. However, in the last decade, the number of satellites launched into orbit, particularly by private companies, has increased dramatically, seeing a more than 10-fold increase in a decade. As a result of this increased launch cadence and growth in satellite technology, the Commission found that last year, the ''. . . availability data indicate that satellite service offering 100/20 Mbps speeds is available to almost 100% of the U.S. population.'' And beyond delivering high-speed internet service, the commercial space industry now includes a varied array of companies providing direct-to-device cell service, resilient enterprise and military connectivity, Earth observation services, and novel space activities. Innovators and explorers are embarking on lunar and interplanetary missions and considering how to use the resources of outer space for the good of humanity. This change and rapid growth in the space industry has created new demands on the Commission's resources and raised new questions about how to apply the existing licensing framework to new satellite and earth station technologies.

5. The expansion of the space economy has resulted in significantly more licensing activity at the Commission. The Commission received 295 space station applications and 2,684 earth station applications in 2024. In contrast, the Commission received only 124 space station applications and 974 earth station applications in 2016. During this time, the complexity, size, and variety of license applications has also changed. Such rapid change in the space economy—and the resulting demands on the Commission's existing licensing system—means our rules and operations must be modernized to

match the realities of the space economy. In the face of greater application volume and highly complex, non-traditional systems, the Commission's framework has resulted in slow decision timelines and unpredictable outcomes. Therefore, the time has come for the Commission to overhaul its space licensing processes. While the Commission has updated some of its licensing rules in recent years in response to these changes, today we initiate the NPRM to avoid piecemeal reforms going forward and to make the licensing process of the future fast, predictable, and flexible.

A. Rationale for Modernizing Space Licensing

6. As we modernize the Commission's space and earth station licensing process, we aim to align our rules with the pace, growth, and innovation in the space economy while upholding our statutory duties. Unnecessary regulatory burden imposed on a dynamic, early growth industry can have substantial costs. Inefficient, slow, and costly license processing thwarts innovation and reduces competition. Complex and prescriptive regulation can support incumbents' lobbying against new innovators, and highly discretionary regulation can enable regulators to arrogate their power at the expense of the public. If regulation prevents deployment of new space systems, consumers and businesses must wait to realize the tangible benefits of new innovations and services flowing from the space economy. Many satellite systems also combine commercial and national security components, and the costs of inefficient regulation may hinder America's defenses or put us at a strategic disadvantage with our adversaries.

7. With the NPRM, we have four main goals: (1) to increase license processing speed; (2) to provide more predictability to applicants and licensees; (3) to provide more flexibility for innovation and for licensees' operations; and (4) to faithfully meet our responsibilities. Pursuit of these goals guides each element of our proposal as we aim to design a system which can efficiently scale with the space economy. These goals flow directly from the mandates in the Communications Act of 1934, as amended (Act), directing the Commission ''to make available, so far as possible, to all people of the United States . . . . world-wide wire and radio communications service'' and to ''encourage the provision of new technologies and services to the public.'' Additionally, the Act provides for the regulation and licensing of radio communications, including satellite communications, for the purpose of national defense and in service of the ''public convenience, interest, or necessity.'' We believe these statutory mandates strongly support our goals of greater speed, predictability, and flexibility in the space and earth station licensing process to promote the wide availability and proliferation of communications and new technologies for the public.

8. Therefore, we direct our space licensing review toward a clear and limited set of concerns when determining if granting a license will serve the ''public convenience, interest, or necessity.'' In particular, these areas are (1) harmful interference, (2) spectrum efficiency, (3) space safety, and (4) foreign ownership. As we re-design the Commission's space licensing processes to increase speed, predictability, and flexibility we must do so in a way that guides our determination as to whether a license for space-based communications is in the public interest based on evaluation in these areas. We recognize that a process which efficiently and effectively reviews license applications for these factors will promote the wide availability of communications delivered by a thriving space economy employing new technologies. In addition, it is our intention that by simplifying and modernizing our space licensing procedures we will ensure that the use of part 5 experimental licenses will again be for the testing and development of truly novel space concepts.

9. *Increasing Processing Speed.* The Commission must increase the speed of application processing to ensure that space innovation is not limited by unnecessary delay, which entails more quickly licensing qualified applicants and dismissing unqualified requests. In burgeoning sectors like space, progress stems from a chain of iterative innovations. This means that seemingly small delays in authorizing beneficial new services—such as a few months extra to process an application—could result in a cascading chain of delays over time. Delay in innovation today means delay in the next step, and then the next, and so on in the iterative innovation process. Over time there will be less advancement, slower economic gains, and a weaker national defense. The Commission's licensing process should foster and support innovation and not be an additional source of delay and uncertainty. The volume and variety of space and earth station applications have been increasing and will continue to do so. Large amounts of staff resources go to sifting through non-standardized application materials to determine whether an application is complete and is in alignment with the Commission's rules. Application review frequently entails excessive, time-consuming back-and-forth between the Commission and applicants, with the Commission having to make a large number of non-routine decisions, which can cause delays. The application process should incentivize applicants to submit clear, high-quality, and complete applications so that Commission staff can focus on whether applicants are technically and financially qualified to deploy their systems rather than manage administrative hurdles unrelated to the quality of the application. Applicants should also have clarity as to the timing under which their applications will be processed so they can plan accordingly when designing and implementing their systems.

10. *Providing More Predictability.* Our goal is for both applicants and the public to be able to generally understand how a request will be handled in terms of process, timeframes, and requirements based on the Commission's rules. In a dynamic, capital-intensive sector like space where funding sources often depend on quick execution and demonstrated progress, it is critical that applicants know what to expect when seeking Commission authorizations. Applicants must be able to plan. Engineers need to know what requirements their systems must meet. Additionally, it is important for licensees to know the rules they must follow after receiving a grant and the consequences for rule violations or non-compliance. Furthermore, in a situation where an entity's actions can have considerable impact on others—for example, one satellite operator causing another harmful interference—it is important that there is predictability in how the regulator will approach a request so that parties can find private agreements with mutually beneficial outcomes. Unfortunately, part 25 of the Commission's rules does not always afford a high level of predictability for applicants. Timelines for acting on some license applications can be years. The sometimes-subjective nature of certain application requirements means that applications receive unpredictable levels of review. The Commission's proposals in the NPRM seek to remedy these issues by providing applicants with predictability in how applications will be processed.

11. *Expanding Flexibility for Operations.* The satellite industry is developing systems, services, and operations that were not envisioned

when the Commission adopted its current rules. The industry has evolved from GSO systems operating within a clear set of parameters to large NGSO constellations and multi-orbit systems. Recently, the Commission has received applications for a highly varied set of operations, including ISAM and lunar missions, without specification on exactly what activities these spacecrafts may undertake in the future. At the same time, existing licensees are looking to upgrade and modify their systems as technology develops. Allowing satellite operators the freedom to find the best and most efficient ways to operate and build complex systems of space-based operations, while upholding the Commission's responsibilities, is critical to the long-term economic development of the industry and our nation's ability to compete with global operators. However, the Commission's existing licensing process was not designed with the scope of the current satellite industry in mind. Certain activities that are unobjectionable and beneficial still require potentially slow review by the Commission. Many requirements can be replaced and made more efficient with the use of modern technology rather than paperwork. Over-regulation not only creates a burden on industry and the Commission but can make operations less efficient. While in the past the Commission noted that broad, somewhat subjective rules could provide flexibility for innovation, experience has shown that they sometimes leave applicants and staff struggling to figure out how a proposal should be evaluated, leading to extended back-and-forth between applicants and staff. Through this modernization effort, the Commission seeks to provide more certainty for applicants to avoid unnecessary delays and allow operators the ability to innovate and provide Americans with the best satellite services technology can offer.

12. Lastly, in addition to our key goals, we also take this as an opportunity to propose clearing out regulatory underbrush. In crafting the proposals in the NPRM, we heavily incorporate suggestions from the *Delete, Delete, Delete* proceeding and seek comment on additional reforms that should be undertaken in light of these proposals to overhaul our approach to regulation. We see our proposals in the NPRM as aligning with the President's Executive Order *Unleashing Prosperity Through Deregulation* to remove ''. . . unnecessary regulatory burdens.''

B. Three Pivots Towards Modernization

13. To modernize our licensing process so it can scale to meet the needs of the space economy, we propose three pivots away from the current framework in our part 25 rules. First, we propose a review process to facilitate permissionless innovation. Second, we propose an overhaul of the application materials for more efficient processing. Third, we propose expanding the freedom applicants and licensees have for designing and operating their systems. We believe these pivots are the conceptual path to achieving greater speed, predictability, and flexibility in space and earth station licensing.

14. *Presumed Acceptable Criteria.* The core of our proposal is an approach to facilitate permissionless innovation which sets forth a set of system features which the Commission generally presumes to be acceptable. Our proposed framework looks to the outcomes and performance of a proposed space system rather than trying to prescriptively regulate how a system must be designed to obtain authorization. The notion behind our proposed framework is that the Commission should set bright-line performance measures and characteristics of systems that it finds are presumed to be in the public interest. That is, the Commission will default toward allowing proposals that fall within these bright-line standards and characteristics. In its review, the Commission can then compare a particular applicant's proposal against such bright-line criteria. This change should allow applicants greater freedom to design systems that meet performance standards rather than the Commission providing detailed direction on how to reach a performance standard. While we recognize some applicants may find it difficult to not have prescriptive rules around how to design their system, we believe this can be mitigated by defining a clear set of boundaries as a kind of safe harbor that companies can build within.

15. Our aim is for this approach to support expedited review of any portions of an application that meet bright-line rules. Doing so then allows for targeted review of any elements which do not meet the bright-line criteria, essentially allowing the Commission to make decisions about systems once in a rulemaking (for all applicants) and taking a posture of defaulting toward permitting any requests meeting the criteria. Space companies will then be incentivized to design their systems to meet these standards that the Commission has found are in the public interest while still allowing for deviation as necessary.

16. One key element of this approach that we propose is an expedited processing pathway. We propose that an application will be placed on public notice for seven days and then be granted quickly in most circumstances if it: (1) meets certain presumed acceptable criteria that the Commission has found to be in the public interest; (2) does not request waivers; and (3) is not subject to certain limited ''exceptions'' to expedited processing. Our expectation is that operators will see expedited processing as a highly desirable way to obtain a license and will design their systems and organize their licensing requests to take advantage of this path. Such an approach with expedited processing delivers by providing faster processing speeds, more predictability as to what features of a system are unobjectionable, and greater flexibility to design systems within the performance parameters presumed to be in the public interest.

17. For applications that do not qualify for expedited processing, our proposal still postures toward granting a license application. We recognize that many applications may not meet all the bright-line standards or that may seek a waiver of the Commission's rules. There also are situations where the Commission will need to consider issues beyond the performance of a particular proposed system, such as how that proposed system will impact other operators' ability to use spectrum. To handle these situations, we propose to adopt a limited set of ''exceptions'' to the expedited processing pathway. We envision using these exceptions as a clear way to identify specific aspects of applications that require targeted review, like off-shoots from an assembly line.

18. Identified exceptions for a given application would serve as the basis for targeted review. That is, the Commission will focus on review and consideration of any identified exceptions in determining whether granting an application is in the public interest. However, existence of an exception should not necessarily mean an extensive or delayed process. For most applications with an identified exception, we propose to place complete applications on public notice for 15 days. After the public comment period ends, we expect the Commission will work quickly through the areas needing focused review. To facilitate timely review and to increase transparency, we also propose the Commission will notify applicants of any or all exceptions still undergoing

Commission review if full action has not been taken within 60 days after the close of the public comment window. This notification will inform the applicant and the public of any areas which still stand as barriers to grant and promote quicker resolution of any outstanding issues. Our expectation is that applications can be granted well before the 60-day window closes if we implement an overhauled process designed to focus attention on the areas that cannot be presumed to be in the public interest. Lastly, to provide transparency and accountability we also propose that the Space Bureau release regular updates tracking the efficiency of the modernized application framework.

19. *Enhanced Application Design.* Our proposed framework also seeks to dramatically increase processing speeds and lower burdens on applicants by using modularity, standardization, and certifications. With such reforms we seek to reduce unnecessary burden on applicants while also facilitating application routing as part of the licensing assembly line. Our vision is that the application itself will be designed so that the Commission can easily determine completeness and then appropriately route the request to expedited processing or for focused review of one or more elements. Further, a modular design will also support future changes to application requirements.

20. Over time, we expect that our standardized and modular application design will allow for increasing automation of licensing. We envision applicants being able to submit requests into an FCC system where, based on responses, the application form dynamically adjusts. Applicants would be able to quickly see which rules apply to their proposal and make certifications alongside such information. The system would also then be able to conduct validation checks, identify incomplete elements, and then route the application to Commission staff with any exceptions already identified. With standardized, machine-readable application materials organized by design, an FCC system could automatically generate public notices and draft grant materials. During the public notice period, commenters could respond to particular elements of a proposal in a system, so that when the comment period closes, all application materials and public comments are already organized by issue so that staff does not have to do such sorting. With time, artificial intelligence (AI) tools can be used to assist, automating parts of the review so that staff can focus on more complex policy questions. While our proposal does not take these steps, our enhanced application design anticipates such developments. Further, section 8(a) of the Communications Act mandates that the Commission assess and collect application fees based on the Commission's costs to process applications. Section 8(c) also requires the Commission to amend the application fee schedule if the Commission determines that the schedule requires amendment to ensure that: (1) such fees reflect increases or decreases in the costs of processing applications at the Commission or (2) such schedule reflects the consolidation or addition of new categories of applications. Thus, as we make changes to our application process, we will also consider as necessary, any changes to the Commission's schedule of application fees that result from a more standardized and modular application design.

21. Under our proposal, applicants would be able to flexibly select the application modules relevant to the system's frequency bands, orbital characteristics (*e.g.,* GSO, NGSO) and services (*e.g.,* fixed-satellite service (FSS); mobile-satellite service (MSS); telemetry, tracking, and command (TT&C)). Applicants would only need to complete the application materials needed for their request and could even choose to segment requests for more efficient processing. This modular approach de-couples in the application the orbital characteristics from the frequency and service elements so there is flexibility in how systems can be licensed. Over time, licensees could use these ''licensing building blocks'' to add to their systems with additional satellites or frequencies or make changes to improve efficiency.

22. One particular example of the flexibility and reduced burden afforded by the modular license approach that we propose is that entities be able to complete the FCC Form 312—Main Form with basic contact and ownership information *without* immediately seeking an authorization request. Then, all future license requests from one applicant could be associated with the single FCC Form 312—Main Form so applicants only need to submit this information once (and keep one form updated) and so all requests and licenses associated with an entity can easily be identified. We also propose to eliminate unnecessary narratives as these impose burden on applicants and can require significant unpacking by staff when reviewing a proposal.

23. Perhaps most important to enhancing the application process, our proposal introduces a series of certifications concerning the bright-line elements that carry a public interest presumption. These certifications are specific to the type of proposed system, such as GSO or NGSO, and applicants will certify affirmatively or negatively as to whether their proposed system meets these prespecified elements. Not only do these certifications allow us to relieve applicants of certain showings, but these certifications can be used to quickly identify specific areas where targeted review is needed. Applicants who provide a negative certification—that is, applicants who certify that their system will *not* meet a bright-line standard that the Commission has determined to be in the public interest—will be required to submit additional information so the Commission may make a determination as to whether the application is in the public interest. But in the case of an affirmative certification, applicants generally will only need to submit system design information collected in non-narrative form.

24. *Increased Freedom for Applicants and Licensees.* Our proposals also seek to increase licensees' freedom to design, build, and operate systems. Our view is that licensees should be able to easily create and authorize systems and then continuously upgrade these systems for greater capability and efficiency. It is economically inefficient for the Commission to require approvals for activities which create no harm or to over-prescribe system design features. To allow operators to have the flexibility to operate and compete in the market, our proposals would both remove the burdens of handling requests for unobjectionable activity and allow operators to improve systems over time.

25. Our proposal allows for freedom and flexibility in numerous respects so that applicants can seek authorizations that work best for their operations and so that licensees can operate as necessary. As a general matter, we follow the principle that if a request or activity does not trigger one of the specific exceptions then it is presumed to be in the public interest and requires minimal review. We also seek to allow entities, in some instances, to evaluate tradeoffs within the licensing process and then choose how to proceed with an application. Here, we note key elements of our proposal intended to offer flexibility to applicants and licensees. First, we propose to expand the set of modifications to a license which would be permitted through only a simple notification and/or certification. This means that licensees will be able to operate more freely and only have to

seek additional authorization when requesting a change which falls outside prespecified boundaries set by the Commission. Second, we propose to update our rules to provide the opportunity for applicants to request conditional grants in situations where such flexibility will fit better with the applicant's planning and design process. For example, we are proposing to grant authorizations conditioned on the applicant submitting a future satisfactory orbital debris showing prior to launch. This change would provide applicants more flexibility as to when they can submit their application to the Commission while still finalizing their system design. Third, our modularized application proposal means applicants can choose to segment their requests. If desired, an applicant could send some requests that will not trigger an exception through expedited processing while segmenting others that will take longer into a different request. In addition, over time, licensees could add satellites or frequencies to their systems incrementally at the pace needed. Fourth, we propose that applicants can request any license term shorter than the default term. Fifth, we propose to allow applicants that are not automatically subject to processing rounds to opt-in to a new processing round approach for certain bands to receive priority if needed. In exchange, the applicant would be required to maintain a surety bond on file with the Commission. This allows entities to decide whether to take on a bond in exchange for priority or whether to operate without priority and not have a bonding requirement. Lastly, for licensees with a bonding requirement, we propose a deescalating surety bond formula that declines with deployment so that licensees can control how quickly and granularly to reduce the bond.

26. A final important element of flexibility in our proposal considers new areas of space and satellite innovation that do not fit neatly into the traditional GSO or NGSO categories. In particular, we propose to create a new category of Variable Trajectory Spacecraft System (VTSS). This proposed category would provide a new licensing pathway for applicants seeking to operate space stations on spacecraft that may not follow predictable trajectories. For example, we believe that the VTSS category would include certain ISAM operations, as well as lunar missions, or missions to other celestial bodies. We recognize these systems need greater flexibility in their operations and therefore propose to update our licensing process and rules to accommodate these operations. One particular way we do this is by proposing to allow VTSS licensees to file propagated ephemeris and engage in collision avoidance rather than having to generally prespecify all activities over the license term.

III. Discussion

27. The NPRM seeks comment on all aspects of the proposal and alternative possibilities. We have organized the discussion in the NPRM around four main threads: (1) the licensing assembly line in which we describe our proposals related to the application process for space and earth stations, including application materials, handling, and decision processing; (2) additional reforms for licensing efficiency where we describe proposals related to space and earth station licenses, such as milestones and surety bonds, and the transition to part 100; (3) operational and technical requirements where we describe our proposals related to operational and technical rules for licensees; and (4) compliance where we describe our proposals for rules addressing violations. In each, we seek to explain how our proposals support the overall goals of the modernization process.

28. We propose to adopt a new part 100 of the Commission's rules that would replace the existing part 25 rules. We believe that creating a new rule part altogether would provide a better organized and improved framework for applicants and industry stakeholders, rather than extensively revising the current rules and potentially creating unnecessary confusion. We therefore propose to create part 100 and sunset part 25. Part 100, which is Reserved, is contained in 47 CFR Subchapter D—Safety and Special Radio Services which is preferrable to the current placement of part 25 in Subchapter B—Common Carrier Services. We make this proposal because, while not all our licensees or market access grantees provide common carrier services, all use radio services. We also propose titling part 100 as ''Space and Earth Station Services'' rather than the current part 25 title, ''Satellite Communications.'' Satellite communications is a subset that does not include communications with earth stations or spacecraft that are not satellites, and as such is limited. The new proposed title encompasses a broader set of communications operations that reflect the current space industry. We seek comment on implementing the new part 100 and on the overall structure of the proposed modernized rules. Are there benefits to retaining part 25, or are there alternative solutions that the Commission should consider in restructuring the rules?

29. Appendix A to the NPRM contains the largely complete proposed part 100. By providing a largely complete text of proposed rules, we aim to provide the public with a meaningful opportunity to comment on the overall framework and detailed, specific rule sections. There are instances where we do not propose specific regulatory text and instead describe a proposal in the text of the NPRM and seek comment on appropriate additional regulatory text. We also propose alternatives to the proposed rule text and seek comment on both the proposed rules in Appendix A and any alternative proposals in the NPRM. In addition, other parts of the Commission's rules contain cross-references to part 25, or specific sections within it, that would need to be updated if part 100 replaces part 25. We also seek comment on the necessary revision of these cross-references, including whether any would involve substantive changes to those rule parts.

30. We propose to organize the new part 100 into four subparts:

Subpart A—General. This would include the legal basis for the rules, authorization requirements, definitions, ownership, references, and preemption of local zoning.

Subpart B—Applications and Licenses. This would include application materials and application processing for space and earth station licenses.

Subpart C—Operational Rules. This would include rules general to all licensees and specific to operations, services, or frequencies.

Subpart D—Compliance. This would include consequences for rule violations.

31. Two of the main goals of this modernization effort are to make the Commission's space and earth station licensing rules easier to understand and to make the application process easier for incumbent and new operators alike. In this regard, an overhaul of certain aspects of our rules could bring more clarity to regulated entities, such as removing redundant portions and separating application requirements from operational rules to clarify for applicants what is required in the application process versus after grant. We believe that the proposed organization of part 100 will help applicants and licensees to more easily understand the application requirements, the application process, the rules applicable to a licensee, and the consequences for non-compliance of the rules and requirements. We seek

comment on this proposed organization of the new part 100. Additionally, we seek comment on whether certain proposed rule sections should be moved to a different subpart.

32. Another fundamental way in which we seek to provide greater clarity as part of our modernization efforts concerns the Commission's use of terms regarding the physical objects in space to which our rules and regulations apply. In the past, the Commission has at times used the terms ''space station,'' ''satellite,'' and ''spacecraft'' interchangeably despite the different definition of each term in the rules. However, such ambiguity does not support a predictable regulatory environment where defined terms carry precise meaning so that the public can understand the rules. Therefore, throughout our proposed revisions, we aim to more carefully apply and delineate these terms. The Commission's statutory authority is rooted in regulating the ''apparatus,'' which in this context includes the ''space station,'' or antenna, as a radiocommunication transmitting device. The space stations in a satellite system that the Commission licenses and regulates are often combined with a ''satellite'' or ''spacecraft'' such that interchangeability of these two terms is not a problem. However, as the Commission anticipates that it will continue to receive more new and novel licensing requests, it is important to clearly distinguish these terms to promote clarity in our rules and in matters of statutory authority. Therefore, we propose to incorporate the definitions of ''space station,'' ''satellite,'' and ''spacecraft'' from parts 2 and 25 into part 100, and use these proposed definitions throughout the NPRM. We broadly seek comment on these definitions and these concepts. We also seek comment on the use of each term throughout the proposed rules and ask whether there are instances where a different term or definition may be more appropriate.

A. Licensing Assembly Line

33. Our proposed ''licensing assembly line'' is designed so applicants can efficiently prepare applications which can be routed so that applications are identified for quick review (*i.e.,* expedited processing) or targeted review (*i.e.,* exceptions to expedited processing). Like an assembly line, the proposed approach aims to standardize the review process and route the review of each application on a predictable and ever-moving track. We seek comment on this proposed approach.

34. The licensing assembly line proposes three key phases. First, the modular application phase where applicants submit applications or other requests to the Commission. Second, the application processing phase where the request is prepared for a decision in a timely fashion by establishing completeness, seeking public comment, and requesting or receiving any additional information or amendments. Third, the application decision phase in which the Commission applies a structured review process to decide on the request in accordance with the rules. The particulars of these three phases are embodied by the rules proposed in Appendix A and are discussed below.

35. Within the proposed part 100, ''Subpart B—Applications and Licenses'' is where we propose rules for accepting and processing applications. In subpart B, we propose to organize the rule sections covering the space and earth station application requirements as well as rules for application review. Our expectation is that subpart B would be the primary portion of our rules that the public and regulated entities would reference to understand how to apply for a space station or earth station license and the application review process. We seek comment on the general organization of part 100 proposed below and in Appendix A, as well as on the specific proposals for each section.

1. Application Modularity; Required Forms

36. We propose to require applicants to submit their space and earth station applications by completing one or more application pieces depending on the nature of the request. Relying on modularity will mean applicants only need to complete relevant portions of the application and the Commission can efficiently design and update internal review processes for applications. We intend for this approach to apply to any type of application, including initial space and earth stations applications, petitions for market access, amendments, modifications, requests for special temporary authority (STA), and any other applications. The key modular pieces of the application materials under our proposal for space station applications include General and Ownership Information on FCC Form 312—Main Form, Orbital Elements on Schedule O to the FCC Form 312, and Frequency Elements on Schedule F to the FCC Form 312. Earth station applicants would file FCC Form 312—Main Form and Schedule B to FCC Form 312. Additional information would be required for applications to provide Supplemental Coverage from Space (SCS) and petitions for U.S. market access.

37. We propose to modularize the information that space station applicants must provide in the new part 100. Specifically, we propose to condense the information required for space station applications into three rule sections in part 100: one section for general applicant information; one section that contains the orbital information for a proposed system; and one section that contains the frequency information for a proposed system. Many of the information requirements that we propose in these sections are similar to the current part 25 rules, though we have sought to significantly reduce what is required. We also propose in many of these information requirements to shift away from requiring narratives and demonstrations and shift to requiring more straightforward pieces of information. In making these changes we propose to replace the current Schedule S and much of the narrative required for space station applicants with two new schedules to the FCC Form 312: Schedule O and Schedule F. Schedule O would contain the orbital information and Schedule F would contain the frequency information related to the space station application. We propose to still require earth station applicants to submit Schedule B but propose streamlined revisions.

38. Applicants would only need to complete the portions of the forms that pertain to their requested operations. We propose to still require a description of the proposed system in the application but seek to substantially reduce the narratives required. Experience with part 25 application requirements shows that lengthy narratives and non-standard submissions can slow the review process as the Commission must spend time parsing the narrative and reconciling inconsistencies with other parts of the application. Additionally, we believe that this approach could facilitate intake of application data in standardized formats for improved review over time. By modularizing the orbital and frequency information, we seek to provide a wide range of flexibility for applicants. For instance, we envision this modularity facilitating simpler approval of hosted space stations and space-as-a-service systems by only requiring the information needed for their proposal. We seek comment on how our proposed application design could support such flexibility. Are there any changes we should make to our proposal for these

kinds of requests? We also want the application process to be flexible enough to accommodate novel proposals. For instance, how can the application process accommodate an operator who seeks to transfer a hosted space station from one spacecraft to another? We seek comment on the types of systems that need flexibility and how our application materials can support such requests in line with our goals.

39. We also propose to continue to require electronic submission of applications via ICFS or another successor system and propose delegating to the Space Bureau the ability to designate the specific application filing system. In addition, we propose to codify that waiver requests are not necessary for submission of supplements or exhibits filed contemporaneously with applications due to technical limitations of the designated forms. We also propose that, consistent with Commission precedent and practice, applicants would not be entitled to refund of application filing fees once an application is reviewed. We seek comment on these proposed changes and generally on whether any changes related to the application fee rules in part 1, subpart G, or the ICFS rules in part 1, subpart Y would be required as a result of the proposals in the NPRM.

40. While the proposed rules set forth the requirements for application materials, we expect the form and format will need to be carefully designed to support our goals. Furthermore, we anticipate the need for the form and format of applications to evolve over time. Therefore, we plan to delegate authority to the Space Bureau to determine and revise the form and format for filing application materials and for designating the system for the intake of those materials. In particular, we plan to delegate to the Space Bureau the authority to announce through public notice any changes to the form and format of required application materials. This delegated authority would allow the Space Bureau to modernize and streamline the application process as necessary through improved technology and other process design improvements. We also propose to delegate authority to the Space Bureau to proceed by notice and comment rulemaking in making these changes if the Space Bureau deems required or advisable. Delegating authority to the Space Bureau as set forth above will allow it to effectuate improvements as quickly as possible. Since these delegations of authority, if made, might be of a continuing nature, we seek comment on whether corresponding rule changes should be made to Section 0.51 or other parts of our regulations. We seek comment on this approach.

a. FCC Form 312—Main Form

41. Section 25.114(a) directs applicants for NGSO and GSO space station authorizations to submit applications via FCC Form 312—Main Form, with the required exhibits attached. The FCC Form 312—Main Form also prompts applicants to respond to a number of questions relating to the applicant's compliance with the Commission's environmental policy rules, basic qualifications, and ownership, and requires certifications to the accuracy of the information provided therein. We propose to create a new rule section entitled ''Application Requirements of the FCC Form 312—Main Form'' that aggregates the required information for space or earth station license applications with the FCC Form 312—Main Form. Specifically, this section would continue to require applicants to submit contact information, management and ownership information, and attest to certifications that are included in the existing application forms. We propose to connect the requirements with the FCC Form 312—Main Form in the rules so that it is clear what information applicants must provide in applications. We seek comment on these proposals. Does this proposal provide predictability for applicants? Is there additional information that should be included in this form?

42. We propose to retain the FCC Form 312—Main Form existing requirement that the applicant include an attestation, made under penalty of perjury, that all information submitted on FCC Form 312—Main Form and any associated forms has been verified for accuracy and is believed to be complete and accurate at the time of submission similar to what is currently required by our forms. The Commission often receives applications with incomplete, inconsistent, and inaccurate information, and staff have generally engaged in a time-consuming process of guiding applicants on how to correct and amend applications so that they are acceptable for filing. Should an additional requirement be added so that the attestation be made by an officer of the applicant filing the FCC Form 312—Main Form to better ensure that the information is complete, consistent, and accurate since the submission might be taken more seriously by leadership of the entity filing the authorization if an officer has to attest? Currently, all applications are subject to the requirements outlined in part 1 of the Commission's rules to maintain the ongoing accuracy of its materials.

43. We also seek to reduce the need for applicants to fill out the same form multiple times with identical information when applying for additional space or earth station authorizations. Under the current rules, applicants must re-file the same information required by FCC Form 312, Main Form for every request. We propose to allow applicants to certify that no information has changed from a previously filed FCC Form 312—Main Form rather than requiring them to submit a new FCC Form 312—Main Form with each request. We seek comment on this proposal generally and invite suggestions on how to operationalize this requirement. Specifically, should the Commission allow applicants to certify that no information has changed from a previously submitted FCC Form 312—Main Form and provide the corresponding file number? Would this proposal relieve any significant burdens on applicants such that it would justify the operational changes that may need to be made to ICFS?

44. We also propose an avenue that would bifurcate the FCC Form 312—Main Form from the associated application schedules so that applicants could elect to file the FCC Form 312—Main Form independent of an application for space or earth station authorization. We believe that independent filing of the FCC Form 312—Main Form would allow the Commission to make a preliminary determination as to whether an applicant is qualified to hold a space station or earth station license before they actually apply for a license. Since the FCC Form 312—Main Form collects ownership information, we propose to allow entities to seek preliminary-clearance to hold a license which could facilitate accelerated review for transfers of control or assignments. Specifically, this would allow an applicant seeking to obtain a space station or earth station authorization to submit an FCC Form 312—Main Form in advance of a transfer of control or assignment and have the Commission review the ownership and legal qualifications of the applicant in advance of any transfer or assignment. It could also be a way for entities who do not typically operate space or earth stations to be pre-cleared to hold a license if that would facilitate a contractual arrangement. We seek comment on this proposal and any potential alternatives. Would this proposal facilitate a more efficient review of basic licensee qualifications

and promote investment and capital formation in the space sector? If we were to adopt this proposal, should the Commission adopt a new application fee for reviewing an FCC Form 312—Main Form application that is not associated with an underlying application, consistent with section 8 of the Act? We believe the Act provides authority for creating a process that bifurcates preliminary review of applicant qualifications from the final review of all elements of an application to achieve permissible policy objectives, such as facilitating efficient capital formation to promote investment in communications facilities. What rules, if any, need to be added to carry out this proposal? Are there any legal barriers to the Commission providing preliminary review of applicant qualifications, subject to review of any new information that may be provided in connection with a complete application for authorization?

b. Ownership Information

45. The Commission also proposes to codify in part 100 the long-standing requirement that space station applicants include a disclosure of certain management and ownership information in FCC Form 312—Main Form, and to expand this requirement to every applicant filing an FCC Form 312—Main Form, including all earth station applicants. This information has been required to ensure that applicants meet the basic qualifications to hold satellite licenses and grants of market access. While this information is already required by the current FCC Form 312—Main Form for space station applicants, we propose to include a reportable ownership requirement in part 100 that all applicants disclose information about individuals or entities holding a 10% or more direct or indirect (equity and/or voting interest) in the applicant or a controlling interest, as well as the names, citizenship, and address of each officer and director in the applicant. These requirements would also allow the Commission to identify domestic and foreign persons, governments, or entities that hold 10% or more interest, consistent with current practice. We believe that such information allows the Commission to assess whether grant of an application will serve the public interest, including consideration of any national security concerns and a determination of whether to refer an application to the Executive Branch for review to assess any national security or law enforcement issues presented by foreign ownership. We seek comment on how these proposed regulations interact with 47 CFR 1.5000 et. seq., which apply to satellite or earth station common carriers, and how to enable a single set of ownership rules with a uniform 10% reportable ownership threshold that apply to all satellite and earth station licensees and recipients of market access grants.

46. The Commission adopted a *Notice of Proposed Rulemaking* in May 2025 proposing foreign adversary ownership certification and information collection requirements for all entities holding covered Commission licenses or authorizations (*Foreign Adversary NPRM*). Specifically, the *Foreign Adversary NPRM* proposes to require such entities to affirmatively certify whether the entity is or is not directly or indirectly owned by, controlled by, or subject to the jurisdiction or direction of a foreign adversary, and if so, to submit any additional information on foreign adversary control including identities, citizenships, and descriptions of any held control. The *Foreign Adversary NPRM* proposes to require foreign adversary certification and reporting for satellite networks, specifically seeking comment on whether to modify FCC Form 312—Main Form, along with other categories of satellite licensing, to include a certification on an applicant's foreign adversary ownership. We propose to align our final rules in this proceeding with the final rules established in the *Foreign Adversary NPRM,* including the final decision on whether those requirements should be incorporated into existing licensing rules or whether the Commission should create a single set of new rules that apply to all regulated entities and whether the requirements should be reflected in FCC Form 312—Main Form.

47. Finally, we propose to incorporate the current requirement that applicants submit an ownership diagram that illustrates the applicant's vertical ownership structure, including the direct and indirect ownership interests with 10% or more ownership interest or controlling interest. This chart should clearly indicate the non-U.S. citizenship entities. As ownership and control structure of companies in the space industry have become increasingly complex, Commission staff have routinely requested that applicants provide information in this format to facilitate their analysis. We propose requiring this submission with the FCC Form 312—Main Form at the initial stage of the application process to avoid delays. We seek comment on whether this proposal should be included in final rules and any alternative methods for collecting ownership information.

c. General Space Station Application Requirements

48. We propose to create a rule section that would aggregate many of the space station application requirements currently found in separate sections of part 25 and that apply to all space station applicants. This rule section would consolidate certain part 25 rules into one rule section requiring applicants to provide the type of authorization requested, contact information for the applicant, a comprehensive description describing the satellite system, a brief public interest statement, and ITU filings and cost recovery materials. These proposed requirements are similar to the current requirements found in part 25, but we seek comment on whether certain information should be added, eliminated, or modified.

49. The FCC Form 312—Main Form requires space station applicants to submit contact information for the applicant and a point of contact if different from the applicant. We propose to retain this information and include contact information for the person or entity capable of and responsible for ceasing transmissions directly on the FCC Form 312—Main Form, which applicants are already required to submit to the Commission under the § 25.271 point of contact filing requirement. This section would also require applicants to submit a comprehensive statement that includes a description of the satellite system, detailing its services, orbits, and planned operations. While we propose to require applicants to submit most technical elements of their applications on one or more schedules to the FCC Form 312, we view the comprehensive statement as the portion of the application that describes in relatively plain language the overall design and operations of the proposed system. We see this as a valuable element that puts the rest of the information in the application into context and makes it easier for the public to understand and comment on applications when they are placed on public notice. However, we would also like to reduce the burden of unnecessary requirements. Accordingly, we propose that applicants provide a comprehensive statement rather than the currently required ''comprehensive proposal'' in § 25.114, which refers to the application in its entirety. We tentatively conclude that a statement will result in a reduced burden on applicants while still giving the public and the Commission an opportunity to scrutinize any planned operations. Should we issue additional guidance

regarding what entails a comprehensive statement to ensure that applications contain sufficient information for Commission review while preventing applicants from having to expend resources on unnecessary showings? Are there more effective or efficient ways to collect the required information within the overall application? We seek comment on whether the comprehensive statement element of an application is necessary for public review of applications. Is the statement at all redundant to any other proposed requirement?

50. We also propose in Appendix A to retain the required public interest statement supporting grant of the proposed operations. However, we seek comment on whether a public interest statement is necessary. Our proposed modified application process is designed to identify parts of an application where either a public interest presumption cannot be made *ex ante* or where a more focused review of the merits is needed. In those situations, the applicant would provide information to support a grant of authorization. Therefore, is it necessary to require a separate public interest statement? If we do retain this requirement in the new proposed rules, are there ways to limit the burden on applicants in preparing public interest statements?

51. We also propose to codify that an operator may file an application requesting authority for multiple GSO satellites under a single call sign as long as the necessary information is provided for each specific GSO satellite listed in the application. Historically, the Commission has licensed single GSO satellites for a single location on the geostationary arc. This is largely due to the distance from Earth, which requires high power and large GSO satellites that are expensive to construct, launch, and operate. But that is beginning to change. As satellite systems are becoming more advanced with increased technical capabilities, we anticipate that applicants may seek to operate multiple satellites at one location on the geostationary arc. We therefore propose to modify our rules to allow applicants to file for and receive a GSO space station license for multiple GSO satellites. We seek comment on this proposal. Should applicants only be allowed to file a single application for multiple GSO satellites if those satellites will be located at the same location on the GSO arc? Should there be a maximum number of GSO satellites allowed to operate under one license? Should existing operators be allowed to combine multiple GSO satellites under one license?

52. Finally, are there any additional requirements that generally pertain to space station applicants that should be included here? Are there elements we propose which should be removed or changed?

d. Space Station Orbital Requirements; Schedule O

53. We propose to create a new schedule to the FCC Form 312, Schedule O, as part of the application requirements for space station applicants to submit the corresponding orbital information for proposed systems. Applicants seeking license authorizations for GSO satellite systems, NGSO satellite systems, VTSS, and Multi-Orbit Satellite Systems (MOSS) would be required to submit Schedule O as part of their initial application.

54. In the proposed Schedule O, applicants would provide the system's orbital information, such as the number of satellites and orbital planes. Applicants would also certify whether a proposed system would meet a set of bright-line orbital criteria. These certification criteria, including collision risk and human casualty risk, would define the contours of the orbital criteria that the Commission presumes to be in the public interest. We want the part 100 application materials to clearly define what applicants must submit and we believe that the proposed Schedule O will help to reduce uncertainty on the orbital information required. Certain current part 25 rules require statements or technical disclosures demonstrating how the applicant meets the orbital criteria. Under our proposal, we seek to allow applicants to certify affirmatively or negatively that their system will meet the criteria, instead of preparing statements describing in detail how their system will meet a certain standard, and the Commission can verify this certification via the technical information included in the submitted orbital debris mitigation plan. In the case of a negative certification, the applicant would then submit additional information to justify why the request is in the public interest. We have largely transferred from part 25 to part 100 the same required orbital showings, but have sought to revise these showings into bright-line standards to support our certification approach where possible. In this way, applicants can have clarity on what exactly the Commission will consider and then need only submit a public interest justification for a request outside of the presumed acceptable orbital debris criteria.

55. The proposed Schedule O would aggregate some of the requirements located in part 100 to help applicants easily determine and certify whether the orbital components of their proposed system are in compliance with the Commission's rules. Additionally, Commission staff would be able to review an applicant's Schedule O to quickly determine whether the application meets the orbital requirements or requires further review. With this proposed Schedule O, we seek to clearly organize the information required under the proposed rules and provide Commission staff with an easy way to identify applications that require closer review, thereby making the licensing process more efficient. In cases where the applicant cannot certify compliance in the affirmative, then the applicant would be permitted to submit a justification for Commission review to determine if granting the license is in the public interest. In this way, the application materials would, by design, assist with routing an application along the licensing assembly line. We seek comment on this as well as the general proposal outlined here. Are the proposed Schedule O and orbital certifications therein sufficient for the Commission and the public to analyze space station applications?

56. As part of providing the orbital information for a system, under our proposal applicants will need to identify their proposal as a GSO satellite system, an NGSO satellite system, a VTSS, or a MOSS. Depending on the type of request, we propose specific application requirements. The proposed definitions and application requirements for each type of system are discussed below.

e. GSO Satellite Systems

57. The Commission's rules currently define a ''Geostationary-orbit satellite'' as ''[a] geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a geosynchronous satellite which remains approximately fixed relative to the Earth.'' This definition is included in both parts 2 and 25 of the Commission's rules, and we therefore propose to forgo its inclusion in part 100 as unnecessary and retain the definition in part 2. We do, however, propose to adopt a definition of ''GSO satellite system'' to help applicants and operators determine when a defined GSO satellite would be classified as part of a larger GSO system in the context of the Commission's regulations. We propose to define a ''GSO satellite system'' as, ''a system composed of one

or more geostationary-orbit satellites operating together at a single location and under a single call sign.'' We seek comment on this proposed definition. Should we expand this definition to include multiple GSO satellites operating at different locations as part of the same call sign? Are there other defining traits of a GSO satellite system that should be included in this definition? Should the definition require that the multiple GSO satellites be controlled by a single network control center?

58. We propose to significantly reduce the amount of information required for applicants for GSO space stations and satellite systems. Specifically, we propose to require the requested orbital location, certifications as to whether the satellite(s) will comply with the two-degree spacing requirements on the U.S. arc and the orbital debris mitigation rules we propose in subpart C. We also propose to require materials be provided to explain orbital debris mitigation plans and end-of-life disposal plans in support of the certification. We seek comment on this proposal. Is there any additional information the Commission should include in this section? Are the rules proposed in Appendix A clear so that applicants understand what is required?

f. NGSO Satellite Systems

59. We propose to codify a definition of ''NGSO satellite system.'' We think that this will make it easier for Commission staff and applicants to refer to applications and discrete satellite systems, particularly if certain applicants apply for multiple satellite systems. Specifically, we propose to define ''NGSO satellite system'' as ''[a] system of one or more non-geostationary orbit satellites operating together under one space station call sign.'' We seek comment on the proposed definition and whether it will facilitate flexibility for operators over time. Does this definition support flexibility and efficiency in how operators organize their systems? As operators build and modify their systems through the licensing process, there may be value in allowing an operator to consolidate multiple call signs so that changes to the operator's deployed system only require a change to one call sign. Should we limit the proposed ''NGSO satellite system'' definition or make clear that licensees cannot consolidate satellites that would otherwise be viewed as separate systems into a single system with a single call sign? How should we determine whether satellites are ''operating together''? Should we allow applicants to define the limits of their own satellite systems for purposes of deciding whether a separate license and/or call sign is necessary?

60. We propose to divide the information that NGSO space station applicants must provide into three parts: technical information, certifications, and additional information. The technical information that we propose to require is similar to current part 25 requirements. We propose rules in Appendix A that include information such as the number of satellites in a constellation, the requested orbital planes, inclinations, and apogee and perigee, among others. We seek comment on this proposal. Does the information we propose to require provide enough flexibility for modern systems to be described?

61. Is there any additional information that the Commission should require for both the Commission and the public to better evaluate applications, or information we do not need to require? For NGSO satellite systems, are there different aspects of a system design we should collect, or aspects we should collect differently, to ensure applicants can request the type of flexibility needed for their proposed operations? For example, do the requirements afford the opportunity for requests involving flexibility in adjusting systems across orbits or shells? Do we need to specify that the information provided only needs to reflect an applicant's initial deployment but that the system can operate flexibly as long as it is done within our rules and subject to any license conditions? Are there other areas we can build in flexibility so that applicants may request to operate within certain envelopes? If so, how would we incorporate this into our application requirements and the forms?

62. The list of proposed certifications for NGSO satellite system applicants is set forth in Appendix A. These proposed certifications include bright-line criteria that applicants must certify whether or not their requested system will meet. Many of these criteria are taken from the current streamlined small space station authorization process in part 25. For example, we propose to require applicants to certify whether their satellite(s) will be 10 cm or larger in the smallest dimension. We believe that these bright-line criteria, drawn largely from current information requirements in part 25, will make the application review process more efficient because it will remove subjective elements from the review. We seek comment on this proposal, including on the specifics of each certification we propose. Are the certifications clear enough so that applicants can make accurate certifications? Is the way we propose to rely on the National Aeronautics and Space Administration (NASA) Debris Assessment Software appropriate? Do we need to provide additional guidance as to how collision probabilities should be calculated? Do we need to provide guidance on what it means for a satellite to be able to be ''maneuvered effectively'' under proposed rule § 100.111(c)(2)(vi)? Are there additional certifications that should be added, or proposed certifications that should be deleted? Are there other proposed rules or requirements that could be turned into certifications?

63. Similar to our current application process, we propose to require that applicants submit an orbital debris mitigation plan that details their end-of-life disposal plan and demonstrates how the applicant will comply with the orbital debris rules and required certifications in subpart C of the proposed new part 100. Additionally, for applicants who may request a waiver of any orbital debris rules or certify that they will not comply with one of the bright-line rules we propose that they would provide the necessary technical information to supporting the specific waiver request. We seek comment on this proposal. Would it be helpful for the Commission to release guidance documents with examples for newer applicants to use as a model? Our goal is for the orbital debris mitigation plans to create as little burden as possible while supporting the certifications made in the application. Therefore, what steps can the Commission take to reduce the burden of these plans? Given that ensuring compliance with the orbital debris certifications will require running orbital debris models, is requiring submission of the report any more burdensome?

64. We also propose to require NGSO satellite system applicants whose requested operations trigger certain information requirements to submit additional information. We believe that these situations will arise in two cases. First, when an applicant certifies that it will not meet one of the proposed bright-line criteria, that applicant would need to provide additional justification to support a grant by the Commission. For example, an application for an NGSO satellite system with a human casualty risk that is greater than 1 in 10,000 would not fit within the criteria that the Commission presumes *ex ante* to be in the public interest. Accordingly, the applicant would need to justify why it is in the public interest for the Commission to grant the application despite having a higher casualty risk.

The second case is when an applicant proposes specific system operations where the Commission has identified that such operations require additional information. For example, we propose to require applicants whose space stations will transit through orbits used by inhabitable spacecraft to provide a description of the design and operational strategies they would employ to minimize the risk of collision with any inhabitable spacecraft. An applicant who falls within this category would then provide additional information to the Commission when they submit their application so that the Commission can determine whether granting the application is in the public interest. Under this proposal, applicants would submit additional information where necessary either in a text box on Schedule O or by filing a supplement to Schedule O. We believe including specific circumstances that require applicants to submit additional information in the ''Additional Information'' section will make it easier for applicants to identify whether they need to submit the required information. We seek comment on this proposal. Are there other information requirements that would pertain to many NGSO satellite systems—but not all—that should be included in this section? Should we place any limits on the information or its form or format to reduce burden or promote efficient review?

g. Variable Trajectory Spacecraft Systems

65. Increasingly, the Commission is receiving applications for systems that do not fit neatly into the construct of a traditional NGSO or GSO system. These applications instead seek authority for operating space stations on spacecraft with variable orbital parameters in order to conduct novel space activities. Additionally, the Commission has already issued licenses and continues to receive numerous applications for lunar landers and operations. In line with the Commission's modernization goals, we propose to add a new type of license for space stations on a ''Variable Trajectory Spacecraft System'' or VTSS. Specifically, we propose to define VTSS as, ''[o]ne or more spacecraft either operating beyond the geosynchronous orbit or operating without fixed or predictable orbital patterns over the course of its lifetime and operating under one space station call sign.'' We intend for this defined category of operations to capture applications for systems that do not fit within the traditional idea of an NGSO or GSO satellite system which have generally predictable and stable orbits. Specifically, under our proposal we expect VTSS would encompass applications for many ISAM systems, orbital transfer vehicles, lunar operations, other novel space activities and operations beyond geosynchronous orbit to asteroids and other planets, and applications for space stations that do not fit neatly within the traditional idea of an NGSO or GSO satellite or satellite system. These operations are often unique in their orbital parameters because satellites or spacecraft may move around to service different spacecraft in orbit, or they may move between NGSO and GSO orbits, or because they transit to or orbit around the moon or other celestial bodies. Our expectation is that VTSS license requests will be distinct from GSO or NGSO requests because of the variability in the orbital parameters of the spacecraft over the course of the license term. We seek comment on this definition and whether it will provide the clarity and distinction needed so that applicants are able to clearly determine whether they need to file an application for a VTSS or a different system type.

66. We seek comment on the proposed definition of VTSS and on the category more broadly. We believe there is a need to have a definition and licensing category for space stations that encompasses the wide range of applications the Commission has received and will continue to receive as companies innovate and seek authorizations for radiocommunications to support novel space activities. Does our proposal for the VTSS definition and licensing category adequately encompass the types of novel operations at the forefront of the industry? Is it sufficiently future-looking and distinct from our proposed definitions of GSO satellite system and NGSO satellite system? Would it make more sense to separate the definition so that space stations traveling beyond the geosynchronous orbit are separate from space stations operating in NGSO or GSO with variable orbits? While we propose to define VTSS (and NGSO and GSO) with respect to the orbital parameters of the system containing the space station(s) being licensed, would it make more sense to define this category based on spectrum use, with a focus on space stations that seek authority for communications not to provide services directly to consumers on Earth, but to operate spacecraft that will provide services in or beyond Earth's orbit? To provide modularity and flexibility, our proposal seeks to separate in the application process the orbital parameters of a system from the frequencies and spectrum use but we welcome suggestions for other approaches. Should we permit operators to file separate Schedule O and Schedule F for propulsion, sensor, or communications payloads that evolve over time? Furthermore, are there alternative names that would fit this definition better? Would Dynamic Satellite (or Spacecraft) System, Non-Standard Orbital Operations, Flexible Space Activities, Non-Conventional Satellite (or Spacecraft) System, or Mission Infrastructure Support Communications (MISC) be better names? Or should the Commission select a more colloquial name like Weird Space Stuff (WSS) to describe this class of applications?

67. We propose to separately specify the information that VTSS applicants must submit when filing an application under the proposed part 100 to make it easier for applicants to know which information is required of them and as a recognition that review of VTSS applications will differ from review of NGSO or GSO applications due to the unique nature of the system. Specifically, we propose to require VTSS applicants to submit information about the number of spacecraft they seek authority for as part of the system, the range of altitudes at which those space stations will operate, and the anticipated amount of time the space station(s) are expected to operate in any particular phase of a mission. These proposed requirements are similar to the proposed requirements for NGSO satellite systems, but differ slightly because we believe they will give operators flexibility in designing systems that do not follow traditional NGSO or GSO operations, while allowing the Commission to collect the information necessary to evaluate a system's potential to cause interference to other operators. We seek comment on these proposed requirements. Are there additional information requirements that should be included? Should they be further subdivided so that certain requirements only apply to certain sub-categories of VTSS, like lunar missions?

68. We also propose to include certifications for VTSS applicants similar to the certifications we propose for GSO and NGSO applicants. We propose fewer certifications for VTSS applicants than NGSO applicants to account for the added flexibility that we seek to provide these operators. Some certifications are unique to the types of operations anticipated under a VTSS application. Specifically, we propose to require applicants who plan to conduct

servicing missions to certify that operations will only happen with the consent of the client and that the applicant will consult with other relevant federal agencies. Additionally, we propose to require operators to certify that they will comply with the relevant end-of-life disposal rules for the orbit at which they will terminate operations. For example, an operator that plans to conduct servicing in medium Earth orbit (MEO) and then move to service a satellite in GEO would have to certify that they will comply with the end-of-life disposal rules for GSO satellites. We seek comment on these proposals. Additionally, is there anything specific the Commission should require from applicants seeking to provide servicing as evidence of client consent? Will the proposed information requirements for VTSS applicants provide operators with flexibility to design and operate novel space stations for novel services?

69. We currently propose adding a rule that requires all space station licensees to share ephemeris data more broadly, which is discussed further below. Is that proposed rule sufficient for VTSS applicants who will be moving spacecraft around more variably and interacting with other satellites on orbit? Should the rule be modified or changed to effectuate the goals outlined above for VTSS applicants and licensees? Should the Commission encourage or require standardized telemetry formats for conjunction assessment and covariance data? What sources might be used to set such standards?

70. In addition to the rule requiring space station licensees to share ephemeris data, we propose to require VTSS applicants to certify whether they will share propagated ephemeris and covariance data prior to and during any planned maneuvers or rendezvous and proximity operations. We believe that for operators planning to move their spacecraft over the course of their lifetime and perform RPO maneuvers, sharing propagated ephemeris and covariance data is in the public interest so the Commission and public may have information on the location of the licensed space station(s) attached to the spacecraft. Having VTSS operators share propagated ephemeris could allow licensees the flexibility to move between orbits while maintaining transparency as to where a licensed space station is. Additionally, this will support space safety and help other operators protect their satellites as well. We therefore propose adding this certification to encourage applicants to file ephemeris and to assist the Commission in quickly identifying VTSS applications that need further review if the applicant is not willing or able to share ephemeris information. We seek comment on this proposal.

71. We also seek comment on whether we should allow VTSS operators who decline to share their propagated ephemeris and covariance data to instead submit a completed agreement with another government agency approving the applicant's space safety plan. Given that some operators work closely with federal agencies, would it be feasible to rely on another federal agency to review and coordinate a VTSS applicant's plans consistent with our obligations under the statute? Could allowing applicants to work with other government agencies for operations that are unique like those we envision under the VTSS framework and submit a coordinated agreement for consideration by the Commission be a substitute for sharing propagated ephemeris and covariance data? Are there other possible ways that operators could meet the needs we identify as in the public interest if they cannot or will not certify to submitting their ephemeris data? Should operators ever be allowed to refuse to submit this data if they are planning on performing maneuvers and RPO? Should we let VTSS applicants submit an orbital debris mitigation plan and certifications to the requirements for NGSO satellite systems or GSO satellite systems, depending on the proposed operations?

72. We also propose to require that VTSS applicants submit certain additional information depending on the specific requested operations. In this section for additional information, we propose to require VTSS applicants whose space stations will travel beyond the geosynchronous orbit to submit a description of any instruments or rovers onboard that will engage in radiofrequency communications with the spacecraft as well as a description of coordination with government entities such as the National Science Foundation We seek comment on this proposal. These information requirements come from the Commission's experience with lunar applications. Are there additional information requirements that the Commission should seek for these missions? We also propose to require applicants who plan to engage in servicing or otherwise interact with other spacecraft on-orbit to submit the following information: a list of FCC file numbers or call signs for applications or grants related to the operations, including for client space stations; a list of ITU filings or United Nations (U.N.) registration information, or the expected State of Registry with the U.N., for any space stations not licensed by the FCC or without market access that will be client spacecraft or related to the proposed operations; and a statement disclosing planned proximity operations and addressing any debris generation. Since many VTSS operators may not likely know at the application stage the particulars of this information, should we instead set this as a notification requirement unless the information is already known? Could the Commission, working with others in the United States government, create pre-cleared lists of nations for which operations need not be specifically disclosed? Or potentially a list of only spacecraft overseen by certain administrations? We seek comment on these proposals. Is there any additional information that the Commission should request?

h. Space Station Frequency Requirements; Schedule F

73. We propose to adopt a new Schedule F to the FCC Form 312—Main Form on Space Station Frequency Information Requirements as the other main schedule for information that applicants must provide to the Commission. Schedule F would replace the current Schedule S but contain much of the same required frequency information. We believe that including all required frequency information in one section will make it easier in the future for the Commission to update both the Schedule F and the Commission's rules as industry and technologies evolve. In addition, we seek to reduce the number of technical showings that applicants must submit. For example, if the Commission were to use an electronic filing system that auto-populated information based on an applicant's requested services, orbital locations, and frequencies, we would not need to change the rules to accommodate that system. We seek comment on this proposal.

74. Similar to the space station orbital information requirements in the proposed Schedule O, we also propose to include certifications in the space station frequency information requirements section. Specifically, we propose to include the following certifications in Schedule F: the space station(s) will comply with all applicable technical rules; the space station(s) will operate under ITU coordinated procedures and agreements; and the space station(s) can be commanded to immediately cease transmissions to eliminate harmful interference. We believe that these certifications will help the Commission quickly identify applications that are in

compliance with the rules and can therefore be processed quickly, distinguishing from applications that request a waiver and therefore require further review. We seek comment on these certifications. Are there additional certifications specific to frequency information that we should include in Schedule F? We also propose to include a subsection that points applicants who seek to operate in specific frequency bands or to provide specific services to the appropriate rule sections in subpart C where additional application materials can be found. We believe that this will be more efficient and reduce the overall length of part 100. We seek comment on this proposal. Does it give applicants sufficient notice of what information is required of them? Are there proposed requirements we should not adopt?

75. The specific frequency information we propose to require is set forth in Appendix A. We seek comment on this proposed rule and the information and certifications. Are there any frequency information requirements that are no longer needed or relevant, either because they are not used in practice by space station operators to assess interference or because technology has evolved? Are there additional frequency or technical requirements or data that we should require applicants to provide? Are there alternative methods for collecting the relevant frequency information from applicants that the Commission should consider?

i. Requirements of Supplemental Coverage From Space Applications

76. Because SCS is a developing service, we do not at this time propose to make any substantive changes to our rules from what is currently required in part 25. We generally believe that making substantive changes to the requirements for SCS at this juncture would be premature and may risk derailing efforts by the industry to build systems that comply with the current rules, with one exception where we propose to eliminate a current requirement.

77. As has been pointed out in other proceedings, and as we have seen in applications before the Commission, although we had endeavored to create a flexible and low burden approach to licensing devices for SCS, there may be some areas which can be further improved. We think this proceeding serves as an opportunity to potentially revise our SCS equipment rules in a targeted manner. As such, we seek comment on whether to remove the requirements for equipment authorization certifications under part 25 and omit them from new part 100 for SCS earth stations. We tentatively conclude that this requirement is unnecessary because all devices used for the provision of SCS must be certified under other rule parts and, the way the rule is structured, the certification under part 25 mirrors the certifications under other rule parts without requiring anything new. We seek comment on this tentative conclusion. Is there a reason to keep this requirement? If we do adopt our proposal, would a rule in the new part 100 making all equipment that meets the equipment authorization requirements of parts 22, 24, or 27, SCS earth stations by default be sufficient to classify the devices as earth stations for allocation purposes? Alternatively, is there a way that we can incentivize manufacturers who are responsible for equipment certifications to certify their equipment to be SCS compliant? We do not seek comment on any other matters related to SCS or the other rules previously adopted.

j. U.S. Market Access

78. The Commission permits satellite systems that are licensed by jurisdictions other than the United States to access the U.S. market. Our current rules require a demonstration that U.S. licensed space stations have effective competitive opportunities to provide analogous services in the country in which the non-U.S. licensed space station is licensed. The Commission currently allows this access to the U.S. market via either a petition for declaratory ruling filed by the space station operator or a request to access the foreign satellite by a Commission-licensed earth station operator. We propose to continue to review market access applications to ensure U.S. licensed space stations have effective competitive opportunities to access other markets.

79. Additionally, we propose a change to our request for market access procedures to prohibit U.S. market access via earth station licensing. We seek comment on whether to prohibit companies that seek U.S. registration for a space station or system pursuant to the Registration Convention from receiving an FCC authorization for U.S. market access.

80. Current § 25.137 allows earth station applicants to request authority to communicate with a non-U.S. licensed space stations via a petition for declaratory ruling under requirements that are equivalent to those currently outlined in § 25.137 which governs access via satellites. In practice, however, we have found that this process creates confusion among operators since this rule provision only allows for communication with the specific earth station for which the petition for declaratory ruling was made and not broader access to the U.S. market. The current process also creates unnecessary burdens on the Commission to process multiple earth station market access applications rather than a single market access application for a non-U.S. licensed satellite or satellite system. Therefore, we propose to eliminate this option in our rules and only permit market access for non-U.S. licensed satellites pursuant to petitions for declaratory ruling for satellites and no longer via earth stations. We seek comment on this proposal.

81. We seek comment on whether to change our market access rules to prohibit applicants who seek registration by the United States under the processes defined in the Registration Convention from receiving authorization to access the U.S. market via a petition for declaratory ruling and instead require those entities to hold an FCC space station license. We seek comment on whether to require entities that seek registration from the United States to hold a U.S. space station license pursuant to our licensing authority under section 301(f) of the Act, the stated purpose of which is ''to maintain the control of the United States over all the channels of radio transmission,'' and section 303(r) of the Act, which directs the Commission to make such rules and prescribe such restrictions to carry out the provisions of the Act and ''any international radio [ ] communications treaty or convention, or regulations annexed thereto, including any treaty or convention insofar as it relates to the use of radio, to which the United States is or may hereafter become a party.'' We seek comment on whether this change in our licensing process is necessary to fulfill the statutory objectives expressly stated in section 301, and to assist the United States as a party to the Outer Space Treaty, pursuant to the express requirements of section 303(r) of the Act. Under the Registration Convention, States register space objects in a registry maintained by each State in order to provide information regarding each space object to the U.N. We also seek comment on whether there are other sound reasons to make this change.

82. When entities seek authorization for space stations from non-U.S. administrations, in many cases, the authorization is of limited scope. For example, the authorization may only involve ITU filings for some, but not all,

of the operational frequencies, or it may be only one of several authorizations for space activities that the country's national legislation provides. Given that the non-U.S. authorization may be incomplete, we seek comment on whether an FCC license should be required when an applicant seeks to have its satellites registered by the United States under the processes defined by the Registration Convention. Is this requirement necessary so that the United States can maintain ''authorization and continuing supervision'' over the space object? We therefore seek comment on how the U.S. space station licensing process can better align with the registration process. Additionally, we seek comment on how to implement any new rule if adopted, recognizing the complexity of issues that could arise between the licensing administration, the ITU filing, and the U.N. registration. Should any operator that seeks or obtains registration by the United States under the Registration Convention be required to obtain a FCC space station license as of the effective date of any new rule? Should a condition be added on any grant of U.S. market access, providing that authorization would be automatically terminated without further action by the Commission if, after grant, the grantee seeks or receives registration by the United States for any of the authorized satellites and if so, what effect would that have on existing services? If any new requirement only applies on a going-forward basis, should the requirement for a U.S. license attach if current operators who received market access and were registered by the United States apply for renewal, if a renewal period is established, or a major modification and what effect would that have on existing services? We seek comment on how real-world scenarios should be addressed as well as any alternative suggestions.

83. Finally, it is our intention to ensure that operators who are granted authorization to access the U.S. market via a petition for declaratory ruling do not receive an advantage over entities holding a U.S. satellite license. Do our proposed rules meet that goal, and if not, how can they be improved? We note that the European Union (EU) recently proposed a comprehensive EU Space Law which includes additional requirements for non-EU entities to gain access to the EU market, such as appointing an EU legal representative. Under the EU proposal, some of these requirements may be waived if the European Commission determines the non-EU jurisdiction's regulatory framework is sufficiently equivalent to its own. Are there additional requirements, including requirements like those proposed by the EU, that should be incorporated into the Commission's rules for market access entities to establish a level playing field for U.S. operators? For example, there is no license term for U.S. satellite market access grants, and instead we rely on the review of the licensing administration, which establishes the term, if any, on the original license. Therefore, we propose to establish a 15- or 20-year license term for these authorizations, as discussed below. Are there additional requirements that should be imposed on the grantees of market access? For example, should the Commission require a periodic certification that grantees continue to hold a license from their authorizing administration, and/or the ITU and continue to provide service to end-users in the U.S. market? If so, when should such a certification be required? Commenters should describe proposals with specificity, including whether the requirement can be waived upon a showing of sufficiency of the regulation in the country in which the operator holds its original license.

k. Small Satellite Systems

84. We believe the Commission's small satellite and small spacecraft rules in §§ 25.122 and 25.123 have generally been successful despite applicants facing some of the same challenges as other applicants for part 25 licenses. In addition to the more straightforward criteria to qualify as a small satellite system (akin to our proposed approach to prespecify acceptable criteria), the current rules for small satellite systems afford applicants relaxed surety bond and milestone requirements. Accordingly, we do not propose separate rules for small satellite systems. Instead, under the proposed part 100, we expect that applications for all space stations will be reviewed against a prespecified set of standards for expedited processing, as described in the NPRM. Our proposed framework essentially expands the existing small satellite authorization process to encompass a broader range of systems eligible for faster processing. In addition, as proposed herein, small systems would not be required to post a surety bond. We therefore believe that applications that are currently eligible for small satellite or small spacecraft processing will receive the same benefits—no surety bond, exemption from processing rounds, faster processing—under the proposed part 100 rules. Further, our proposal expands the class of applications that would receive these benefits. We seek comment on this approach and alternatives.

85. First, we seek comment on whether we should eliminate the streamlined small space station and small spacecraft authorization processes entirely if we adopt the proposed processing rules in the NPRM. Specifically, because the rules we propose aim to optimize all application processing and would only require larger systems to post a surety bond, as discussed below, would these changes effectively negate the need for a process specific to small satellite systems? We do not propose to address any regulatory fee issues in the NPRM but seek comment on any alternatives the Commission should consider as far as designating certain systems as ''small satellite systems.''

86. Alternatively, we seek comment on whether we should continue to distinguish a small satellite system from an NGSO satellite system. Could we revise the definition to be any NGSO satellite system of ten or fewer satellites under a certain mass limit? Would it then make sense to retain the shorter six-year license term? Should we change the current mass requirement by increasing it? We seek comment on this proposal and how to define ''small satellite'' or ''small satellite system'' if we retain these categories. Is there any benefit to having this specific carve out and definition? What benefits, if any, would a small satellite system get given our proposed streamlined approach to application processing and the proposed changes to the surety bond requirement for applicants and licensees? Is this proposed definition too restrictive or not restrictive enough? We seek comment on these questions and proposals generally.

l. Earth Station Licensing Application Requirements

87. We propose to streamline the earth station application requirements by shifting to a predominately Nationwide, Non-Site License approach, and modularize the application so that applicants only provide information that is necessary for the license sought. We believe that this will be more efficient than the current approach, where the Commission requires certain information that it typically does not review. We propose to require additional specific information be submitted based upon the type of application. For instance, rather than applying radiofrequency exposure requirements to all applicants, we propose to only require the information for user terminal and Earth Stations in

Motion (ESIMs) applications. We believe that the changes we make to the requirements for earth station applications will streamline the process for most applicants and promote more efficient Commission processes.

88. Our current rules regarding earth station application requirements are overly burdensome and outdated. Experience indicates our earth station rules often confuse applicants. Much of what the Commission currently requires an applicant to provide is information that is redundant or unnecessary to the Commission's review. In addition, we generally require separate applications for earth stations with the same operating or technical parameters, requiring multiple and redundant reviews. The current approach by the Commission to reviewing earth station applications requires applicants and the Commission to engage in time-consuming submissions and tedious reviews. In addition, the current rules do not take into account advances in technology since the rules were written. To modernize our process, similarly to how we propose reviewing space station applications, we propose to shift to a certification-based approach for earth station applications. Under this approach, applicants who do not operate in accordance with the certifications that they make in the application will assume the risk of an enforcement action for falsely certifying, including the possibility of forfeitures and revocation. So, while the proposed approach may increase speed and efficiency for applicants, it comes with more responsibility on the applicants to ensure they are meeting the Commission's requirements. We seek comment on our proposals. We note that some of the proposals may impact earth stations that operate in the Upper Microwave Flexible Use Service (UMFUS). We do not propose any substantive changes to the UMFUS regulations in this proceeding and do not seek comment on changes to the UMFUS rules here, instead leaving any such substantive discussion to other proceedings.

89. In addition, we also seek comment on a number of specific questions that may inform the Commission on how our proposed approach will impact industry and the public. Specifically, if an applicant provides all of the certifications in the application, is that sufficient, or does the Commission need to require additional information or review before placing an application on public notice? What additional information, if any, should an applicant be required to provide? For instance, we propose to require applicants to provide their power levels, out-of-band emissions (OOBE), and other power information and also to certify that they are operating within the rules we have established. Is this redundant? Should we instead only require the certification? If we should require both the technical data and the certifications, what is the benefit to doing so? What should the Commission do if an applicant does not certify that they have completed coordination but states they are in the coordination process? Should this be deemed an incomplete application? For operations in shared bands, should we request different or additional information? We tentatively conclude that an applicant, for operations other than those for Immovable earth station Nationwide, Non-Site License, will likely have coordinated applicable operations before submitting an application with the Commission and that such coordination would be reflected in the coordination report. We seek comment on this conclusion. Instead of requiring applicants to provide their coordination reports, should we require licensees to certify that they will complete coordination prior to operation but have available at the request of the Commission evidence of having completed that coordination? Would a coordination report be appropriate evidence or something else? Is there any particular benefit to having a coordination report in a license file instead of simply requiring licensees to produce evidence of coordination at the request of the Commission? Should applicants provide a description of their operations? Is that information relevant for Commission review and licensing? For instance, if an applicant applies for a user terminal authorization, should they be required to tell us what the intended use is, or should they be allowed to use the devices as they see fit so long as they do not violate the Commission's rules? For an applicant who fails to certify in the affirmative or who requests a waiver of the Commission's rules, what information should we require from them? Should we be more specific as to what showings (*e.g.,* interference analysis) should be included with particular types of waiver requests? Is any of the information proposed to be requested unnecessary? Are there sufficient similarities between ESIMs and user terminals so that an applicant can apply for both ESIM and user terminal authorization in the same application if the technical information provided meets applicable requirements specific to each service? Further, we seek comment generally on any potential impacts our proposed changes to earth station licensing could have on services in shared spectrum bands. In addition, should we exclude spectrum bands that are subject to freezes or other limitations—such as C-band—from the proposed licensing rules?

m. Nationwide, Non-Site Licensing With Registration for Immovable Earth Stations

90. We propose to shift our earth station licensing from the current, burdensome site-by-site approach to a predominately Nationwide, Non-Site Licensing approach. While the site-by-site approach will still be available, the dramatic increase in the number of earth stations required by the space industry necessitates a much more streamlined approach that can scale licensing earth stations. We envision a framework involving two steps: first, obtaining a Nationwide, Non-Site License; and second registering earth station sites and completing coordination before operations. Under this two-step process, an operator would only need to go through a full licensing process once but could then register earth station sites as needed. Under this proposal, either at the time of registration or after registration but prior to operation the licensee would certify and/or demonstrate compliance with any location- or frequency-specific rules that might apply. Our intention is for the proposed two-step framework to apply to all frequency bands. However, given that there are specific rules related to different frequency band usage and that we do not propose to change them here, we see this approach as setting the framework for licensing and registering earth stations so we progressively make registration more efficient in various bands. While initially some bands or locations may vary in how registration takes place, it is our goal to progressively move toward simpler, data-based enabled registration of earth stations under this Nationwide, Non-Site Licensing model. For example, similar to what the Commission has adopted for the 70/80/90 GHz band, such an approach could be applied to other frequency bands used for earth station operations.

91. We propose to adopt a new class of earth station, the Immovable earth station. We propose to define ''Immovable earth station'' as, ''[a]n earth station licensed under either a Nationwide, Non-Site License or a single location authorization that is located at a single fixed location that must be registered and coordinated before operating.'' We propose this definition to distinguish from the

Commission's definition of fixed earth station (which operate in the FSS) from other types of earth stations. Additionally, we propose to only allow applicants who do not require any exceptions or waivers to apply for a Nationwide, Non-Site License for Immovable earth stations and then register locations. We believe that this new type of earth station and definition, one that makes clear that an earth station must be registered at a location, will provide flexibility to applicants and avoid confusion with the definition for fixed earth stations that currently exists in our rules. In addition, under the current rules, the Commission requires, generally, that every new earth station at a different location goes through the entire licensing process, even where new earth stations are technically identical. Although currently the part 25 rules allow for blanket licensing in certain frequency bands, those bands are limited and do not account for technical advancements or more efficient use of spectrum in the future. Accordingly, we believe that creating this new class of Immovable earth station, and permitting nationwide, non-site licensing with registration requirements, is a more efficient way to license earth stations.

92. We do not wish to allow licensees to circumvent coordination or other requirements that are meant to protect against harmful interference. We therefore propose that applications requiring a waiver or an exception, other than for federal coordination, will be required to file a site-specific license application for the earth station that requires the exception or waiver. In addition, while we propose allowing applicants to register their sites instead of needing to go through a full licensing approach, we still will require proof that coordination has occurred prior to the earth station operating at the newly registered site. In this case, we propose to require applicants to file a certification prior to beginning operations affirming that all required frequency and site-specific coordination has been completed. To be clear, what we propose is a two-step process. An applicant can first be licensed for the use of a specific frequency without the need to coordinate but would then have to coordinate with all required commercial and federal entities prior to operating at a site registered under the Nationwide, Non-Site License. What we propose still requires that coordination occurs between operators prior to operations—although registration may occur prior to certifying to meeting coordination. We envision this approach to be used in all frequency bands. We tentatively believe that our coordination before operation but after registration proposal would ensure protection and that the criteria of any frequency specific rules, such as those for the UMFUS bands, are met. Although we propose to allow an applicant to receive a license, this proposal does not allow a licensee to begin operations prior to both registering their sites and certifying that coordination has been completed at those sites and completing all coordination requirements. We believe this two-step approach—licensing first then site specific registration and coordination prior to operations—would allow for a streamlined licensing regime wherein operators would only need to come to the Commission for a license once and then register sites pursuant to the Nationwide, Non-Site License and begin operations after certifying to completing all required coordination without having to seek additional Commission approval.

93. Alternatively, rather than requiring filed coordination reports prior to operations, would self-coordination amongst operators as the default approach in all frequency bands achieve the same objectives? Specifically, should we allow earth station operators to assess the risk of harmful interference to incumbent users prior to operation and require them to take steps to proactively prevent harmful interference to earlier-in-time users? Would this approach better allow for licensee's to begin their operations quickly while still ensuring that other users are protected? Are there any drawbacks to this approach? What benefits are there to this approach over what we propose above? Alternatively, is there a way to combine the two approaches that would still allow for quickly deploying and operating while ensuring there is no harmful interference to incumbent operations? We note that the proposal above does allow for licensees to register sites prior to coordination, but must coordinate and certify to meeting all coordination requirements before operating. Would instead allowing operations on an unprotected/non-interference basis while coordination is occurring but still require a coordination report or certification be filed upon completion of coordination be a suitable alternative to what we propose? Should we instead adopt this self-certification approach for certain bands and exclude others? Alternatively, would allowing licensees at the time of registration to certify that they will complete coordination prior to beginning operations but rather than file a coordination report only require that they be able to provide evidence of completed coordination at the request of the Commission achieve the same goals with a reduced administrative burden?

94. We are cognizant, however, that a one size fits all approach for every frequency band is unlikely to be possible in the immediate future. Many bands have certain restrictions or limitations that likely need to be addressed in separate rulemakings. However, we tentatively believe that the new predominately nationwide, non-site licensing approach we propose here can be applied broadly nonetheless. We invite comment on whether there are any spectrum bands today that are suitable for a lighter approach than what is proposed. For instance, are there any where we can require only to supplement their license file with the locations at which they seek to operate rather than officially registering the sites? Are there any other approaches that should be considered for certain frequency bands that do not have coordination concerns or use limitations?

95. While we tentatively conclude that adopting a nationwide, non-site licensing approach would best serve the dual needs of ensuring growth in the industry while protecting other spectrum users, we recognize that there are issues that may still need to be addressed. Accordingly, we seek comment on specific questions and proposals. First, as part of this approach, should we establish any sort of first in time right? For instance, if two licensees want to register at the same location, should the one that files first have protection over the one that files second? Should it be based on who begins operations first? Are such rules even necessary, or does the coordination process coupled with the requirements to only operate within the Commission's rules without the need for waiver or exceptions resolve most of these issues? We note that under our current rules, coordination is only required for operational sites. Does that address these issues? In that same regard, how should site-specific licenses be treated when determining priority? Should there be different operational limits for different frequency bands or do the proposed operational limits in Appendix A sufficiently protect other spectrum users? Similarly, are there bands that should be excluded from our proposed Nationwide, Non-Site License with registration approach? Is there a benefit to allowing for registration prior to certifying to coordination if it means that the earth station cannot operate until the certifications are also filed?

Could this result in warehousing of locations for a year at a time? Should we establish a mechanism where multiple parties can register at a site, so that if the party that registers first is unable to meet the 365 day deadline, the applicant that is next in line will have a chance to begin operations at the site?

96. Further, should the Commission establish a database for registering the sites? We note that no database currently exists, but licensees are currently able to file supplements in their license files in ICFS. Does the filing of supplements achieve the same purpose as a database? If so, how would the public be made aware that the registration has been filed without causing unnecessary burdens on Commission resources? We also ask whether we should have different registration systems generally for different frequency bands or if they should all be uniform? For instance, UMFUS bands have specific requirements that must be met before a licensee can begin operating, but S- and X-band frequencies do not have those same requirements. Does this warrant establishing different registration systems or rules for registration for specific frequency bands? Could establishing a database similar to what the Commission has established for the 70/80/90 GHz bands be a solution that would allow for a single database? Should the Commission instead delegate to the Space Bureau responsibility to find the best approach for registering sites at a later date? Should the Commission establish a new database that is more easily searchable and tailored specifically to just these proposed registrations?

97. In addition to the questions above, we seek comment on general questions related to this approach. Specifically, what possible issues exist with adopting a Nationwide, Non-Site License approach? Are there specific bands where this proposal would not work, and if so, why not? How would this impact coordination between operators or with the federal government? Is there a benefit to this approach, or will applicants primarily only seek site specific licenses? Should we permit applicants that seek a waiver of certain rules, such as the U.S. Table of Frequency Allocations, to utilize the Nationwide, Non-Site License approach? Are there any drawbacks or benefits to allowing an applicant who requests a waiver to utilize the Nationwide, Non-Site License approach?

2. Application Handling

98. We propose to revise the Commission's rules guiding how a filed application will be processed prior to a final action by the Commission. The proposed rules in this portion of subpart B would establish certain processing timelines, a standard of completeness, public comment processes and guidelines for information requests to applicants. As part of the licensing assembly line, application processing is designed to gather and organize all the information needed in preparation for the Commission to consider the application. We believe that these proposed rules will increase processing speed and reduce burden on applicants and the Commission. Our proposed rules would function as follows:

- Within 30 days of filing and confirmation of fee payment, the Commission must either place an application on public notice or, if the application is incomplete, ask for all information needed to establish completeness.
- Once an incomplete application is supplemented and deemed complete, the application will be placed on public notice as soon as practicable.
- If an application is complete, and the applicant certifies in the affirmative to meeting all the bright-line criteria for their system, does not request a waiver, and is not subject to any ''exceptions'' to expedited processing, the application will be placed on seven-day public notice (*i.e.,* expedited processing).
- Applications not eligible for expedited processing will be placed on 15-day public notice.
- Applications subject to section 309(b) of the Act will be placed on 30-day public notice.
- If no action is taken on the space station application within 60 days following the end of the public notice period, the Commission will inform the applicant of the reasons preventing a license grant with specific reference to any exceptions.

We seek comment on the specific revisions to the application processing phase detailed below and in Appendix A.

a. Completeness

99. Before an application is placed on public notice, the Commission must determine that the application is complete. It is longstanding Commission precedent that applications must be ''substantially complete'' before they are accepted for filing, meaning that ''applications must be complete in substance, and must provide all the information required in the application form.'' The substantially complete standard does not refer to a determination on the merits of the application, nor does it imply that the Commission does not have further questions for an applicant after an application is placed on public notice. Rather, it is designed to ensure that an application includes all of the information required by the Commission's rules and helps to deter against the filing of speculative applications.

100. The Commission's rules state that an application will be unacceptable for filing and returned to the applicant if ''the application is defective with respect to completeness of answers to questions, informal showings, internal inconsistencies, execution, or other matters of a formal character.'' Further, § 25.112 of the Commission's rules states, in part, that an application will be unacceptable for filing and returned to the applicant if the application does not substantially comply with the Commission's rules, regulations, specific requests for additional information, or other requirements. In adopting this rule, the Commission clarified that ''[w]hile in some instances it is efficient for staff to help parties address discrepancies in their pending applications, we require all applications under part 25 to be substantially complete when they are filed.'' The current requirements for space station applications additionally require that an applicant provide a ''comprehensive proposal.'' The Commission has previously noted that a ''comprehensive proposal'' must describe ''in detail all pertinent technical, operational and ownership aspects of the system and its ability to proceed expeditiously with construction and launch.''

101. Our experience is that these overlapping and subjective standards have not served to promote expediency in placing applications on public notice or in making applicants aware of what comprises a complete application. We believe that establishing a clearer standard for what determines ''completeness'' as a precursor to the application review process will be an important and beneficial addition to the rules if we adopt our proposal to determine whether an application qualifies for expedited processing prior to the public notice period. This proposed rule section would codify the existing process for determining whether an application is complete and the process by which an applicant will be notified of any deficiencies in the application. To provide applicants with clarity and a more predictable standard, we propose to clearly articulate the

standard for completeness before an application can be accepted for filing and placed on public notice. Accordingly, we propose to include a new rule section in part 100 defining the standard for completeness, stating, ''An application will be considered complete if, under the relevant rule section(s), all required information, forms, certifications, and showings are included in the application.'' We believe this definition focuses on whether all required materials have been provided rather than involving a determination on the merits of an application. In addition, the application certifications and processing framework to identify exceptions to expedited processing as proposed herein aim to allow for a more objective determination of whether all information required has been provided and an application can be deemed complete. We also clarify that applications with negative certifications or waiver requests must provide additional information to be complete, which will assist the Commission as it informs applicants of any deficiencies in an application within 30 days of filing. We seek comment on the proposed definition and standard for completeness. Are there alternative proposals or methods the Commission should consider in determining that an application is ''complete''? Does the proposed standard provide the intended benefit and guidance to applicants in stating a more clear standard on when applications can be accepted for filing? We believe that 30 days will give the Commission sufficient time to review space station applications and either place them on public notice or contact applicants to inform them of any missing information or other deficiencies. Should the initial timeline be longer to encourage more intensive review prior to public notice to identify any missing application requirements or exceptions that might delay grant so that the Commission can proceed with grant more quickly following the end of the public notice period?

b. Public Notices and Oppositions to Applications

102. We propose to overhaul our current public notice procedures for all applications not subject to section 309(b) and (c) of the Act. For most applications that are determined to be acceptable for filing, we propose a shortened public notice period of either seven or fifteen days. Applications that do not have any enumerated exceptions would be subject to expedited processing and placed on a seven-day public notice period. All other applications would be placed on a 15-day public notice period. Applications subject to section 309(b) and (c) of the Act would continue to be placed on public notice for a 30-day comment period.

103. We propose that oppositions to applications, including petitions to deny and other pleadings (collectively ''oppositions''), would need to be received by the Commission within seven days after public notice for applications. Any replies responding to oppositions must be filed within five days after the expiration of the time for filing oppositions, consistent with the current rules. We note that the Commission currently accepts informal objections filed outside of the established public notice window or outside of conformance with § 25.154(a). To encourage timely filings, we propose to include in part 100 the requirement that any commenter, petitioner, or filer request a waiver of the rules when filing outside of a designated filing window. Finally, we propose allowing the Commission to shorten or extend a public notice period on its own motion.

104. We seek comment on these proposals. It is our goal to provide certainty to process applications quickly while still guaranteeing opportunity for public comment. Do these comment periods provide enough time for the public to understand and comment on applications, particularly given our proposed revisions to the application requirements so the request may be more quickly understood? Is the rule language sufficiently clear to inform applicants of the relevant public notice period? Does this proposed rule section include all pleadings that are subject to public notice requirements, or should additional classes of pleadings be added? The proposed rules only allow reply comments to be filed by the party that filed a petition to deny. Would a more robust record result if that constraint were eliminated and the public at large allowed to participate at this stage of the proceeding? Would expanding the process in such a manner complicate the proceeding or cause delay in resolution? We seek comment on the full range of options available for expediting public notice procedures, consistent with the goals of this proceeding.

c. Processing Timelines for Space Stations

105. We propose to adopt timelines for space station application processing in order to achieve our goals of speed and predictability. We propose that if no action is taken on a space station application within 60 days following the end of the public notice period, Commission staff will inform the applicant and public of the reasons preventing a license grant with particular note to any exceptions. We believe this approach will foster accountability and transparency which in turn will facilitate resolution of outstanding issues as the applicant will be better able to understand the Commission's view on its license request. We seek comment on these proposals. Are these timelines appropriate? In what manner should the Commission notify the applicant of any issues or deficiencies? Would a letter filed in ICFS (or successor system) be sufficient?

d. Processing for Earth Station Applications

106. We also propose to adopt processing timelines for earth stations that mirror those for space stations. Under our current policies, earth station license applications are placed on public notice within 30 days of filing. However, the Commission has not generally adopted strict timelines for taking action on an earth station application, other than in the case of renewals. While this approach has drastically increased the speed of earth station application processing, it leaves applicants with a lack of clarity on status once the public notice period ends. Accordingly, we propose to adopt rules that specify for applicants how their applications will be processed. We seek comment on our proposals.

107. As a general matter, we acknowledge that while earth station processing has seen dramatic increases in speed over the last year, there is still plenty of opportunity for improvement to the process. With that in mind, we propose to overhaul the processing of earth station applications to be more streamlined so that applicants can start providing services faster. Under our current rules, when staff processes applications, no differentiation is made between applications that conform to the Commission's rules and those that seek waivers. This results in all of the applications being processed in the order in which they are received rather than creating a way for those applications that comply with Commission rules to move through the process faster. Accordingly, we propose to create two separate processes for earth station applications. Specifically, we propose a process where applications that conform to the Commission's rules can begin temporary pre-grant operations on a non-interference, unprotected basis once the application is placed on public notice,

similar to the current process for STA. Applications that do not conform with the Commission's rules—for example, if they request a waiver or do not certify in the affirmative to requested certifications—will not be afforded this status. We seek comment on these proposals.

108. While we are cognizant of concerns of harmful interference when allowing operations to begin before the completion of a public notice period, we note that what we propose allowing is similar to what the Commission currently allows via STA, only without the extra step of submitting another application. Specifically, earth station operators often file for STA operations while their underlying applications are being processed so that they may begin operations, even if it is on a non-interference and unprotected basis. We seek comment on whether our proposal of permitting operations to commence prior to grant without requiring the submission of another application would be consistent with statutory requirements.

109. In addition, we seek comment on whether the industry has matured to a point where users in shared frequency bands or adjacent bands are able to coordinate amongst themselves to prevent interference such that allowing operations while an application is on public notice would cause little to no harm. Should there be restrictions on specific bands or operations? For instance, should this approach be limited to non-Federal bands only? If so, why? And if not, is it because the coordination and interference protection is band agnostic? Do there need to be any other restrictions? Given that we only propose to allow the operations beginning at public notice in specific circumstances, do the proposed rules offer sufficient protection and afford operators a sense of predictability? Does the differentiation even matter, or should the Commission allow operations for all applicants, regardless of whether they require any waivers or exceptions? What are the benefits or drawbacks to this approach? Should we allow operations while an application is on public notice when the applicant requests waiver of certain rules? Are there common waivers the Commission grants regularly that we should consider as part of this approach such as waivers of the U.S. Table of Frequency Allocations or location restrictions?

e. Information Requests

110. Applicants need predictability, whether in terms of launch timing, regulatory requirements, or the kind of questions that can be expected during the licensing process. At the same time, it is critical that the Commission receive clear, complete, and factually accurate applications. Accordingly, we propose specifying the scope of information the Commission may request from applicants. We propose that information requests must be targeted at obtaining information directly material to a determination of whether the requested authorization is in the public interest, or to resolve inconsistencies, technical issues, or other matters of concern that have a direct bearing on the decision. We believe that by requiring the Commission to identify all issues with an application in the initial information request and explain why the information is necessary, we will not only increase the level of predictability for applicants, but also increase the speed at which applications can be processed. We seek comment on our proposal generally.

111. We propose that the Commission may request information from applicants to: (1) determine completeness of the application; (2) understand the facts of informational showings, inconsistencies, execution, or other technical matters when the factual issue is directly material to the review; (3) determine if an exception applies to the application; (4) resolve matters of concern raised in pleadings, objections, or comments in response to an application; (5) evaluate compliance with the Commission's rules, regulations or other requirements; and (6) consider issues that are directly material and necessary for the Commission to evaluate the merits of the application under the Commission's rules. Our objective is to limit information requests to only those showings that are directly material to the Commission's review of the application under our rules and regulations. Do these categories sufficiently cover such areas? Are there any ways in which the information requests allowed should be narrowed to prevent unnecessary or tangential inquiry?

112. To be clear, we do not propose to limit the Commission's ability to speak with applicants to discuss the status of an application or as part of *ex parte* presentations outside of a formal information request to address issues or deficiencies with applications. We believe that the proposed rule strikes the right balance of speed and predictability but also provides applicants the opportunity to engage with Commission staff to address any issues or concerns within the application that may risk delay in the licensing process. We seek comment on this proposal. Further, is there value in expressly outlining guidance by which the Commission may ask for additional information from an applicant? Do our proposed rules provide enough flexibility for the Commission to be able to get all the information necessary to make a final determination on the merits?

3. Review of Applications for Decision

113. We propose to apply a standardized decision framework to determine whether grant of a space or earth station application would be in the public interest. We propose rules that would standardize the Commission's review process by using the information received in the application materials and through public comment. Our proposal seeks to focus review of the application primarily on areas where the Commission needs to consider an issue that is not presumed to be in the public interest. If there are no issues, then the application will receive expedited processing. If there is one or more identified ''exception'' to expedited processing, then the Commission will consider the issue(s) triggering the exception in light of the record. We detail our proposals and seek comment on each below.

114. *Expedited Processing.* We propose that an application which does not trigger one or more specific ''exceptions'' following the public comment period will generally be presumed to be in the public interest and thus granted as soon as practicable. For applications placed on seven-day public notice (based on the Commission's initial review not identifying any exceptions to expedited processing), we propose to allow a conditional grant by rule upon completion of the public notice period if no comments are received. Not only would this allow operators to more quickly begin operations prior to a license being issued, but we expect this would reduce the number of requests for STAs. As discussed in more detail below, operations under a conditional grant would be at the operator's risk and would not guarantee a final grant, though we would expect in most instances that the Commission would issue a license soon after. We seek comment on this proposal.

115. *Exceptions to Expedited Processing for Applications.* For applications where the Commission identifies one or more exceptions to expedited processing—for example, a waiver request or negative certification—then the Commission would focus its review on the element(s)

of the application triggering the exception. The logic behind our proposal is that the portions of an application that do not result in an exception may generally be considered to be in the public interest and therefore would not need additional review. Therefore, the Commission can focus attention on the smaller set of issues needing an individualized public interest determination. We seek comment on this proposed approach and on any alternative frameworks.

116. To operationalize this framework, we propose to adopt rules that clearly identify the instances when an application would be removed from expedited processing. We propose to refer to these instances as ''exceptions'' to the expedited processing timeline. We believe that by including a specified list of scenarios that would qualify an application for an exception to expedited processing and how the Commission will process and review such applications, applicants will be provided more regulatory predictability.

117. We describe the proposed exceptions to expedited processing below, and seek comment on each:

- *Negative Certification.* If an applicant is not able to affirmatively certify a particular element on the relevant application materials then we will consider that to be a ''negative certification,'' requiring review. In some instances, a negative certification would require a waiver of one or more rules, but it may simply require a review of additional information supplied by the applicant. Applicants would be able to provide additional information to support a public interest finding for negative certifications.
- *Request for Waiver.* If an applicant requests a waiver of any of the Commission's rules, the waiver request would require review on the merits to determine if it is in the public interest.
- *Foreign Ownership.* Reportable foreign ownership above a threshold and control information, including foreign adversary ownership or control, will need to be carefully reviewed.
- *Processing Round.* Applications requesting to operate in certain identified frequency bands that have been designated for a processing round would be considered as part of that processing round and thus excepted from expedited processing.
- *Spectral Constraints.* A proposed system also may require the use of frequencies which may be subject to limitations prescribed by rule or that relate to existing users or international arrangements. The Commission would need to review such proposals.
- *Federal Coordination.* Applications involving frequency bands subject to federal coordination would not be eligible for expedited processing.
- *Market Access.* Requests for market access would need to be reviewed in light of market access rules addressing whether applicants' home administrations have opened access to U.S. companies.

118. Our goal is to provide applicants with a high degree of predictability as to whether an exception to expedited processing would apply to an application. Relying on our proposed design of the application materials and required certifications, we believe the Negative Certification exception can be clearly identified. We also believe it will generally be clear to applicants whether the Waiver Request, Foreign Ownership, Federal Coordination, and Market Access exceptions will apply. Under our proposal for processing rounds, we also believe clarity can be provided as to whether a processing round exception would apply. We expect the most ambiguous exception may be Spectral Constraints, and we seek comment on how we might provide clarity as to when such an exception would apply. What criteria could be elaborated upon to make it clear when such an exception is likely to be applicable? Is there a need for delegation to the Space Bureau to provide continuing clarity around the Spectral Constraint exception or any other exceptions? We also seek comment on each of the exceptions and whether they could be applied in a straightforward and predictable manner.

119. As part of reviewing exceptions related to an application, we expect there will be situations where information is needed beyond what is required by the application sections. For instance, under the Spectral Constraint exception there may be a need for interference analyses from the applicant so that the Commission can determine whether it is technically feasible for a system to operate in certain frequency bands in accordance with our rules while protecting other operators. Under our proposed application design, we have sought to limit such showings and technical narratives for *all* applicants so we can narrow the scope of situations where such submissions must be made. To ensure the Commission can request the information needed to review any of the exceptions, we propose to allow for such information requests for the purpose of making a decision related to any exceptions. While supplemental information may need to be requested, our hope is that, by providing clarity in the rules as to which exceptions are likely to apply, the Commission can help applicants predict what will be needed so they can supply that information with the initial application. We seek comment on this approach. Are there ways we can provide further clarity so that applicants know what information will eventually be requested as part of reviewing exceptions? Will this approach reduce the amount of unnecessary information requests pertaining to areas of an application which require more focused review (*e.g.,* exceptions)?

120. Do these exceptions from expedited processing sufficiently encompass all instances where the Commission may need to conduct a more thorough review of an application to determine if it is both in conformance with the rules and in the public interest? As discussed above, we propose to place applications *not* triggering any exceptions and not requiring a thirty-day public notice, on seven-day public notice with the potential for a conditional grant by rule if no comments are filed in response to the application. In that context, are these exceptions appropriate? Are the proposed classes of exceptions too subjective? Are there any other classes of exception that should be added? Or should any of the classes be removed? Are there approaches to federal coordination that we might adopt and which we discuss elsewhere that would allow us to remove the exception for federal coordination? We ask commenters to provide examples of possible additional exceptions to expedited processing with justification as to why an exception should be added or removed. In particular, we ask that proposed exceptions be able to function within the framework we have set out such that whether an exception applies may be quickly and clearly determined.

121. We also seek comment on the factors the Commission should consider when determining whether a request is in the public interest if an application includes one of the listed exceptions. We seek comment on how we may better operationalize application of these rules during the review and decision-making periods. In particular, we seek comment on how decisions around Negative Certifications, Waiver Requests, Foreign Ownership, and Spectral Constraints should be made. Given that we expect many applications for new and novel operations would have one or more negative certifications or waiver requests, how or should we provide additional guidance on any additional information that applicants should provide? How can we make sure triggering an exception would not result in longer review timelines? Given our

desire and statutory responsibility to promote the proliferation of new technology, how might we implement decision-making processes that support innovative and novel technologies? To seek specific comment, we propose that system designs resulting in negative certifications would be in the public interest if the expected benefits of the system design with the negative certification exceed the expected costs to society. This approach would allow for applicants to submit information demonstrating the net positive benefits to society and would give the Commission a basis for making a decision. We would expect such showings in most instances to be limited to a basic set of calculations with reasonable assumptions. We seek comment on this proposal, as well as alternatives, and ways the process could be made as straightforward as possible. Should this approach be applied to review of other exceptions besides Negative Certification?

122. Both applicants and the Commission often have struggled to figure out how a new technology or innovative proposal fits into the Commission's rules. Since we seek to provide predictability and flexibility, we seek comment as to how our proposed licensing approach can address and anticipate new technologies in the Commission's rules. Our expectation is that the exceptions framework will route the novel portions of an application for focused review. Within that focused review, an expectation of grant in situations where the net benefits are positive can greatly facilitate approval for proposals that fall outside the bounds of the presumed acceptable framework. In this way, applicants can have some predictability in seeking a potential license grant. Is this a workable way to provide for innovation and technological development over time? We seek comment on this approach and alternatives that will assist the Commission in making sure the Commission's space licensing rules are able to continuously accommodate in a structured and predictable way new innovations which cannot necessarily be foreseen.

123. In addition, we seek comment on the proposed timelines and the requirements on the Commission to communicate to applicants why no action has been taken on an application. Specifically, is the fact that the Commission must either act on an application within 60 days or notify applicants and the public of the reasons for not processing an application sufficient? We seek comment on what impact, if any, that might have on the proposed process. Regarding applications for shared Federal bands, would it assist the process if the Commission were to provide a point of contact at the National Telecommunications and Information Administration (NTIA) as part of the notice to an applicant if the reason the application has not been acted upon is due to federal coordination? Alternatively, in shared terrestrial bands where an applicant is unable to coordinate with a terrestrial operator and that is preventing action on the application, should we require the terrestrial operator to justify why they cannot complete coordination with the applicant? Ultimately these are issues that may be primarily outside the Commission's control but that can still prevent action on an application. How can the Commission ensure transparency for these or other instances that are outside the Commission's control? We seek comment on these questions and welcome comment on other situations or proposals for how the Commission can achieve its goals.

124. To further guide decisions on applications, we propose a section articulating the standards under which requests will be judged. A portion of this section is similar to § 25.156(a) and explains circumstances generally under which a request ''will be granted.'' However, we further propose to make clear in our rules that any request which demonstrates compliance with the Commission's rules, regulations, and policies is in the public interest. We believe these clear statements will provide greater predictability to applicants as they seek to understand how a request will be reviewed. Furthermore, such a public interest presumption reinforces our desire to take a permissive posture toward innovation by allowing flexibility within the rules the Commission has adopted.

4. Conditional Grants

125. We propose to add an option for a conditional grant of authority for certain types of applications. We believe that the option for a conditional grant will help alleviate delays in the application grant process caused by one or more specific requests in an applicant's proposal that might prevent the applicant from beginning operations in other frequency bands or with certain satellites that are not affected by the issue. Specifically, we propose to allow conditional grants by rule in the scenarios discussed below.

126. *Expedited Processing Conditional Grant.* We propose to permit conditional grants for applications that are eligible for expedited processing. Specifically, we propose that an application that is not subject to any of the exceptions described herein, that is deemed complete and placed on public notice, and that receives no objections, comments, or other petitions during the public notice period would be conditionally granted upon the expiration of the seven-day public notice period. We propose that this conditional grant would apply to all proposed operations and will authorize operations only on an unprotected, non-interference basis. Commencement of operations following a conditional grant would be at the operator's own risk, including adverse final action on the application or conditions imposed on the authorization following completion of staff review. We seek comment on this proposal and whether it provides sufficient oversight of satellite operations consistent with our rules and treaty commitments. Should there be a specified process for moving to a full grant after the conditional grant? If so, what should it be? Should the Commission adopt a rule that it will issue a final decision within a certain number of days after the public notice period? If so, how many days should that be? We specifically believe that conditional grants would be particularly beneficial in situations where applicants file an application for a license modification and then file multiple STAs covering the same request while the modification application is pending. Under this proposed rule, an applicant who files an application for license modification that fits within the parameters of this conditional grant would not need to file for STA during application review and would instead be able to operate under the conditional grant.

127. Should conditional grants be allowed for expedited processing even if comments or petitions to deny or other filings are made on the underlying application? Would the requirement that all operations be on a non-interference, unprotected basis be sufficient to protect other operators? Would the rule that all operations are at the applicant's own risk—and therefore the Commission could deny the application and the applicant would be forced to immediately cease operations—be sufficient to ensure applicants are operating within our rules? Are there other guardrails that we should put in place to ensure that no harmful interference results from

operations under this proposed conditional grant mechanism?

128. *Orbital Debris Deferral Conditional Grant.* We also propose to allow a conditional grant for applicants who are not sufficiently advanced in the critical design review phase to be able to submit the orbital debris mitigation plan (ODMP) when they submit their space station license application. In recent years, the Commission has received requests for waiver of the orbital debris showings which are handled on an *ad hoc* basis. We believe our proposal will create a standard approach so applicants can flexibly plan their system design and application filing. Applicants could elect when they initially file their application to receive a conditional grant without providing certifications and supporting materials related to orbital debris. Under this proposal, an applicant may file for a conditional grant with the requirement that at least six months prior to integration with a launch vehicle, the applicant must submit an ODMP for Commission review and approval. Additionally, we propose to require applicants who seek this conditional grant to meet the following requirements: (1) provide all information required by the space station information requirement sections in the proposed rules, and any additional information required; (2) certify that the finished and operational satellite system will comply with all the requirements in the orbital debris rules adopted by the Commission as well as all of the showings required by the proposed ''Space Station Orbital Information'' section; (3) file an ODMP that demonstrates compliance with all relevant orbital debris rules and certifications at least six months prior to integration of any satellites with a launch vehicle. We propose that if an applicant is unable to follow these requirements, they would be directed to file an application for license modification and the conditional grant would be revoked. We believe this approach would incentivize applicants to provide an ODMP as soon as practicable while still having much more flexibility during the design process. Additionally, we believe this would incentivize applicants to design satellite systems that comply with the bright-line criteria rather than request a modification. We seek comment on this proposal. Is there additional information that we should require at the time of the application? Is six months prior to integration with a launch vehicle sufficient time to allow the Commission to review the ODMP?

129. *Commercial Coordination Conditional Grant.* Finally, we propose allowing applicants to receive a conditional grant in situations where an applicant is coordinating with other operators in specific frequency bands. Specifically, we propose to allow a conditional grant for operations in the frequency bands or portions of the frequency bands that are not subject to coordination with other commercial operators. We further propose to condition the operations in shared frequency bands or bands that require coordination with other operators on the applicant providing notice to the Commission of successful coordination with other commercial operators. Does this proposal provide sufficient flexibility for operators to use frequencies not subject to coordination? If not, how should this proposal be modified? Would it instead be more efficient to allow operations in the bands subject to coordination on a non-interference, unprotected basis to incentivize coordination? What are the risks and benefits to this approach? What exactly should the applicant be required to submit to the Commission to show successful coordination—a coordination report that becomes part of the grant?

130. In addition, we seek comment on specific questions related to conditional grants. Specifically, should there be a maximum timeline for how long a conditional grant can last? Should the Commission update a conditional grant to reflect that the condition has been met or should the licensee's notification suffice? Further, we propose to allow operators to launch while subject to a conditional grant, but only with an express launch authorization from the Commission. Should the Commission allow operators to launch new satellites under only a conditional grant? Or should the conditional grant only be allowed for modifications or for operators who must satisfy the condition before launching? What ramifications should there be if an applicant launches without approval from the Commission while only conditionally licensed? Similarly, how should the Commission address instances where the Commission approves launching the satellite while it is conditionally licensed, but subsequently the licensee does not meet the condition of the license? We expect that the commercial coordination conditional grant will be particularly beneficial for earth station operators and especially those that request multiple frequency bands because it will allow them to begin operations in bands without coordination issues while addressing necessary coordination for the other bands.

131. *Federal Coordination Conditional Grant.* We seek comment on whether we should allow for conditional grant of a license in a frequency band that is subject to federal coordination. Specifically, what are the benefits or drawbacks to allowing conditional grant for licenses that are subject to federal coordination? If we adopt this approach, should we allow for conditional grant for all requested frequencies—including those subject to federal coordination—or only allow it for the bands not subject to the federal coordination, similar to what we propose for commercial coordination conditional grants? Do existing rules and coordination requirements for shared bands mitigate the risks of allowing for conditional grants in bands subject to federal coordination requirements? Should applicants be required to demonstrate that coordination with the federal government is complete? Or instead, should applicants only be required to certify that they will complete coordination prior to operating and be able to provide evidence of completed coordination upon request by the Commission or any impacted federal agency? What type of certification or documentation is sufficient to demonstrate this? Alternatively, would a certification from the applicant be sufficient, or should the Commission require some other indication that federal coordination is complete? Further should we instead adopt a framework in our rules that outlines specific license conditions for operations in shared federal bands rather than any bespoke license conditions for federal coordination? Should this framework also establish a mechanism for licensees to quickly determine what shared frequency bands with federal operations may be subject to more stringent coordination reviews? Alternatively, rather than a framework for federal coordination conditions, would adoption of a conditional grant subject to federal coordination in our rules, rather than bespoke conditions or a framework, achieve the same goals? Is there any reason to tailor the criteria for meeting this federal coordination requirement under a conditional grant on the basis of which coordinating agencies, or categories of agencies are involved? If this approach is adopted, should the Commission be required to provide a point of contact at NTIA as part of the conditional grant to an applicant? If we condition grant on

federal coordination, should we remove federal coordination as one of the listed exceptions to expedited processing?

5. Processing Rounds

132. *Processing Rounds for NGSO Applications.* The Commission currently considers applications for NGSO system licenses in groups based on filing dates under a processing round framework. Under the current rules, a processing round is initiated when an application for NGSO-like satellite operation is placed on public notice as a ''lead application,'' establishing a cut-off date for applications filed in response, or ''competing applications.'' The Commission then reviews each application filed in the processing round and any pleadings filed in response, and grants applications for which the Commission finds that the applicant is legally, technically, and otherwise qualified, and that the proposed facilities and operations will comply with all applicable rules and policies and will serve the public interest, convenience, and necessity. The rules also detail the spectrum sharing procedures for applications granted within a processing round.

133. We propose to revise the processing round framework for NGSO FSS applications, both in terms of the general structure of processing rounds and of which applications would be included in a processing round. Considering the significant evolution in NGSO system technology and increase in applications in recent years, we seek comment on whether the traditional processing round framework still provides both applicants and the Commission with the same functionality or advantages as originally intended. When an application is designated as a lead application and a processing round is opened, interested entities have a limited window of time to prepare and file these competing applications before the cut-off date. As a result, competing applications often lack significant technical, operational, or other fundamental system details to demonstrate a proposal for a viable system, consequently leading to extended review timelines and leaving other applicants in the same processing round unable to fully assess and plan for their own operations and coordination obligations. Furthermore, the decision to open a processing round is discretionary based on designation of a lead application and therefore there is little predictability as to whether an application will initiate a processing round. As part of our modernization efforts, we aim to revise the NGSO processing framework to limit regulatory obstacles and provide a clearer and more reliable path to authorization and operation.

134. Instead of the existing approach, we propose that the Commission would pre-determine specific frequency bands (''processing round-eligible bands'') and applications for authorization in those bands would accordingly be processed in a processing round. For each of these designated frequency bands, by rule, a processing round would *automatically* open on January 1 at 12:00 a.m. Eastern Time and close on October 31 at 11:59 p.m. Eastern Time of the same year, eliminating the cut-off date for applications. This way, the licensing assembly line would automatically determine when and into which processing round(s) a license application would be considered. Thus, regardless of the existence of any actual applications, there would be an annual processing round open for each of the designated bands (*i.e.,* ''synthetic processing round'').

135. Under this proposal, applicants would file applications for inclusion in a processing round at any time, with priority status based on the date of grant, rather than the date of filing. Applications granted during the same band-specific processing round in a given year would have the same priority status. For example, applications granted for a specific band between January 1, 2027, and October 31, 2027, would be part of the 2027 processing round. We note that the NPRM does not propose any changes to the spectrum sharing procedures in part 25 and we propose to incorporate the relevant rule sections into proposed part 100. With this approach, we intend to allow applicants enough time to prepare comprehensive applications and request authorization for realistic NGSO systems, rather than provide applicants and industry with a limited window of time and opportunity to prepare an application for a system that may or may not be viable for operation. This would also negate the need to designate a lead application as the requisite first step in the framework, allowing applicants to plan and prepare for a processing round to open annually for specific frequency bands, rather than file in response to the Commission's determination of a lead application. Further, the pre-designated annual processing round window would provide applicants with a significant amount of time to prepare applications with the necessary level of detail to be considered ''complete'' under our proposed completeness standard. Additionally, since processing rounds are band-specific, if a request to operate in one frequency band could be granted more quickly than a request for a different frequency band in the same application, then the earlier-granted band would hold an earlier year priority in one processing round than a band granted in the following year. We intend that this revised timeline for review would benefit all applicants by creating the necessary structure to both encourage complete applications and provide predictability in timing and spectrum availability. Overall, we see this proposal as a way to process applications for certain bands in a way that retains the benefits and intent of processing rounds while mitigating the delays that result from the current processing round framework.

136. We seek comment on this proposed processing round structure for NGSO systems and ask for industry input as to which bands the Commission should designate for processing rounds and how the Commission should make these determinations. For example, the Commission envisions this structure being useful for frequency bands that are optimal for NGSO FSS operations, including the Ka-, Ku-, V-, and Q-bands. Should the Commission delegate to the Space Bureau to announce which frequency bands are subject to a processing round for the following year, prior to the January 1 opening date or should this determination be made by the Commission? Should this announcement be made by a certain date in the prior year to allow possible applicants enough time to plan? For example, if the Commission were to adopt a cut-off date of October 31 for the annual processing round, should the announcement of the following year's frequency band be made by then as well, to give applicants several months to plan applications? Should the yearly processing round be established with reference to the fiscal year running from October 1 to September 30, rather than the calendar year, to align with the period for assessment of regulatory fees? Should the Commission seek comment on which bands it should open for a processing round for the following year, or should the Commission make this decision without seeking comment? How should the Commission inform potential applicants as to which bands are subject to the processing rounds? Does the shift from a 30-day filing window to a full calendar year processing window provide applicants with the intended benefits of increased predictability and flexibility? Should the Commission consider an alternative or additional process to open a

processing round based on a request or petition to do so? Should the window for a processing round be three or six months instead of the ten months currently proposed to minimize the risk that less qualified applicants submit strategically upon seeing other submissions rather than because they are ready to submit on their own merits? If processing round windows are shorter, should there be multiple processing rounds in a calendar year? Should the annual processing round end on a date other than October 31st? If processing rounds run from January 1 to October 31, should the Commission freeze grants for any pending processing round applications until January 1 of the following year, so that all applications granted for a single processing round are granted in the same calendar year? Or should applications granted between November 1 and December 31 be considered part of the following year's processing round? What other structures or methodologies would provide applicants with the best opportunity to maximize the benefits of processing rounds? Are there potential consequences or complications that may result from the proposed annual processing round framework? We also ask for input on whether applications should be placed into a processing round based on the date of filing, rather than the date of grant, or by another classification. What are the benefits or disadvantages of determining processing round by grant date? Does this provide applicants and earlier-round operators with enough predictability to successfully coordinate with new or other operators in the band?

137. Specific to eligibility for inclusion in a processing round, we propose that an NGSO application would be placed by rule into a processing round if the application meets two criteria: (1) the application proposes operations in one or more frequency band(s) that the Commission has pre-designated as a processing round-eligible band; and (2) the applicant's system proposed for operation includes 200 or more satellites. We note that under the revised proposals to the surety bond rules discussed below, an NGSO satellite system seeking authorization for 200 or more satellites would be required to post a surety bond to the U.S. Treasury in the event of a default, in accordance with the surety bond requirements and calculation proposed in the NPRM. Our logic behind such a proposal is that applicants seeking priority in a processing round should be held to a bonding requirement. We seek comment on these proposals. Do the proposed criteria justify inclusion in a processing round? Are there other factors or alternative methods the Commission should consider in determining whether and how an application should be included in a processing round? We additionally ask for input on whether a system with 200 or more satellites would be an effective benchmark for determining that an application should be considered in a processing round and therefore required to post a surety bond.

138. We also, however, propose that applicants who do not meet the surety bond criteria (*i.e.,* fewer than 200 satellites) but seek to operate in a processing round-eligible band may request for an application to be included in that processing round to receive priority status. In that case, the requesting applicant would be required to comply with the surety bond requirements and post the required bond within 30 days of the license grant. We see this as a way for operators to have the flexibility to seek priority in a processing round if that is worth the cost of taking on the bond. We seek comment on this approach, proposed eligibility via surety bond, and alternative methods in greater detail in the section of the NPRM discussing proposed reforms to surety bonds. Relatedly, we discuss the intersection of the processing rounds and milestone deployment requirements in the milestone section below.

139. Under the proposed annual processing round framework, NGSO system applicants that request to operate in multiple frequency bands would be placed in the corresponding processing round for each frequency band and the remainder of the frequency bands requested (*i.e.,* those not subject to a processing round) would be considered under the expedited processing procedures detailed herein, unless another exception to expedited processing applies. This could lead to a scenario where a single operator of a large satellite system that operates in multiple frequency bands could hold a different priority status for each band in which it is authorized, depending on when authority to operate in each requested band is granted. How should we handle these cases? Would this annual processing round structure disincentivize satellite operators from upgrading their systems and instead encourage them to design new systems and file new applications? Should we grant priority based on when the first communications for the system are initially authorized? We seek comment on these questions and any other proposals that could help inform the Commission on how to address these issues.

140. *NGSO FSS Spectrum Sharing.* NGSO FSS operators who are granted authority to operate in certain frequency bands through a processing round would be still subject to the Commission's spectrum sharing rules among NGSO FSS systems. For these systems, the Commission has recently adopted specific protection criteria and other sharing obligations developed with the benefit of a substantial technical record. Specifically, NGSO FSS systems authorized in a later processing round are required to either certify that they have reached a coordination agreement with any earlier-round, operational NGSO FSS system or demonstrate that they will satisfy the dual protection criteria of: (1) causing no more than 3% degraded throughput to the earlier-round system; and (2) causing no more than 0.4% absolute change in availability to the earlier-round system. In this proceeding, we do not propose to make any substantive changes to the NGSO FSS sharing criteria currently in § 25.261, including the requirement that NGSO FSS licensees and market access recipients must coordinate in good faith the use of commonly authorized frequencies regardless of their processing round status. We also propose to carry over the provision currently in § 25.157(b)(2) that NGSO FSS space station license applications granted within a processing round are exempt from the frequency band segmentation procedures that otherwise apply to applications for NGSO operations.

141. The Commission currently applies a default spectrum-splitting procedure for systems approved in the same processing round, absent a coordination agreement, and requires later round-systems to either coordinate with or otherwise demonstrate they will protect earlier-round systems, subject to the sunsetting provision. NGSO FSS systems authorized in the same processing round share spectrum on an equal basis under a $\Delta T/T > 6\%$ spectrum-splitting rule, and this equal treatment is also extended to later-round NGSO FSS systems following a 10-year sunset period. We propose to incorporate these procedures as is into the new proposed part 100 and do not intend to consider any substantive revisions to the NGSO FSS sharing requirements, including the 10-year sunset period, currently in § 25.261 as part of this rulemaking. Considering the

proposed processing round framework, we seek comment on any changes that should be made to better adapt processing rounds to the existing NGSO FSS spectrum sharing criteria.

142. What are the benefits and costs of each processing round approach? How does a processing round framework help or harm innovation for NGSO operators? Do processing rounds place a burden on operators who are able to launch, deploy, and operate systems quickly while simultaneously encouraging hastily submitted applications for systems that may not be viable? Does our proposed approach address these problems? Alternatively, should we instead maintain the existing processing round approach and address these issues in a separate proceeding? What other changes might we consider to improve the processing round framework?

143. *Mutually Exclusive Applications.* We propose to delete the Commission's rule on mutual exclusivity in § 25.155. Given that satellite and earth station operators share spectrum, this requirement is no longer needed. In particular, our proposed rules account for the compatible operations of different licensees through first-come, first-served application processing, processing rounds, and various technical requirements on space station and earth station operation. In light of these, we believe the concept of mutually exclusive applications is unnecessary in part 100. We seek comment on this proposal and alternatives, including whether, in light of the proposed yearly processing rounds for NGSO systems and first-come, first-served processing for GSO networks we need to include a mechanism for deciding priority for orbital or spectrum resources between applications received at exactly the same time, or whether such rare instances, if they ever occur, could be sufficiently resolved on a case-by-case basis within the Commission's licensing discretion or potentially through a prescribed resolution criteria.

144. *Compatibility of Systems Authorized Outside of a Processing Round.* For NGSO licensees authorized to operate in frequency bands that are not granted in a processing round, we propose to require compatibility with existing or future operations in those bands. Specifically, we propose that ''the NGSO satellite system must be compatible with existing operations in the authorized frequency band(s) and must not materially constrain future space station entrants from using the authorized frequency band(s).'' This is similar to how small satellite systems currently operate under § 25.122(c)(9), and we believe this could be appropriate for a broader range of operations. We seek comment on this proposal. Is the fact that we are requiring licensees to not materially constrain future space station entrants from using the frequency band sufficient to protect future entrants, or should we require additional information from licensees? Does this proposal provide enough certainty to licensees and future applicants that they will be able to design their systems to be sufficiently flexible to accommodate future users?

6. First-Come, First-Served Processing

145. *GSO Systems.* We propose to maintain the current first-come, first-served application processing for GSO FSS and GSO broadcasting-satellite service (BSS) systems in the new part 100. This process, currently described in § 25.158, is generally reflected in the proposed new § 100.142. Similarly, we propose to carry over the technical requirements for two-degree orbital spacing of GSO FSS networks in the U.S. arc, the requirements for four-degree spacing of 17/24 GHz BSS networks, and other technical rules underpinning the first-come, first-served processing of GSO system license applications. We invite comment, however, on any improvements to our first-come, first-served procedures as they apply to GSO systems.

146. *NGSO System*s. The Commission currently licenses certain NGSO satellite systems outside of a processing round when they are shown to be compatible with existing operations and will not materially constrain future entrants. In the context of NGSO FSS satellite systems, as described above, the Commission has adopted specific technical criteria to ensure their compatible operation. These criteria, applied in the processing round context, could readily be used to create a first-come, first-served licensing procedure for NGSO FSS systems. For example, a new applicant could either coordinate with each earlier-filed NGSO FSS system operating in the same frequency bands or demonstrate that it will meet the dual protection criteria of causing no greater than 3% average degraded throughput or 0.4% absolute change in unavailability for any system with which coordination is outstanding, in order to be licensed. Additionally, 10 years after licensing of a new system, we could apply the current sunset period and afford that system equal spectrum sharing with earlier-filed systems under the $\Delta T/T > 6\%$ spectrum-splitting rule. We invite comment on whether to authorize NGSO FSS systems on a first-come, first-served basis and, if so, how best to adapt our current sharing criteria to such an approach. We also invite comment on whether, and how, to authorize any additional NGSO systems on a first-come, first-served basis, including whether any applications that qualify for such processing should be considered for expedited processing as outlined above.

B. Additional Reforms for Licensing Efficiency

147. In addition to the proposed processes discussed above, we also propose rules to improve the efficiency of the licensing process. We expect these proposals to further enhance the proposed licensing process by alleviating burdens on the licensing system and aligning parties' incentives to act in more efficient ways. For example, in addition to allowing greater freedom for entities to operate and upgrade their systems, some of our proposals for modifications will mean that fewer requests will need to be processed. We also seek comment on how the Commission can reduce the complexity of requirements and the cost of licensing in the United States.

1. Dismissal and Return of Applications

148. § 25.112 of the Commission's rules details the procedures for dismissal and return of applications. To better harmonize the proposed rules, and in consideration of the proposed completeness standard discussed above, we propose to clarify the § 25.112 requirements in part 100. The Commission proposes that, unless otherwise specified, dismissal or return of an application would be without prejudice. An application would be deemed unacceptable for filing and may be dismissed with a brief statement if the application is determined not to meet the standard for complete applications under proposed § 100.131. Additionally, an application would be dismissed if an application requests authority for a specific type of system that does not align with the proposed operations. Applications would also be subject to dismissal if the application does not comply with relevant application requirements, is duplicative of a pending application on file with the Commission, or if there is clear indication that the application contains materially false information. We also propose to include a new section clarifying that application fees are due upon filing and that applications filed without the corresponding application fee will be dismissed by the Commission. We believe that a deviation from the existing part 1 rule,

which allows applicants a 14-day window after filing to pay the associated application fee, is warranted to effectuate the processing timelines we propose here. We seek comment on the proposed revisions. Are there other scenarios the Commission should include in the proposed rules to provide applicants with a clear framework for dismissal or return of applications?

149. We also seek comment on how the Commission should address applications where the applicant does not sufficiently address any additional questions asked by staff in their review of the application. Should the Commission establish a default standard of how to address applications where the applicant does not sufficiently answer additional information requests? Should the Commission immediately dismiss those applications? Should we only allow for a single follow-up request for the same questions? We invite comment on these proposals and any other commenters may have.

2. Other Application Filings

a. Amendments to Applications

150. We propose to adopt new procedures for the filing and processing of amendments to applications and expand the scope of the term ''major amendment,'' as a means of preventing abuses of the amendment system while also streamlining the process. Under the current rules, a pending application generally may be amended until the Commission adopts a final order on the application. An amendment is deemed to be a ''major amendment'' if it increases the potential for interference or changes the proposed frequencies or orbital locations to be used, or the amendment, or its effect, is determined to be substantial under section 309 of the Act. Major amendments are also subject to the public notice requirements under § 25.151 of the Commission's rules.

151. We propose to adjust the scope of requests or changes to an application that would qualify an amendment as a major amendment. We propose that if an amendment would result in the application falling within one of the proposed exceptions to expedited processing, it would be categorized as a major amendment. Additionally, we propose that an amendment would be deemed a major amendment if the amendment: would result in the application qualifying under an exception to expedited processing; adds frequencies to the proposed operations; proposes to increase power, power density, or OOBE beyond what is permitted in the Commission's rules; modifies the antenna pattern(s) or antenna gain characteristics; requests operations outside of already coordinated ranges or would require re-coordination with federal agencies; would cause an increased risk of radiofrequency exposure to humans; or would otherwise be determined substantial under section 309 of the Act. For non-blanket licensed earth stations, an amendment would be classified as a major amendment if the amendment proposes a change of more than 10 seconds from the location requested in the application. We seek comment on the proposed list of major amendments. Is this list sufficient, or is it too broad or not broad enough? Are there other circumstances that the Commission should consider in categorizing major amendments?

152. We propose to continue considering major amendments as newly filed applications, regardless of the type of service in which the applicant requests to operate. Consistent with the current rules, we propose to place major amendments on public notice after a determination of completeness. In addition, we tentatively conclude that it is in the public interest to limit when an applicant can file a major amendment to prevent applicants from filing speculative applications and then strategically waiting months or years to amend that application. Specifically, we propose that major amendments may not be filed more than 45 days after the date of filing of an initial application, unless as otherwise directed by the Commission. Given the Commission's goal of rapidly increasing application processing speed, allowing applicants to file major amendments too late in the review process risks delay. It could also help the Commission to avoid directing resources to review of an application that is later significantly amended. In addition, we propose to automatically dismiss major amendments filed after the 45-day window. We seek comment on this proposal. Does a 45-day window give applicants sufficient time to file any major amendments? Should we limit the permissible timeframe for the filing of major amendments to the period before an application is placed on public notice?

b. Applications for License Modifications

153. Currently, if an applicant wants to make a change to its systems or operations, the applicant typically must file either an application for modification or a notice of modification with the Commission. While the Commission previously revised the modification rules in part 25 based on the record we had before us, we believe that the structural overhauls proposed in this rulemaking present an opportune time to propose larger changes to what types of modifications require notice or application.

154. Under the current rules as recently amended, any modification not specifically categorized as a ''minor modification'' must be treated as major modification. While the recent changes the Commission made are an improvement, an operator must still file an application and wait for Commission approval to begin operations even for modifications that would have little to no risk of harm to people or the radio frequency environment. In turn, licensees often seek STA to operate under a revised set of parameters while modification applications are pending, or in lieu of seeking a modification at all. We believe that by allowing applicants to make a broader range of changes to their systems without needing to notify the Commission or seek prior approval, we can alleviate the need for STAs and allow staff to prioritize reviewing license applications while ensuring no harmful interference and that the public interest is served. We also hope to give licensees the flexibility to test and modify systems as needed to determine the most effective and efficient system equipment or operational parameters as quickly as reasonably possible.

155. Once a license has been granted, the licensee can make changes through modifications. As a general principle, our proposal would permissively allow operators to make changes to their authorized system and operations if the change(s) do not explicitly fall into the categories of a major or minor modification. We propose to clarify that unless a modification is considered a major or minor modification as defined in the proposed rules, a licensee could freely make changes to their system and operations without notifying or seeking approval from the Commission. We propose to divide modifications into three classes: (1) modifications not requiring notice to the Commission; (2) minor modifications, that is, those that an applicant can make subject to notifying the Commission either before or after the modifying event occurs; and (3) major modifications, meaning any modification that requires express prior Commission approval to modify the license authorization.

156. We recognize that there are modifications that risk creating harmful interference to other licensed operations and warrant public review and comment. Therefore, what we are

proposing, while giving maximum flexibility to licensees, still requires that licensees either seek prior Commission approval for certain modifications or notify the Commission either before or after the modification in certain instances. We believe that this careful balancing act that started in the *Streamlining Second Report and Order* and that we propose to expand upon here is necessary to ensure we are maintaining our obligation to protect against harmful interference and ensure the public interest is met. We seek comment on our proposal generally.

157. We seek comment on the proposed categories of major and minor modifications in part 100 and the types of operations included in each. Are these categories sufficiently clear in outlining which types of activities would require approval rather than notification, or no notice at all? We also seek comment on other potential changes or operations the Commission should consider in categorizing the types of modifications and any corresponding needs for notice or approval by the Commission. For example, we generally want operators to be able to increase transmission capacity and improve spectral efficiency with minimal regulatory barriers. Do the proposed rules herein provide enough leeway for licensees to make such improvements with minimal burden or delay? Are there ways we can make clearer the type of changes that are permissible without approval? Additionally, although the Commission recently modified the part 25 rules to make adding a point of communication or changing certain satellite equipment minor modifications (requiring only prior notification to the Commission), we did so based on the record before us in that proceeding. We seek comment on whether we should instead change those minor modification requirements so that the Commission may be notified after the change is made. Are there any benefits to this?

158. As licensees deploy and operate their systems, we generally want to permit them to simplify the number of licenses that must be maintained. Could this be accomplished through modifications that only require notification? For instance, should we allow for modifications to merge call signs or combine multiple licenses? Will licensees wish to combine licenses in such a way as to align license terms, and could this be accomplished with modifications? We seek comment on these questions.

159. We also seek comment on whether a licensee's decision to host other space stations could be accommodated through a license modification. If a satellite is already licensed and would like to host a space station that is separately licensed, should this be allowed without the need for a modification? Or should we require a notification, and if so, from which licensee? Should the notification requirements differ if the space station is U.S.-licensed or non-U.S.-licensed? How should we handle situations where the hosted space station and the host satellite are licensed by different administrations? If a hosted space station is licensed by the U.S., should that licensee be required to file for a license modification to attach to a satellite?

160. Finally, could we use modifications to handle situations where one spacecraft transfers a hosted space station to another spacecraft? Anticipating such requests in the future, is a modification the most straightforward approach to handling such requests? For example, should the Commission review requests to transfer a hosted space station that would remove the hosted space station from one license and add it to another license via modification? In that situation, could the ''offloading'' modification be a notification while the ''onloading'' modification would require a major modification if adding a space station to a separate system? If multiple spacecraft are joining, should licenses be modified? Should we add to the rules a specific type of modification to handle such situations or can it be handled by our proposed modification framework? What are the orbital debris and radiofrequency implications involved? We broadly seek comment on what type of activities and scenarios this may involve and how the proposed modification framework could accommodate these situations in a flexible and predictable way with minimal burden on operators and the Commission.

c. Special Temporary Authorizations

161. We propose to significantly overhaul and limit the way in which STAs may be used in part because we believe that the changes proposed in the NPRM for license modifications and conditional grants will greatly alleviate the need for STAs. Specifically, we propose to only allow for two types of STAs—60 day and 180 day—and limit requests for extension without public notice. In addition, we propose to deem granted earth station STA requests for 60 days or fewer upon the filing and payment of fees. We seek comment on these proposals more fully below. As the Commission recently recognized, the current STA process is ''generally in need of reexamination.'' The current STA application process for space and earth stations has created administrative burdens and a loophole for applicants and operators to secure prolonged temporary authorizations as a substitute for the proper licensing or to initiate prolonged temporary operations before the conclusion of a public notice period. This is neither the principle behind nor the intended effect of the STA process.

162. We recognize that there are instances where an STA is necessary in lieu of a permanent license authorization. For instance, during natural disasters, emergencies, or other anomalies, STAs are vital to quickly ensure continued operations. Thus, we are not proposing to eliminate STAs. Rather, we propose to limit the types of STAs available to licensees, shorten the processing timelines, and incentivize applications for STAs only when necessary, rather than when convenient. In addition, with the proposed conditional grants and the proposed overhauls regarding license modifications without Commission approval, we believe operators will have less need for STAs beyond actual short-term use or emergency situations, as directed and intended by the Act.

163. We seek comment on whether our proposal to create conditional grants would eliminate the need for an applicant to seek STA to commence operations prior to the grant of their license. Further, we seek comment on whether the two proposed terms for STAs, 180 days and 60 days, are enough time for true emergency and short-term uses. Should these terms be extended or reduced? Are there any limits placed on the Commission by the Act on how we can change our rules for STAs? Should we put STAs on public notice? The Space Bureau has previously announced that STAs for services not covered by section 309(b) of the Act will not be placed on public notice. We also seek comment on our proposal to deem granted earth station STAs for a term of up to 60 days upon the filing and payment of fees. Should our deemed granted approach for earth station STAs only be permitted in certain frequency bands or in specific situations? We note that all STAs are granted on an unprotected, non-interference basis. Does that alleviate the coordination and interference concerns given that the STA holder is responsible for ceasing operations in the event of any interference? Considering the proposals to the license modification process discussed above, do the proposed changes and limitations on STAs sufficiently address and resolve

ambiguities on the appropriate use of each of these two types of applications for the type of authorization requested? We ask for comment on whether the NPRM provides applicants and licensees with the tools to determine when a modification is needed compared to an STA, and if not, how we can more clearly distinguish the two to avoid further conflation and improper use of the licensing process. Finally, we seek comment on any alternative proposals, requirements, or limitations for the STA process.

d. Assignments and Transfers of Control

164. We propose to largely maintain the text of current § 25.119, which sets forth the requirements for assignment and transfer of control of space and earth station licenses and receive-only earth station registrations, although we propose a reorganization of the rule provisions to more logically group relevant requirements together and propose textual changes to more clearly state existing requirements. We also propose to incorporate into this section the requirements for assignments and transfers of control in the context of non-U.S.-licensed space stations granted U.S. market access. We seek comment on the proposed regulatory language and its structure. We note that, as discussed above, we propose that applicants include with the FCC Form 312—Main Form a diagram depicting ownership and control and, for assignments and transfers of control, we propose that the diagram include both the pre-transaction and post-transaction ownership of the authorization holder. We seek comment on these proposals and any alternatives.

e. Submission of ITU Filings

165. Before the Commission submits a filing to the ITU for a satellite system on behalf of an applicant, the Commission has required an applicant to first file the space station application describing the overall system, operational parameters, type of service, and the service area(s). This requirement was intended to prevent speculative filings with the ITU and ensure that the filings submitted to the ITU are consistent with the associated application. This, however, may have led some operators to submit ITU filings through other regulatory regimes that vary in the requirements and processes for submitting applicants' filings to the ITU. Considering the proposals to the licensing structure in the NPRM and the ITU cost recovery fees associated with ITU filings, we propose to allow prospective applicants greater flexibility to submit ITU filings to the Commission without requiring an underlying space station application. We seek comment on this proposed change. Should we limit this proposal so that a prospective applicant can only submit one ITU filing to the Commission without an underlying application? Given that applicants are already required to pay the ITU cost recovery fees for each filing submitted to the ITU, is there any need to limit the number of ITU filings? How would this affect a first-come, first-served application process? Are there any additional safeguards needed alongside such a new rule to prevent potentially harmful, speculative filings with the ITU? We also seek comment on other measures the Commission can take to facilitate ITU filings from prospective applicants and operators.

166. If the Commission allows prospective applicants to submit ITU filings to the Commission without having filed an underlying application, how long should the Commission maintain these filing(s) without an underlying application before suppressing them? Is four years a reasonable timeline? If no application is filed, could the entity lose the ability to use the ITU filing but the Commission allow another entity to do use that filing? Are there other considerations that we should take into account?

167. Regarding space station experimental applications filed under part 5 of the Commission's rules, the Commission will typically submit the ITU filing after the application has been granted. This allows for complete coordination with U.S. government operators before submitting the ITU filing, specifically in frequency bands that are shared on an equal basis with federal operators, given the quick turnaround time for a part 5 grant. We seek comment on the Commission submission of part 5 satellite ITU filings while an FCC experimental license application is pending for bands that are not primarily allocated to federal operations. For bands that are co-shared on an equal basis with federal and non-federal users, we seek comment on the Commission submission of ITU filing for these bands while the application is pending provided the applicant is able to obtain a letter from NTIA agreeing to the ITU submission. Are there other considerations that we should take into account?

3. Milestones and Surety Bonds

168. We seek to simplify and reduce the costs associated with bonds and milestones while making sure resources are used efficiently. We seek comment on our proposals detailed below.

169. *Milestones.* The Commission currently requires space station licensees and market access recipients to comply with milestone deployment deadlines. GSO space station licensees are required to launch and operate the authorized space station no later than five years after the grant of the license. NGSO space station licenses are subject to both interim and final milestones. NGSO operators are required to launch 50% of the maximum number of authorized satellites, place them into orbit, and operate them in accordance with the station authorization no later than six years after the grant of authorization. The remainder of the satellites in the authorized constellation must be launched, placed into orbit, and operational no later than nine years after the grant of the authorization. Licensees subject to these milestone requirements must demonstrate compliance or notify the Commission that an applicable deadline was not met within 15 days after the specified deadline.

170. We propose to eliminate the milestone requirement for GSO space station licensees. Considering the proposed license terms for GSO space station licensees in the NPRM, we believe that the five-year milestone benchmark for a 20-year license term would not be necessary to ensure that GSO system operators launch the authorized satellite(s) and position and operate the satellite(s) in the orbital location by the end of the license term. We seek comment on this proposal to remove the milestone requirements for GSO systems. In the alternative, should the Commission retain a milestone requirement for GSO licensees, or alternatively revise the GSO system milestones to more closely align with the ITU requirements for GSO systems? If so, should the Commission continue to require the five-year deployment milestone for GSO licensees, or should the Commission shorten or extend this milestone to more effectively ensure that GSO satellites are timely launched and operational? Similar to the NGSO milestone proposals discussed below, should the Commission similarly require an initial ''bringing-into-use'' (BIU) benchmark to align with the ITU requirements for GSO licensees? If the Commission took that approach, should we further align to only require a BIU benchmark for GSO licensees rather than a milestone deadline, or require both a BIU and milestone deadline? We seek comment on alternative milestone proposals and the benefits to any such proposals on a revised GSO milestone benchmark framework. Are there other approaches or benchmarks the

Commission should consider specific to GSO systems to ensure that GSO satellites are timely launched and operational, for example, should the five-year milestone be maintained or should we establish alignment with the proposed first NGSO milestone? Specifically, we seek comment on a requirement that GSO operators enter into a verifiable launch contract no later than five years after the grant of the license. This approach may be desirable as it replaces overly strict milestone requirements with a more flexible launch contract obligation that continues to promote timely deployment while reducing administrative burdens on technically prepared applicants. We seek comment on this alternative to our proposal and on any other approaches. We propose to retain interim and final milestone requirements only for NGSO satellite systems and recipients of U.S. market access grants, but we propose to align the milestones with the milestone deployment benchmarks as required by the ITU for NGSO satellite system operators. Under the current rules, a licensee is subject to both the Commission's milestones and the ITU milestones. We view this alignment of the two sets of milestone benchmarks as an effective way to simplify requirements for licensees.

171. As such, we propose that recipients of an initial authorization for an NGSO satellite system, other than a Satellite Digital Audio Radio Service (SDARS) system, would be required to deploy at least one satellite in the authorized system no later than seven years after the date of the license grant, consistent with the ITU's BIU period. Licensees would be considered to have met the requirement upon notification to the Commission that a satellite has been deployed and operating for a continuous period of 90 days consistent with a system's authorization. If a licensee fails to meet this requirement, the license would be automatically terminated and declared null and void. After this point, NGSO system licensees would be required to deploy 10% of the authorized satellites no later than nine years after the date of grant, 50% of the authorized satellites within twelve years after the date of grant, and the remainder of the authorized satellites within fourteen years after the date of grant. A licensee that does not meet these milestones will lose its authorization to launch additional space stations beyond those that they have already launched. We note that this would retain the general requirement for NGSO licensees to comply with interim and final milestone requirements but would add an initial milestone requiring that the licensee launch, deploy, and operate 10% of the maximum number of satellites authorized for service. As required by the current rules, NGSO system licensees subject to milestones must either demonstrate compliance with the applicable milestone or otherwise notify the Commission in writing that the requirement was not met within 15 days after the specified deadline. We seek comment on whether aligning the Commission's milestones with the ITU milestones would benefit U.S. NGSO system licensees and applicants, compared to our current interim and final milestones.

172. We do not propose to implement milestone requirements for recipients of a VTSS license. We believe that VTSS licensees do not need the same milestones as NGSO licensees because VTSS will often involve shorter duration missions due to the satellites moving around in and between orbits. Additionally, we believe that VTSS licenses will typically involve smaller satellite systems that will likely not raise spectrum warehousing concerns which the main issue milestones are meant to address. We therefore seek comment on these proposed revisions to the milestone structure. Are there alternative milestone frameworks or requirements that the Commission should consider adopting for all services or for specific services? Conversely, does this proposed increase in the number of milestone requirements align with the goals of this proceeding? Are there other methods by which licensees can effectively notify the Commission of compliance with a milestone deadline? Should we implement milestones for VTSS authorizations?

173. Further, we seek comment on alternatives to our proposal regarding the milestone deployment benchmarks as applicable to NGSO licensees authorized within a processing round. Specifically, we ask whether systems authorized in a processing rounds should be subject to milestones other than the ITU-aligned milestones we propose to apply to all NGSO systems. In particular, should the Commission retain the existing six- and nine-year milestones only for NGSO licensees authorized in a processing round, rather than apply the proposed revised milestones? What would be the benefits and drawbacks to this approach? Would the proposed milestones in the NPRM cause undue difficulty for future licensees seeking authorization via processing round, and if so, how? Would there be benefits to having milestones which fall well within the ten-year sunset window for a processing round? Would this allow licensees to coordinate more effectively? Regarding compliance with the milestone benchmarks for NGSO licensees authorized in a processing round, we seek comment on more effective or reformed approaches to deployment timelines within the processing round framework. If the Commission were to retain the existing milestones for NGSOs authorized within a processing round and a licensee fails to meet a required milestone deadline, should that licensee's remaining undeployed space stations be moved to a subsequent processing round? In that scenario, should those undeployed space stations be treated as a new system within that next or subsequent processing round, or still as part of the originally authorized system? What other methods could the Commission employ to ensure that NGSO licensees in a processing round are both on track in reaching the required milestone obligations while fulfilling the spectrum sharing and coordination obligations with other systems authorized within a processing round? We seek comment on this approach and any alternative methods or suggestions to best support NGSO systems deployment within a processing round framework as proposed in the NPRM.

174. With respect to licensees authorized to operate different types of satellites in the same system under a MOSS authorization, we propose to revise § 25.164(g), which requires that licensees must meet the applicable milestone deployment deadlines for its satellites, to reflect whatever milestone is ultimately established in the final order. We seek comment on this proposal. We also propose to carry over the current requirement that, in cases where the Commission grants more than one space station authorization for the same system in different stages, the earliest of the milestone schedules will be applied to the entire system. Effectively, the first authorization for a satellite system establishes the milestone deployment timeliness and applies to any subsequent authorizations for that system. Retaining this provision would provide necessary clarity to NGSO operators, especially considering the revised milestone schedule and modernized licensing framework proposed herein, in establishing that all space stations authorized within one licensed system are subject to the same milestone deployment timelines. We seek comment on this rule part and any revisions the Commission should

consider regarding multiple space station authorizations within one system and the associated deployment timelines. Should the Commission consider multiple deployment timelines for one system in certain circumstances, or does retaining this provision provide licensees with a helpful bright-line rule? We seek comment on the proposed requirement and on any alternative approaches.

175. *Surety Bonds.* Under the current rules, all space station licensees are required to post a surety bond covering the potential payment liability to the U.S. Treasury in the event of a milestone default. The Commission adopted the application-stage surety bond requirement to establish a market-based mechanism for ensuring that licensees are financially willing and able to proceed with satellite construction and to discourage warehousing of scarce spectrum resources. Space station licensees generally must post the required bond within thirty days from the date of the license grant, while NGSO systems granted under the small satellite procedures are required to post the bond within one year and thirty days from the date of the grant. Failure to post the bond in full within the designated timeframe automatically renders the license null and void. The amount of a licensee's total surety bond is determined based on a formula calculation dependent on the number of days from the date the license is surrendered, increasing liability for default over time.

176. For NGSO space stations, the Commission proposes to limit the requirement of a surety bond to licensees with 200 or more authorized satellites in one system, excluding replacements. We believe that satellite systems with 200 satellites or more raise spectrum warehousing concerns and require more intense spectrum use and therefore should be subject to the surety bond requirement. In contrast, GSO space stations, NGSO space stations of fewer than 200 satellites that do not seek inclusion in a processing round, and VTSS licensees will generally raise a lesser concern about spectrum warehousing leading us to propose to eliminate the surety bond requirement for those space stations. We seek comment on our proposals to limit the types of space station licensees required to post a surety bond. What are the costs and benefits of removing the requirements as proposed such that the changes are warranted? We also seek comment on whether the proposed threshold of 200 satellites in an NGSO system is reasonable. Should the threshold be more, or less? Alternatively, in contrast to our proposal, should the Commission continue to require surety bonds for all licensed systems or for some additional classifications or types of systems or operators? Additionally, given that a threshold such as this creates incentives for licensees to ''structure'' licenses to avoid the bond, should we establish requirements to prevent circumventing the purpose of the surety bond, and what would they be?

177. We further propose that any NGSO space station licensee authorized to operate fewer than 200 satellites but licensed within a processing round would also be required to post a surety bond. We tentatively conclude that the current surety bond requirement for all NGSO and GSO licensees to discourage spectrum warehousing and encourage efficient construction is no longer necessary to impose on all such licensees, considering the Commission's revisions to the regulatory fee requirements for space station authorizations. In addition, under our proposal licensees granted access to bands outside a processing round would be operating on a compatible basis with other systems and would not be required to post a surety bond. We see little benefit to adding the cost of a bond to systems for which no particular priority is provided and for which there is likely to be no material preclusion of other systems in terms of resources. We also believe that by dramatically reducing the number of situations in which a bond is required, we will better encourage U.S. companies to license with the Commission rather than overseas, and even with a potential increase in non-priority applications due to the removal of the bond requirement, we do not anticipate harmful interference risks that would justify the cost burden. We seek comment on whether this assessment is correct.

178. The Commission proposes to revise the surety bond formula to calculate the surety bond that a licensee must maintain on file and the amount required for payment in the event of a default. We propose two significant changes to the Commission's approach to the surety bond requirement. First, we propose to shift the approach to the surety bond formula from an escalating bond to a deescalating bond calculation. Second, we propose to apply two different calculations—one applicable to NGSO space station licensees with two hundred or more authorized satellites and one applicable to NGSO space stations with fewer than two hundred satellites but that are authorized within a processing round. For NGSO space stations with 200 or more authorized satellites, we propose the following calculation, rounded to the nearest dollar: $B = \$10{,}000 * ((0.9*A) - D)$, where B is the bond amount, D is the number of satellites deployed, and A is the number of satellites authorized. For NGSO space stations authorized in a processing round but with fewer than 200 authorized satellites, we propose using the following calculation, rounded to the nearest non-negative dollar amount: $B = \$1{,}800{,}000 * (1 - (D/(0.9 * A)))$. Since licensees authorized in a processing round are granted a priority status, we believe it is reasonable to set a minimum surety bond amount to disincentivize applications for speculative systems and promote more intensive use of spectrum resources. The proposed formula for NGSO systems with fewer than 200 authorized satellites maintains consistency across small systems, avoids discontinuities in regulatory treatment at the 200-satellite threshold, and ensures that the cost of entry remains sufficiently high to preserve the functional separation between priority and non-priority licensing. We seek comment on these formulae and ask whether there are alternative approaches?

179. We believe that these proposed calculations, where the total amount of the surety bond would decrease based on the number of satellites deployed in an authorized system, would provide a more effective incentive structure to support satellite operators in reaching full deployment, rather than requiring payment of the surety bond based on compliance with deployment milestones. Also, for systems with 200 or more satellites, the formula varies the initial bond amount based on the size of the system which we see as preferable to our current approach, which applies the same initial bond amount to all licensees.

180. Alternatively, we seek comment on other approaches to revising the surety bond calculation and the resulting required commitments for licensees. Should the Commission adopt an alternative formula or methodology from the proposed calculations? What other formula might better incent deployment in a timely manner? Are there better ways to reduce the number of systems which are licensed but never deployed while not preventing operators from licensing in the United States? What other factors, such as system altitudes or beam sizes, might be incorporated either directly or indirectly into a bond formula so that the Commission's objectives in having a bond are met? Should the Commission

apply a separate surety bond calculation for those entities seeking to be licensed through a processing round? If the Commission were to consider a surety bond formula for applicants seeking authorization through a processing round, should the initial surety bond amount be a flat value that would apply to all applicants, regardless of system size or other characteristics, and diminish over time based on deployment progress? For example, should the Commission adopt an initial flat bond of $20 million applicable to all processing round applicants that would diminish over time based on the percentage of satellites deployed? Is a flat initial bond of $20 million an appropriate starting point for the surety bond requirement, or should this number be higher or lower? How should the required bond decline with deployment so that the right incentives are in place to achieve the objectives of having the bond? We ask for input on specific formulaic approaches and the costs and benefits to any proposed methodologies or revised calculations.

181. We also propose to revise the point at which a licensee is relieved of its surety bond obligation. We propose to shifting from upon a finding of compliance with the deployment milestone obligations to the point when the licensee has deployed the total number of satellites such that the bond formula equals zero dollars or less and has notified the Commission of its deployment status. Each proposed formula declines such that the required bond would reach $0 when 90% of the authorized satellites have been deployed. At that point, the licensee could be relieved of the bond while having the flexibility to deploy up to 10% fewer satellites without defaulting on its bond obligation, if necessary. However, the licensee would still be subject to the final deployment milestone requirement, and failure to meet the final deployment milestone which would cap the system authorization at the number of satellites deployed by the milestone date. We also propose to carry over the existing requirement that a licensee will be considered to be in default with respect to the surety bond filed if it surrenders the license, but in alignment with the proposals herein, default would occur if the license is surrendered prior to surety bond amount deescalating to zero, rather than prior to meeting a milestone requirement. Licensees with a surety bond on file would be permitted to notify the Commission on the number of satellites deployed in the authorized system to decrease the total payment that would be required in the event of a default using the applicable formula.

182. We seek input from stakeholders on the proposed approach to surety bonds and milestone compliance and on the revised surety bond formulas. Would these formulas adjusting the amount of the surety bond proportionate to the percentage of deployed authorized satellites effectively incentivize satellite operators while continuing to deter spectrum or resource warehousing? Do each of the proposed formulas support these goals equally, or are there specific considerations or concerns with either of the two formulas? Should the Commission include an inflation adjustment to the bond formula so that the bond amount retains its purpose? If so, what measure of inflation should the Commission rely upon and how frequently should the Commission perform this adjustment? Are there other methodologies or proposals for alternative surety bond formulas or calculations that the Commission should consider in modernizing the surety bond requirement? How should licensees be permitted to notify the Commission of its deployment progress to reduce the total amount of the bond?

183. We additionally inquire as to when and how any revised milestone and bond requirements should come into effect if the proposed revised milestone deployment benchmarks and surety bond requirements and calculations are adopted. When the Commission revised the surety bond requirements in 2016, the Commission permitted space station licensees and market access grantees with existing grants at the time the new rules came into effect to submit a letter requesting to replace its current milestone schedule and bond obligation with the new schedule and obligation. These operators were also permitted to submit a new or modified bond and were relieved of their previous obligations, or retained the option to continue under the milestone and bond conditions established in their grants. We seek comment on whether the Commission should take a similar approach to any revisions to the milestone or bond requirements, allowing applicants the option to either keep their existing obligations and bond amount or replace them with the new rule requirements. In the case that the Commission adopts its proposals to require surety bonds for only those systems authorized to operate 200 or more satellites or for NGSO systems with fewer than 200 satellites authorized within a processing round, or an alternative proposed methodology, we propose that current licensees holding authorizations pursuant to §§ 25.122 and 25.123 of the Commission's rules would be relieved of their bond obligations under § 25.165(a) upon the effective date of any adopted rules. Are there other approaches or considerations the Commission should consider in transitioning to this revised surety bond framework? Should the Commission consider different approaches to the implementation of any revised milestone and surety bond requirements specific to licensees authorized within a processing round? How should the Commission address licensees with surety bonds on file with upcoming milestone deployment deadlines?

4. License Terms, Extensions, Replacements, and Renewals

184. *License Terms.* Currently there are a variety of different license terms for satellite and earth station licenses in our rules. Authorizations for GSO and NGSO space stations are issued for fifteen-year license terms, with certain service-specific exceptions, while satellites licensed under the small satellite and small spacecraft rules are licensed for six-year terms. For GSO space stations, license terms begin at 3 a.m. Eastern Time on the date when the licensee notifies that the Commission that the space station has been placed into orbit at the assigned location and the operations are compliant with the license terms and conditions. NGSO space station license terms begin at 3 a.m. Eastern Time when the licensee notifies the Commission that operation of an initial space station that is compliant with the license terms and conditions is placed into the authorized orbit. Our current rules state that the term of earth stations shall be specified in its authorization.

185. We propose extending the license term for most space stations and earth stations to 20 years. We note that we routinely receive applications to extend the license term beyond fifteen years for GSO satellites, and that we have generally found extensions of five years to be in the public interest. As such, there is efficiency in not requiring licensees to file (and the Commission to review) modification applications to seek authority for five-year license extensions for GSO satellites and to extend by rule the license term of GSO satellites from fifteen years to twenty years. Is there any danger that the proposed extension of the license term may limit the ability for newer technology to be licensed, given the scarcity of resources? We seek comment on this proposal and alternatives. Licenses for Direct Broadcast Satellite

(DBS) space stations and 17/24 GHz BSS space stations that are licensed as broadcast facilities, and for SDARS space stations and terrestrial repeaters, are currently issued for a period of eight years. Licenses for DBS space stations not licensed as broadcast facilities are currently issued for a period of 10 years. We seek comment on whether license terms for all GSO satellites other than those that are licensed as broadcast facilities where the license term is statutorily defined at eight years, should be aligned at a standardized license term, whether that be established at 15 or 20 years or some other term, for ease of administration and tracking. Our current rules also include a provision for GSO satellites to seek license term extensions via modification requests in increments of five years or less, and we propose maintaining this option. We seek comment on whether to maintain the ability for GSO satellites to extend their license term in this manner given our proposal to increase the standard GSO license term to 20 years and, if so, whether the information required for this modification is sufficient. We also seek comment on whether such an option should be provided for NGSO and VTSS satellites and, if so, what criteria should be applied, or whether such a provision is unnecessary given our other proposals regarding license terms, replacement space stations, and renewal expectancy.

186. For NGSO and VTSS satellites, we also propose a 20-year license term. We recognize that most NGSO satellites may have a shorter useful life than 20 years, but that replacement space stations may be used during the license term when needed. Our current regulations allow for both GSO and NGSO systems to replace satellites. We propose to add a definition of ''replacement space station'' that largely mirrors the language in § 25.165(e). Specifically, we propose to define ''replacement space station'' as ''a space station that is authorized to operate in the same frequency bands and with the same coverage area as the space station to be replaced, at an orbital location within 0.15° of the assigned location of a GSO space station to be replaced or in the authorized orbit of an existing NGSO space station to be replaced, and that is scheduled to be launched so that it will be brought into use at approximately the same time as, but no later than, the existing space station is retired.'' We seek comment on this proposed definition and if it provides sufficient clarity to applicants and licensees. Current rules allow for NGSO systems to replace satellites with ''technically identical'' satellites with 30 days advance notification to the Commission and certification that the additional space stations(s) will not increase the number of space stations providing service above the maximum number specified in the license. ''Technically identical,'' however, is not a defined term in the part 25 rules. We propose to retain the ability for NGSO licensees to replace satellites, up to the number of authorized satellites but without notification to the Commission, provided that any changes to the authorized satellites would not require the filing of a modification application, as enumerated in our major modifications proposed rules discussed above, or a condition on its authorization.

187. We believe that permitting NGSO licensees to replace satellites in their authorized constellation, except for those that would trigger a major modification or a change to its underlying authorization, allows for upgrades of the overall satellite system to take place during the license term without the need for additional Commission involvement, which further provides flexibility, ensures no harmful interference, and lessens administrative burden on Commission staff. We seek comment on this proposals, which we believe provide more clarity and flexibility for NGSO operators than the current requirements of §§ 25.165(e) and 25.113(i). We also propose removing the requirements for replacement space stations from their current placement in the surety bond rule and placing them in an expanded section of our new rules regarding license terms, replacements, and renewals since they are more logically related to these provisions than to surety bonds. We seek comment on NGSO and VTSS license terms and definitions and conditions for replacement space and earth stations generally.

188. As was noted when the Commission extended the license term for space stations from 10 years to 15 years, the goal is to reduce the number of times licensees will be required to renew their licenses and reduce administrative burdens. We think aligning the satellite license terms is even more important now when we receive applications for systems that contain both GSO and NGSO satellites. Our existing rules do not contain a set license term for earth stations and Commission practice has been to align the term of the earth station with the term of the satellite with which it is communicating. We believe that having a set license term for earth station licenses will support faster disposition of applications by the Commission staff, since a decision on license term will no longer need to be made on a case-by-case basis and it will instead be standardized. This proposed change should also provide predictability for operators, who may operate earth stations which communicate with multiple satellites with license terms ending on different dates. Finally, we note that we currently do not generally establish a term for market access grantees, instead frequently conditioning the grant of U.S. market access on continued authorization by the non-U.S. administration. We propose establishing a definitive market access term length, whether established at 15 or 20 years, or an alternative term, on market access grantees to establish consistent rules for these operators and domestic satellite licensees, which would be consistent with our requirements under the World Trade Organization (WTO) agreements, since this term length would establish parity of treatment and non-discrimination between U.S. and foreign licensed satellites, including those from WTO member countries. We seek comment on this proposal. We also seek comment on whether and how to implement this change for existing market access grantees in light of any expectations at the time of grant.

189. The Commission retains discretion to establish shorter license terms if in its judgement the public interest will be served, and we propose maintaining that discretion as well as the ability for applicants to seek a shorter license term. Applicants may at the outset of the application process seek a shorter license term, which is currently done through notation in the application narrative. We propose continuing to allow applicants to request a shorter license term than the applicable standard license term at the time they apply for a license and seek comment on this approach. Should there be a question on the general application of Schedule O or Schedule F for applicants to choose the standard license term for a particular license or to specify a request for a shorter term? Would formalizing this option serve the interest of freeing spectrum and orbital resources sooner than otherwise? Do the recent changes to the satellite and earth station regulatory fees make this change unnecessary since licensees will have a financial interest in surrendering their licenses promptly? Licensees currently may surrender a license should they complete operations before the license term ends, and we propose maintaining that option.

190. We further propose revising the license term rules to state that license or market access grant terms for space stations and earth stations will begin on the date that the license is granted, with a potential exception for receive-only earth stations. While this is a change from our current rules, under which a license term generally begins when the operator notifies the Commission the satellite has been placed into orbit with operations in conformance with the authorization or license ''terms and conditions,'' in practice this process has sometimes proven difficult to track as operators may forget to notify the Commission and the end date of the license then may be unclear. There also may be ambiguity regarding when to notify the Commission that the space station is operating in conformance with the ''terms and conditions'' of the license. Considering the proposed extension of the license terms for GSO and NGSO space stations to 20 years, we tentatively conclude that commencing the license term on the date when the Commission issues the license or market access grant will provide licensees with clarity and predictability while ensuring that licensees are ensured sufficient time to recoup their investment. We seek comment on this proposal. Should the license term for both space stations and earth stations, excepting receive-only earth stations, begin on the date of grant, or are there service-specific considerations to justify commencing the license term after the date of grant? Furthermore, we seek comment below on whether to continue registration of receive-only earth stations. If we do continue to register these earth stations, we propose a 20-year term that would begin on the date that the application was filed since these stations do not ultimately receive a license. We seek comment on our proposals on license terms, including their lengths, time of commencement, approaches for replacement space stations, and alternatives. We also seek comment on whether these changes should be applied retroactively to existing licensees and market access grantees and, if so, how that change should be made.

191. *Renewal Expectancy.* Operators of, and investors in, satellite systems and earth stations need sufficient time to recoup the substantial financial investment and effort in establishing and operating their ever-more complex systems. An expectation that a license will be renewed at the end of its term can add to the stability of the satellite and earth station business environment. The Commission generally has proceeded on a case-by-case basis regarding renewal of satellite and earth station authorizations, with the vast majority of renewal applications being granted. In practice, however, the case-by-case adjudication of renewals has occasionally led to protracted disputes about whether a renewal is warranted.

192. We therefore seek comment on whether to establish guidance on renewal expectancy and whether to establish such an expectancy for all types of space stations and for earth stations. Is such a renewal relevant in the GSO context given our proposal for license extensions, consistent with past processes? For renewal expectancy more generally, as a baseline standard, should we require that the renewal application include a certification that the station or system has not operated in a manner which would cause automatic termination pursuant to our proposed automatic termination rules? The criteria triggering automatic termination include, among others, that an earth station has not been operational for more than ninety days and that an NGSO operator has failed to maintain fifty percent of the maximum number of NGSO satellites authorized for service following the nine-year milestone period as functional satellites in authorized orbits. Would requiring certification that the automatic termination criteria have not been triggered be an effective way to ensure that renewal applications are only filed by operators who have been making significant use of resources for which they have been authorized? Should additional guidelines be considered? The Commission issued a Notice of Inquiry in 2013 that examined factors for FSS operations that could be considered where there are allegations of spectrum warehousing, including gaps in service, older ''replacement'' satellites, license extensions, and underutilized space stations. Are any of these criteria relevant to license renewal, and if so, how should they be incorporated into the Commission's review? Should a minimum level of operations or service to customers be required beyond what is defined in the automatic termination rules? For example, for NGSO satellites, should a certification be required that at least 50% of authorized satellites provide ongoing service to customers? If so, how should those terms be defined? How would changes in ownership or control or developments affecting a licensee's qualifications be factored into a renewal expectancy framework? We seek comment on whether additional guidance on renewals should be delineated in our rules, and if so, what criteria should be used for evaluating space stations and earth stations. Our current and proposed rules do not require license renewals to be placed on public notice, but the discretionary authority under proposed § 100.132(v) could be used to place renewal applications of particular importance on public notice. Is this process sufficient or should explicit public notice requirements be added to our rules for certain renewal types? We seek comment on the appropriate public notice for renewal applications.

5. Accountability and Transparency Requirements

193. *Removal of Application Requirements.* The Commission endeavors to make information available to the public to help them understand how efficiently the agency is operating, and to manage expectations on processing timelines so that applicants can have a predictable environment for business planning. We seek comment on how to remove unnecessary elements in applications efficiently, consistent with the President's goals of reducing and eliminating unnecessary and burdensome regulation. We seek comment on whether this function should be undertaken by the Commission or if it is more effective to delegate this function to the Bureau. Would notice and comment be required or desirable in all cases, or can such changes be made without notice and comment? If this function is delegated to the Bureau, should it be included in the rules governing Space Bureau delegation or elsewhere in our rules? We ask for alternative proposals for a process to eliminate unnecessary application elements in the most expeditious manner possible. Is there additional guidance the Commission can provide to applicants in furthering its goals of providing transparency and clarity on the application process consistent with the Space Bureau's directives?

194. *Reporting on Space Bureau Licensing.* To promote transparency for the public, we also propose to require the Space Bureau to report once a year, in December, on the status of all pending space station and earth station applications. We propose this reporting would be released in a public notice and posted on a Space Bureau website and would detail the number of pending applications, the percentage of applications that have been pending for less than 30 days, 31–60 days, 61–90 days, 91–120 days, 121–150 days, 151–180 days, and more than 180 days. Are there any other metrics which we

should also require? Or different metrics? Should the type of requests be separated? We seek comment on this proposal and alternatives that would improve transparency and accountability as to the Commission's space licensing operations.

6. Transition to Part 100

195. *Transition from Existing Part 25 to New Part 100.* When creating a new rule part for existing services, we must be careful in how we transition to the new rule part to avoid any unnecessary issues or disruptions to incumbent satellite and earth station operators. Because there are thousands of licensees under the existing part 25 rules and because there are hundreds of new applications a year for new or modified part 25 authorizations, we are aware of the caution necessary when effectuating the transition between rule parts. Accordingly, we propose to delegate authority to the Space Bureau to effectuate the transition to the new rule part in the most efficient manner, tentatively concluding that the Space Bureau is best positioned to determine the mechanics of the transition from part 25 to part 100.

196. We invite comment on this proposal generally and welcome additional comment on how to effectuate the change over from part 25 to part 100. Are there any best practices that the Commission should rely on from any previous rule part transitions? Are there any specific areas of our proposal that may be difficult to transition to part 100 given the number of current licenses or pending applications such as those for earth stations or for space station modifications?

197. *Prospective Application of Part 100 Rules.* We seek comment on what rule changes should apply to existing licensees and market access grant recipients as of the effective date of the rule changes, or what, if any, reason exists to grandfather existing licensees for particular aspects of the existing regulatory framework. The Commission's goal is to ensure that all licensees and market access recipients ultimately operate under a single set of part 100 rules without disrupting reasonable expectations.

198. Accordingly, we propose to apply all procedural aspects of part 100 prospectively to every licensee, regardless of whether the authorization was issued under part 25 or part 100, subject to a few exceptions. For example, if a system is licensed under part 25, and subsequent system changes would have required prior approval under part 25 but not part 100, we anticipate that such changes will be governed under the part 100 procedures and timelines ultimately adopted by the Commission.

199. At the same time, we intend to maintain certain substantive obligations included in existing license authorizations to protect other operators and respect certain reasonable reliance expectations even after the transition. Specifically, we propose maintaining the license terms, bonds, milestones, processing round status, and trackability attached to individual licenses and grants of market access at the time of authorization. We also propose to preserve license-specific conditions imposed prior to part 100's effective date. We seek comment on this proposal. Are there other proposed rule changes that should not apply to existing licensees and recipients of market access grants after the effective date?

200. We appreciate that some situations may present complexity between these two rule parts. For example, while we expect to apply part 100's modification procedures to part 25 licenses, a major modification may alter a license's processing round status under part 25. In certain circumstances, we propose to grandfather a license's processing round status under part 25 because of the complexity of those rules and the effect changes to priority may have on other systems in a processing round. Comments should state with specificity which rules should be exempted from applicability for current authorizations or whether any of the rules we propose to exempt should not be included. What considerations should we be mindful of to ensure this process is the most equitable and efficient process it can be while still ensuring that all legal requirements are met? We seek comment on these questions and proposals.

201. *Transitioning Legacy Part 25 Authorizations.* We also seek comment on transitioning licenses and authorizations issued under part 25 to part 100. It is our intention to sunset part 25 as quickly as possible in an orderly manner and delete part 25 from the Code of Federal Regulations. We believe that objective is best achieved by clearly specifying events to convert authorizations to part 100. During renewal, for instance, we propose to reissue authorizations that meet part 100's specifications. We also propose to reissue part 100 licenses following transfers of control or assignments and major modifications to the greatest extent possible. We seek comment on creating other opportunities for licensees to convert their authorizations to part 100, for example should an application for a license extension trigger a reissuance? Should we allow, or potentially even require by a date certain, authorizations to be reissued under part 100 by way of specialized application? We seek comment on the circumstances under which a full conversion to part 100 may not be feasible, and how the Commission might address them. For instance, if certain legacy part 25 obligations are necessary to preserve for a specific license, should we incorporate those legacy obligations in grant conditions that attach to the new part 100 authorization? Are there different considerations that warrant different approaches for the transition of space station and earth station licenses, given the number of earth stations and the fact that some have continued operation for relatively longer periods of time without modification or issues via renewals? In addition, are there different considerations for the transition for space and earth station licenses that we propose to be included in new categorizations? We seek comment on any other special considerations that should govern the conversion of earth station and space station authorizations.

202. Are there alternative approaches that should be considered? Commenters should address how to operationalize any proposal and consider the resources needed to effectuate this transition. For example, in addition to reissuing licenses on an individual basis at certain triggering events (renewals, major modifications, extensions, transfers of control or assignments), could the Commission issue an appendix as part of a future Report and Order that lists each part 25 rule and its corresponding rule in part 100 with a statement that any part 25 rules that attached to a license will now be mapped to the new rule part in part 100? Should a rule be added to part 100 that articulates that the part 100 rules will apply to licenses and market access grants issued under part 25, subject to any exceptions established in the final order?

203. *Pending Applications.* We seek comment on how to treat applications pending at part 100's effective date. To facilitate a speedy and orderly transition to part 100, should the Commission require applicants with pending applications as of the effective date of the new rules to supplement their applications to address the new requirements of part 100? Or should there be a cut-off date prior to the effective date of part 100 when the Commission will stop accepting applications pursuant to part 25 in order

to minimize the number of applications that are processed under the old rules and which may receive a license term of 15 years? If so, what time period for cut-off would be reasonable? Could we allow applications that are pending under part 25 when part 100 becomes effective to optionally amend the application to conform with part 100 and then be handled under part 100?

C. Operational and Technical Requirements

204. The Commission proposes to restructure the rules governing the technical standards and operations for space station and earth station licensees. Specifically, the Commission proposes to create a new ''Subpart C—Operational Requirements'' in the proposed part 100 that includes the rules that licensees must follow. We propose to further subdivide this subpart C to create clear sections that outline: (1) general rules applicable to space and earth stations; (2) general space station rules; (3) NGSO frequency specific rules; (4) GSO frequency specific rules; (5) coordination requirements and rules; (6) satellite digital audio radio service rules; (7) general earth station rules; (8) general earth station coordination and performance requirements; (9) frequency specific earth station rules; and (10) miscellaneous rules. We believe that organizing the rules in this manner will make it easier for licensees to understand their obligations and the rules with which they must comply based on their individual licenses. Additionally, we believe it will make it easier for the Commission to update rules in the future while keeping rules that pertain to the same subject together. We seek comment on this organizational approach.

205. The Commission proposes and seeks comment on certain rule sections specific to the technical operations of space stations licensed under part 25. We propose to largely incorporate the rules currently located in subparts C through J of part 25 in this new subpart C in part 100, while making improvements for clarity and ease of use. Although some notable proposed changes are discussed below, we seek comment on the entirety of our proposed subpart C.

206. Furthermore, we recognize that many portions of our proposed subpart C which are carried over from part 25 may be outdated and worth removing or revising. While we have begun to remove some such rules, we have chosen to not completely overhaul such rules at this time so that this proceeding may initially focus on modernizing the overall framework we apply to space station and earth station licensing and regulation. We expect that through further notice and additional proceedings we will further modernize the rules proposed for subpart C in part 100. Therefore, we seek comment on possible revisions, with the expectation that we may make such changes if supported by the record or we may seek further comment.

207. Regarding all of the proposed operational and technical requirements, we particularly seek comment as to whether the rules afford flexibility and predictability for licensees. As we seek to modernize our operational and technical rules in this proceeding and in others, we aim to apply the presumed acceptable framework widely by setting standards according to outcomes rather than prescribing specific designs. To give a few examples, we propose requiring in subpart C of part 100 that systems be able to cease emissions, operate according to ITU filings, and respond to collision risk warnings, but we propose allowing operators considerable freedom as to how they meet these standards. However, we also recognize some of the proposed part 100 technical rules transferred from part 25 may not follow this framework. Therefore, in addition to seeking comment on the substance of such operational and technical rules, we also seek comment on how the rules might be revised to follow a presumed acceptable framework which yields more flexibility and predictability. In particular we seek comment on how new technologies (*e.g.,* Software-defined Networks) are or are not addressed by our proposed rules. Where are specific places we need to update our rules to better allow for such new technologies while continuing to carry out our statutory duties?

1. General Licensee Operations

208. We propose to begin subpart C with general rules applicable to all licensees under proposed part 100. Specifically, we propose to begin with rules that outline permissions and obligations that apply to all licensees, including license terms and renewals.

209. *Licensee Operations.* The Commission proposes a new section to clearly state that licensees may operate within the parameters of their authorization. Specifically, we propose to adopt new rule text that states: ''Licensees under this part may operate within the boundaries of their authorizations, the rules in this part, and any other relevant provision of this chapter, the Act of 1934, as amended, or other statute, subject to any Commission action and any conditions or constraints placed on the license or licensee in any such grant of authority.'' We believe that this rule will clearly outline the fact that operators may operate their licensed systems in any way that complies with all rules applicable to that system as well as with the terms and conditions of the specific license. We seek comment on these proposals.

2. Space Station Operations

210. We propose to modify several existing rules that outline permissible actions for space station operators. We seek comment on the proposed revisions to the Commission's rules below.

211. *Orbit-Raising Maneuvers.* We propose to modify the rule pertaining to orbit-raising maneuvers to authorize both NGSO and GSO operators to transmit in connection with orbit-raising maneuvers and to allow NGSO licensees to engage in orbit-raising maneuvers without Commission approval. We propose to limit this authority to frequencies in which the space station is authorized for TT&C, and to require operators to coordinate on an operator-to-operator basis with potentially affected satellite networks and to accept interference from lawfully operating satellite systems. We seek comment on this proposal and ask commenters whether expanding this authority beyond GSO operators provides a worthwhile benefit to NGSO operators while not posing any unnecessary risk or other disadvantages. Are there additional conditions that would need to be met for NGSO operators to safely engage in orbit-raising maneuvers without first seeking Commission permission?

212. *Operating Provisions for NGSO FSS Space Stations.* We propose to incorporate § 25.146, ''Operating provisions for NGSO FSS space stations.'' We propose to make minor edits to remove the requirement that operators certify that they will comply with certain ITU equivalent power flux density (EPFD) and power flux density (PFD) limits and instead change it to a requirement that operators comply with those limits. We believe this will make it easier for applicants because they will not have to certify to multiple separate requirements with which they must comply regardless. Instead, we propose to require a general certification that applicants' operations will comply with the Commission's rules. We believe that this will be more efficient because applicants will only need to make one certification that encompasses multiple rules with which they must comply. We seek comment on this proposal.

213. *Two-Degree Spacing for GSO Space Stations.* We propose to revise the requirement for two-degree spacing of GSO space stations so that it applies only to operations to and from the United States. The Commission's longstanding policy on two-degree orbital spacing for GSO systems was initially adopted to separate potentially interfering systems and thereby limit the need for coordination on spectrum usage. This requirement aimed to facilitate GSO–GSO FSS spectrum sharing and resulted from independent Commission consideration, departing from the international requirement of six degrees or greater, to enable more satellites to serve the United States and increase competition and service offerings. However, now two-degree orbital spacing may no longer be necessary in some instances. GSO operators frequently coordinate at orbital spacings necessary to provide services to customers without creating harmful interference or otherwise impeding on effective spectrum sharing. Further, the two-degree spacing requirement may risk disadvantaging U.S. licensed operators in designing advanced GSO space station systems vis-à-vis non-U.S. licensed operators or inhibit beneficial coordination outcomes internationally. Therefore, we propose that for operations outside the U.S., GSO operators are permitted to operate under ITU coordinated parameters rather than be restricted to the two-degree spacing. We invite comment on this proposal and also on how to resolve compatibility between U.S.-licensed operations outside the United States that rely on U.S.-submitted ITU filings and are not required to coordinate with each other internationally. Alternatively, we also seek comment on keeping the two-degree spacing rules for GSO space stations for U.S. licensed space stations operating outside the U.S. as they currently are given that the GSO space station industry has utilized the two-degree spacing rules for years? Similarly, should we also maintain the +/- 0.05 degree station keeping requirements associated with the two-degree spacing rules? Would keeping these rules ensure any greater certainty or predictability for the market or potentially create undue burdens on applicants or licensees? Conversely, would eliminating the two-degree spacing and station keeping requirements cause burdens on the industry, or is there a benefit to doing so that outweighs any burdens on the industry? Has the GSO industry matured enough to the point that these requirements are no longer necessary? We seek comment on both our proposal and alternative solutions to build a robust record on this issue.

3. Reporting Requirements

214. As we propose to modernize our approach to regulating operations, we seek to limit reporting requirements as much as possible to only those which will support a more efficient, safe, and flexible space operating environment. We see these requirements as being part of a transition from the Commission's static, backward-looking approach to regulating licensees to a dynamic, forward-looking model where operators have greater freedom to operate within prescribed parameters designed to protect against harmful interference, allowing operators to simply inform others how and where they are operating instead of seeking permission for each change in operations. Therefore, we see these proposals as deregulatory in the long run and facilitating more intensive and efficient use of space for the delivery of communications services.

215. *Licensee Reporting Obligations.* Space station licensees and market access grantees are currently required to provide contact information for interference resolution and emergency response on an annual basis and provide an update with any changes to the contact information on record within 10 days of the change. We propose to eliminate the annual point of contact reporting requirement in light of the existing requirement to provide updates to contact information on record within 10 days of the change. However, we propose to amend this timeline to file the required contact information updates with the Commission within 48 hours of the effective date of the change. We seek comment on these proposed changes. Should the Commission require any additional information to be included in the point of contact information? Are there other reporting requirements for space station licensees and market access grantees that would provide a benefit to other operators?

216. *Ephemeris Data.* As the American space industry booms and the number of satellites in orbit rises, the need for data sharing becomes more important and there is a public interest benefit to the public being informed as to where licenses space stations are located. Commercial satellite operators and space situational awareness (SSA) service providers both have roles in this process. SSA service providers track objects in Earth orbit, predict their future positions, and warn of potential collisions with active spacecraft (commonly referred to as conjunction warnings). SSA service providers use ground-based sensors (and potentially space-based sensors) for object tracking, supplemented by high-accuracy ephemeris data provided by satellite operators to increase the accuracy and predictability of conjunction warnings.

217. Satellite operators have more precise and timely information about the location and trajectory of their spacecraft than SSA service providers do from object tracking alone. While operators know of their planned satellite maneuvers and account for them in their satellite's predicted ephemeris, the orbit propagated by an SSA service provider from tracking alone will not capture any planned trajectory changes due to maneuvering and therefore will leave unreported any satellite conjunctions that could arise from the modified trajectory. Even for non-maneuverable satellites, operators generally have a better understanding of the spacecraft's construction and non-conservative force parameters, such as the ballistic coefficient and solar radiation pressure coefficient. Thus, a satellite operator's prediction of its satellite's future position, captured in predictive ephemeris data, is often reliable and valuable adjoining data to the future position information calculated from a space catalog entry.

218. The Commission's rules currently require NGSO space station license applicants to disclose whether they plan to share information regarding initial deployment, ephemeris, and/or planned maneuvers with the 18th Space Control Squadron or successor entity, other entities that engage in space situational awareness or space traffic management functions, and/or other operators. Applicants must also certify that upon receipt of a space situational awareness conjunction warning, the operator will take all possible steps to assess and mitigate the collision risk, including by contacting operators of active spacecraft involved in the warning and sharing ephemeris data. NGSO FSS satellite operators specifically must ensure that ephemeris data for their constellations are available to all operators of authorized, in-orbit, co-frequency satellite systems in a manner that is mutually acceptable. Non-voice, non-geostationary (NVNG) MSS licensees are also required to obtain ephemeris information necessary to comply with restrictions around certain protection zones.

219. In 2020, the Commission adopted the requirement that NGSO satellite applicants disclose any plans they have for sharing ephemeris data with an SSA

service provider, like the 18th Space Control Squadron, but stopped short of requiring satellite operators to actually provide such ephemeris data to an SSA service provider. At the time, the Commission concluded that such an ephemeris sharing requirement was unnecessary given the newly adopted disclosure requirement and the required certification that upon receipt of a space situational awareness conjunction warning, the operator will review and take all possible steps to assess the collision risk, and will mitigate the collision risk if necessary and that the assessment and potential mitigation should include, as appropriate, sharing ephemeris data and other relevant operational information. While current rules require operators to address conjunction warnings that they receive, there is no general requirement for satellite operators to share predicted ephemeris data for their own systems, including planned maneuvers, to ensure the most accurate information on potential conjunctions with other operators' systems.

220. As we seek to provide greater flexibility for space operations, we recognize the need for orderly activities by spacecraft with licensed space stations. Predictable commercial operations allow GSOs and NGSOs to plan their missions in advance, operate more efficiently, and give VTSS licensees more flexibility in conducting their missions. To the extent feasible, we want licensees to be able to operate freely but to also inform operators, the Commission, and the public of their location by contributing accurate ephemeris data to an SSA system. We see this as the long-term path to replacing the need for many notifications or license requests. Given that SSA technology and the ecosystem is still evolving, our proposal is for a flexible framework for how licensees may comply with this requirement.

221. Accordingly, we propose to require that all space station operators file their ephemeris data via space-track or with the 18th Space Control Squadron or with one or more SSA service providers that would be identified by the Space Bureau through a public notice (after notice and comment if the Space Bureau deems required or advisable). We also propose to ensure that this data be made available to all authorized operators of co-frequency systems. We seek comment on this proposal and ask for specific information as to the frequency of reporting, the method of reporting, any other associated reporting requirements or notifications the Commission should require along with the ephemeris data, or alternative approaches. For example, should we also require that ephemeris data specifically be made available to all other satellite operators at shared altitudes, in addition to shared frequency bands, through an appropriate SSA? If so, how should we define shared altitudes and ensure that such a requirement is not unduly burdensome, particularly on smaller operators? Do we need any additional requirements regarding initial launch phase or post-service mission operations? Should we specifically require operators to immediately notify an SSA provider of any temporary, ongoing, planned, or unplanned spacecraft system outages that would prevent collision avoidance maneuvers? Additionally, we seek comment on how the Commission and the Space Bureau should identify appropriate SSA provider. What criteria should the Space Bureau look for in an appropriate SSA provider? Should we require reporting of the data with a specific frequency? If so, what frequency would be appropriate? Would a frequency of submission of ephemeris data and covariance of no less than every eight hours for spacecraft operating at or below 750 km altitude and every 24 hours for spacecraft operating above 750 km altitude be appropriate? Should we specify that space station operators must register with an SSA provider at least 30 days before initial launch of a spacecraft and must submit ephemeris data and covariance within eight hours of launch or initial insertion for all spacecraft in their authorized system? Is space-track the best place for requiring the reporting? Are there standard data formats that should be required so the data can be widely used? Should the Commission adopt a rule that gives the Commission the ability to update the required reporting method via public notice? Should the Commission define accuracy standards for the ephemeris data submitted to an SSA provider and if so, what should those standards be?

222. *Space System Safety Reports.* We also propose that NGSO space station licensees, after the launch of the first satellite in an NGSO system, must file a semi-annual report in ICFS covering the preceding six-month period detailing the number of conjunction events identified, including the number of events resulting in maneuver or coordination with other operators, the number of satellites removed from operation or screened from further deployment, and the number of satellites that re-entered the atmosphere. These semi-annual reports would be filed by January 1 and July 1 of each year, covering the preceding period from June 1 to November 30 and December 1 to May 31, respectively. We seek comment on this proposal. Is there other information that the Commission should require as part of the reporting that would provide an additional benefit to other operators? Should the Commission delegate to the Space Bureau the ability to stop requiring these reports if they are not used or if other tools such as SSA systems develop to the point where such reports are no longer needed?

4. Orbital Debris

223. The Commission proposes to incorporate the current orbital debris requirements into the proposed part 100 though with important changes to align with our modernized approach of applying bright-line criteria. Specifically, as part of the application submission we propose to require applicants to submit certifications as to whether their satellite systems will comply with specific orbital debris criteria, including: satellites will be identifiable; satellites will fall below a certain threshold for small debris collision risk, large object collision risk, and human casualty risk; stored energy will be vented at the end of operational lifetime; and others. These elements are part of the application process and will be reviewed at that time. In addition to the certifications that we propose to include in the application requirements section, we also propose to create a section in subpart C that includes orbital debris rules that all licensees must follow. These are in line with the Commission's current rules but we believe including them in subpart C provides better organization and clarity. Specifically, we propose to include a rule that details certain operational requirements and end-of-life disposal. Additionally, we propose to create a rule detailing certain space safety rules for NGSO satellite systems. We see these as common sense approaches that have been developed through fulsome Commission proceedings and which will help ensure the ongoing ability of systems to deliver communications services.

224. *End-of-Life Disposal.* We propose to incorporate current § 25.283 which details the end-of-life disposal requirements for GSO and NGSO satellite licensees. We propose to add a requirement that space station operators must operate their systems in accordance with the orbital debris mitigation and end-of-life disposal plans that they provide to the Commission in their applications. We also propose to

require applicants to notify the Commission of any significant changes to the ODMP, statements, and disclosure within 30 days of the change. We seek comment on this proposal, including whether it provides the predictability and flexibility we seek. We also propose to require that space station licensees limit operational debris, debris resulting from accidental explosions, or liquids released that will persist in droplet form. We believe that taking the current requirement for applicants to provide a statement that they have ''assessed and limited the probability'' of accidental explosions and release of liquids that will persist in droplet form and turning it into an affirmative obligation for operators will provide a more objective standard for applicants and operators to meet while also increasing space safety. We seek comment on this proposal. Are there additional information requirements that we could make affirmative obligations? Should the Commission require a specific showing as to how an applicant will satisfy the requirement?

225. We also propose to turn two other current information requirements found in part 25 into affirmative obligations that all space station licensees must follow. Specifically, we propose to require that all NGSO satellites be trackable, with the presumption that each satellite larger than 10 cm in the smallest dimension is trackable. We also propose to require that, upon receipt of a space situational awareness conjunction warning, all operators must review and take all possible steps to assess and mitigate the collision risk. This is similar to the current certification required by § 25.114(d)(14)(iv)(A)(5), but relieves the operator of the obligation to certify to this specific requirement and instead imposes an affirmative obligation on all space station operators to assess and mitigate collision risk. We believe that incorporating these requirements, currently found in a similar manner in part 25, into the new part 100, and making them affirmative obligations will make it easier for space station applicants and operators to understand their obligations and will promote space safety. We seek comment on these proposals. Are there additional orbital debris information requirements that the Commission could turn into affirmative obligations?

5. Interference, Spectrum Sharing, and Coordination

226. *Coordination Requirements with Federal Government Users.* We propose to create a new rule section that lays out the coordination process the Commission will undertake with respect to achieving compatible operations between federal government users under the jurisdiction of NTIA and commercial licensees under the jurisdiction of the Commission in shared government/non-government frequency bands. We propose rule language that is similar to current § 25.279(b)(1). In addition, we propose to include the following language: ''The Commission will coordinate with the National Telecommunications and Information Administration regarding the operations of any licensees authorized to operate in a shared government/non-government frequency band.'' We believe that this standalone section will make the rules clearer and make it easier for cross-references in other rules that speak to federal coordination. We seek comment on this proposal. Is there additional text or are there additional rules that we should include here, or should any of the proposed text be eliminated?

227. *Procedures to be Followed in the Event of Harmful Interference.* We propose to incorporate § 25.274, ''Procedures to be followed in the event of harmful interference,'' with certain revisions. Specifically, we propose to delete current paragraphs (a) and (b) as we believe they are redundant and unused in practice. We propose to incorporate some of these paragraphs and revise paragraph (c) to read as follows: ''An earth station operator experiencing harmful interference must determine that the interference is not a result of equipment fault and that the source of the harmful interference is not from another earth station operating in the same network or from a terrestrial source. The earth station operator shall then contact the satellite system control center and advise the satellite operator of the problem. The control center operator shall observe the interference incident and make reasonable efforts to determine the source of the problem. A record shall be maintained by the control center operator and the earth station operator of all harmful interference incidents and their resolution. These records shall be made available to an FCC representative on request.'' We seek comment on this proposed language, and more broadly on the necessity of the provisions in this section.

228. *Additional Coordination Obligations.* § 25.278 of the Commission's rules details additional coordination obligations for NGSO and GSO systems operating in FSS. The Commission proposes to delete this rule section as redundant with the Commission's requirements requiring such coordination.

229. *OOBE Limitations.* § 25.202(f), (h) and (k) set forth the limits for OOBE. We seek comment on whether these limits should be updated in part 100 in light of modern communications systems and technological improvements in both transmitter and receiver designs.

6. Earth Stations

230. We do not propose to make significant changes to the specific technical criteria for operations of earth stations. We conclude that much of that work is better suited for other proceedings that are more focused on the technical issues. However, as it may relate to application requirements and processing and removing redundant or unnecessary materials from the operational requirements, we do propose to make a number of changes that are reflected in our proposed rules. With this in mind, the Commission has endeavored to structure the new rules in a manner that better groups like services or requirements together. Generally, we seek comment on how we propose to structure the rules and welcome alternative proposals and justifications.

231. Furthermore, we propose removing the enumerated list of available frequency bands because it is redundant of the U.S. Table of Frequency Allocations. We seek comment on this proposal. We tentatively conclude that the inclusion of this list can cause confusion among applicants and can result in misstatements or misinterpretation by the Commission or applicants. We seek comment on this conclusion. Should the Commission keep the enumerated list? If so, what are the benefits of doing so? What are the drawbacks and benefits of removing the list from the rules? Is all of the information contained in the current § 25.202 found in the U.S. Table of Frequency Allocations, and if not, how should this be handled? In order to achieve our goal of allowing satellite operators to apply for any spectrum where there is an allocation for them, do we need to provide a specific rule? Or is the fact that the U.S. Table of Frequency Allocations identifies the bands where satellite operations are permitted sufficient? Should there be any carve-outs for any specific bands?

232. *Choice of Sites and Frequencies.* We do not propose any changes to the established power limits, other than rearranging the relevant part 25 rules to group power limits together. We seek comment on whether any of the requirements of this section are unnecessary given our proposed shift to

a Nationwide, Non-Site License regime for all earth station types. Should any of this section be revised to reflect the new proposal? If so, how should this be revised and why? Further, given that the Commission is now relying on self-certification for coordination, would any of what we require in this section become unnecessary if, as proposed, we will no longer be reviewing an application's coordination other than to see that a report has been provided? We seek comment on these questions and invite any proposals for revising this section.

233. *Receive-Only Earth Stations.* Although we propose to keep the rules relating to receive-only earth stations, we do invite comment on whether we need to have these rules. Specifically, given that the Commission determined that it was unnecessary to license receive-only earth stations communicating with U.S.-authorized space stations, and instead only register them, is this rule part unnecessary? If so, we invite commenters to provide details as to how and why. In addition, we invite comment on how we should treat existing rule parts that limit the receive-only protections available to those already registered, such as in C-band. Alternatively, should we keep this rule because of a potential benefit of registering receive-only earth stations? If so, why? Further, if we choose to adopt a proposal to eliminate the rules, should we address C-band related issues, including registration of sites for receive-only earth stations, in a future proceeding given the unique circumstances surrounding the C-band?

234. *Earth Station Antenna Performance Standards.* We take this opportunity to propose a more streamlined approach in which we generalize the antenna performance standards to cover multiple bands as opposed to on a band-by-band basis, and to have a single standard for the co-polarization and cross-polarization antenna gains rather than the amalgamation that currently exists of specifying different standards based on frequency. Under our current rules, the earth station antenna performance standards have caused a large amount of confusion amongst operators and are unmeetable for many newer antenna types. We believe the streamlined approach we propose here would accommodate more antenna types while providing for the necessary protection of other systems and services. We seek comment on this proposal generally.

235. In addition, we seek comment on whether the streamlined approach we propose here would be sufficient to protect current and future systems. Does it sufficiently account for all types of missions including FSS, MSS, and VTSS? If not, what should be changed to better accommodate all service and system types while still giving maximum flexibility for the types of antennas operators choose to use?

236. *Earth Station Off-Axis EIRP Density Limits.* We propose to significantly streamline the off-axis EIRP density limits for earth stations from what is currently in our rules. Under our current rules, off-axis EIRP limits vary greatly based on frequency bands and whether the transmitted signal is analog or digital. Since almost all transmissions in modern communication systems are digital, as part of our steaming effort, we propose to have a single requirement for both digital and analog transmissions as opposed to different requirements. Also, given the proliferation of NGSO systems with a large number of satellites, we are proposing to add a new off-axis EIRP density requirement for NGSO FSS earth stations, including for feeder links for other satellite services in order to limit interference to other systems and services. Further, we are also proposing to streamline the GSO off-axis EIRP limits by creating a single requirement that would address the different bands as opposed to on a band-by-band basis under the current rules. We seek comment on our proposals. Are the new and modified off-axis EIRP limits we propose both broad enough to include all necessary services, but specific enough such that the requirements are actually meetable and useful? Is there any reason to keep the limits as we currently have them in our rules? Are there any benefits or drawbacks to our proposals? We seek comment on these questions and invite commenters to provide alternative proposals that achieve the same goals of reducing confusion and eliminating unnecessary regulations.

237. *Period of Construction.* We propose to make changes to the period of construction to account for our proposed Immovable earth stations and their registration status. We propose to require that an Immovable earth station licensee begin operations at a registered site within 365 days of registering the site to prevent spectrum warehousing or disadvantage others that may want to operate. We seek comment on this proposal.

238. *Responsibility of Licensee for Blanket Licensed Earth Stations.* In this section we propose to include language in our rules that makes clear who is responsible for an earth station and how they must maintain control of the device. We seek comment on this proposal. Specifically, as the proliferation of direct-to-device and SCS continues, it becomes impossible for licensees to maintain physical control over every device. Accordingly, we propose to only require that the licensee be in control of the network and maintain the ability to cease transmissions to or from the device over their network. We seek comment on this proposal and invite comment on any alternative approaches.

239. *Radiofrequency Exposure Requirements.* We propose to streamline the radiofrequency exposure requirements in our rules. We seek comment on this proposal. We seek comment on whether the general radiofrequency exposure requirements of part 1 that are applicable to all services, combined with the filing requirements and instructions of the forms in ICFS, would sufficiently demonstrate compliance with the rules such that a specific rule under the new part 100 would become redundant and unnecessary. We also request comment on whether, similar to the certification rules for SCS equipment, such requirements could alternatively be relocated under part 2 rules to sufficiently address radiofrequency exposure requirements for all other types of transmitting satellite equipment.

240. *User Terminals and ESIMs.* We propose to make substantial changes to our rules related to user terminals and ESIMs. As technology has developed, the Commission has seen more and more that the same technological parameters and devices are used for both fixed user terminals and ESIMs. With that in mind, the Commission proposes to combine the rule requirements for user terminals and ESIMs into a single rule section. We seek comment on this proposal. Specifically, is there enough overlap between ESIMs and user terminals that a single rule part is sufficient? Should these rule parts remain separate? Why or why not? We tentatively conclude that there is enough overlap that the rule parts can be combined, but seek comment on this conclusion.

241. *Earth Station Coordination Requirements.* We propose to clearly lay out the requirements for coordination between earth station operators in our rules. While we generally make few changes to our current requirements, we do seek comment on this proposal and on ways we can improve coordination amongst earth station operators. For instance, are the requirements described in this proposed rule overly broad and burdensome? Alternatively, are they too narrow to be of much use? Given the

proliferation of third-party coordinators, does the Commission need to specifically enumerate what needs to be provided for coordination, or should operators be able to decide amongst themselves what information they do or do not need to see and evaluate? What are the benefits or drawbacks to the Commission specifying how coordination works and the information needed to be provided? Is there any benefit to the Commission developing a real-time database that handles coordination in real time for applicants and licensees? Or is the current coordination process sufficient?

242. We understand that in some instances, coordination may be used as a tool to prevent new entrants from being able to receive a license. Do the proposed rules provide sufficient guidance and guardrails to prevent this from happening? If they do not, we ask commenters to provide proposals of ways in which the proposed rules can be revised to better protect against gamesmanship in the coordination process.

D. Benefits and Costs

243. We find that the rules we propose today, if adopted, will promote efficiency in the Commission's licensing process, provide more predictability and flexibility for licensees, as well as meet our statutory responsibilities and international obligations. We expect that our proposals would significantly reduce regulatory compliance costs, resulting in annual cost savings of at least $165,000. These cost savings are in addition to other benefits that are more difficult to quantify, but nevertheless important, such as reduced harmful interference, increased spectrum efficiency, and space safety. We estimate that the costs resulting from the changes that we propose will be approximately $90,000. We therefore conclude that the cost savings alone will fully offset the associated costs, such that the proposed rules are in the public interest. We seek comment on these findings.

244. We estimate that the deregulatory steps we take today will result in annual cost savings of approximately $165,000. This reduction will accrue primarily from limiting the cases in which operators are required to submit modification filings and STA requests. Based on conservative assumptions, we expect the proposed changes will reduce such filings by at least 15%. We expect this reduction to result from measures such as eliminating the requirement for waiver requests for contemporaneous supplements or exhibits, allowing applicants to certify that no information has changed from a previously filed FCC Form 312—Main Form, eliminating certain milestone requirements, and allowing prospective applicants to submit ITU filings without the need for prior filings with the Commission. We seek comment on our estimate of cost savings. We also ask commenters to identify additional potential cost savings that we have not considered in our estimate.

245. In addition to these quantified savings, we anticipate significant potential cost savings from eliminating the surety bond requirements for GSO space stations and certain NGSO systems. These savings include monthly fees that licensees would otherwise pay to third parties for posting a surety bond, as well as the opportunity cost of capital that operators forgo by having to set aside financial resources for surety bonds. While we do not quantify these savings here, we believe that they will represent a meaningful reduction in regulatory burden for affected operators. We seek comment on this view.

246. We estimate that the total cost associated with the proposals will be approximately $90,000. This estimate is primarily driven by the cost of preparing semi-annual space system safety reports, which require information on the number of conjunction events identified for satellites in the NGSO system during the reporting period, the number of satellites removed from operation or screened from further deployment, and the number of satellites that re-entered the atmosphere. Since we assume that all NGSO operators already collect the relevant information as part of their routine operations, this estimate only accounts for the costs associated with preparing and submitting the report. We also assume that costs associated with all other proposed reporting requirements will be negligible. Specifically, the costs of sharing ephemeris and covariance data is expected to be minimal, as operators already generate and maintain this information for their own operational purposes. Sharing it with a designated SSA service provider would primarily involve integrating with an existing SSA Application Processing Interface, which should require minimal additional effort. Additionally, we expect that eliminating the annual point of contact requirement will result in cost savings rather than impose new costs, although we do not quantify those savings here. We seek comment on our estimate as well as on the assumptions underlying our estimate.

247. Overall, we anticipate that cost savings will fully offset the total estimated costs associated with this item. Moreover, our analysis does not account for the additional benefits expected to accrue from these changes, including improvements in spectrum efficiency, space safety, and reduced regulatory burden. We seek comment on the potential benefits of our proposed rules. Commenters are encouraged to submit quantifications of all claimed benefits and costs.

E. Compliance

248. As we seek to shift to a more efficient application review process, we recognize there will be a need to ensure compliance with the proposed framework requirements. To that end, our proposal would provide the Commission with a range of tools, in addition to traditional enforcement mechanisms, to address instances of noncompliance. A cornerstone of the Commission's new application and licensing approach relies on ensuring compliance with the Commission's rules after a license is granted, given the greater reliance on certifications to improve processing efficiency. While we expect applicants to operate in compliance with the Commission's rules and in accordance with license authorizations, it is important that the Commission can effectively and nimbly address violations of its rules. Accordingly, we propose additional non-monetary enforcement remedies to ensure and address compliance with the Commission's rules and clearly express in our rules the requirements of operators beyond the operational requirements.

249. Section 25.161 of the Commission's rules provides that a station will be automatically terminated, in whole or in part, if the station is not operational or the license term expires, for failure to meet applicable milestone deadlines. We propose to retain the Commission's existing rule outlining the circumstances when a station authorization will be automatically terminated, in whole or in part, with certain proposed additional circumstances to reflect the proposed rules in the NPRM. We propose that earth station licenses would be subject to automatic termination for failure to comply with the proposed certification requirements for Immovable earth station authorizations. Earth station licenses would also be automatically terminated for failure to meet any of the operational, coordination, or frequency-specific rules. The Commission further proposes to modify the compliance provisions specific to milestone deployments to align with the proposed deployment timelines for satellites.

250. In addition to admonishments and forfeitures, we propose that the Commission could address non-compliance through a variety of other means, including by revoking or terminating a license, requiring cessation of transmissions, placing an entity in an ''authorization freeze'' status (*i.e.,* no additional authorizations may be granted until an issue is resolved), or pausing launch authorization for continued deployment under an existing license. Unlike some other areas under the Commission's jurisdiction, space activities are uniquely complex in that addressing violations of certain rules can be more complicated, if not nearly impossible, if the violation stems from a space station already deployed and in orbit, for example, if space station connectivity fails, if an operator is unable to address or reduce risks to other deployed systems, or if a space station is unable to safely deorbit. With this in mind, we believe our proposed compliance rules will offer a range of ways to ensure licensees comply with the Commission's rules for the benefit of other operators and the space economy at large. We also recognize that it may often be in public interest to address violations outside of traditional enforcement mechanisms. Further, since we propose to rely more heavily on affirmative certifications, we expect that ensuring the Commission can quickly respond to post-grant violations or submissions of misleading or materially false information in an application will ultimately strengthen the overall integrity of the licensing system. We seek comment generally on our proposed compliance measures, including on how we can efficiently and effectively promote compliance while conforming to the procedural requirements of the Commission's rules, the Act, the Administrative Procedure Act, and due process. Under what circumstances could the Commission require immediate corrective action even before an operator has the opportunity to respond? Could the Commission implement automatic enforcement consequences as a licensing condition or through a rule? Are there additional or alternative compliance mechanisms the Commission has not considered that would achieve the goals of this proceeding?

251. Further, if an operator has a history of anomalous events, or other noncompliance with our rules, such as unlicensed operations, should the application no longer be presumed to be in the public interest, and, if so, should the burden of proof shift to the applicant to show that the application is in the public interest? Do the proposed remedies sufficiently dissuade operators from engaging in bad acts or harmful behavior? Are they too stringent or lenient? In either case, what alternatives should the Commission consider to more effectively address and discourage bad actors? We seek comment on these questions and input for other proposals to encourage responsible behavior by all applicants, licensees, and market access grantees.

252. We believe that these approaches are not prohibited by the Act nor do they run afoul of recent judicial precedents.

F. Miscellaneous

1. Delete, Delete, Delete Proceeding

253. This proceeding incorporates the results of the Commission's comprehensive deregulatory review initiated in the *Delete, Delete, Delete* proceeding as it concerns our part 25 satellite licensing rules. Indeed, we are fully aligned with the deregulatory intent of that proceeding, and several commenters in that proceeding suggested an omnibus satellite licensing rulemaking to address the many satellite-related topics raised in that record. Our proposals if adopted would result in a substantial overall reduction in the quantity of satellite licensing rules. In addition to numerous proposed recissions of duplicative, outdated, unused, or unjustifiably burdensome rule provisions identified by Commission staff, we have incorporated commenter suggestions from the *Delete, Delete, Delete* proceeding into the questions above and the proposed rules.

254. We also invite comment on SiriusXM's suggestion to delete the SDARS provisions requiring use of interoperable radios, requiring terrestrial repeaters to retransmit the complete programming transmitted by the SDARS licensee's satellite(s), and requiring terrestrial repeaters not to retransmit different transmissions from a satellite to different regions within that satellite's coverage area. Are these rules, which affect a limited number of licensees, still in the public interest, or should they be modified or removed? Is this something that we should address here, or is it better suited for a separate proceeding? Further, are there any other rule parts that we should consider deleting either because they are redundant of rule parts found in other parts of the Commission's rules, or because they are outdated and unnecessary, or overly burdensome? We seek comment on this generally.

2. Other Open Proceedings

255. Some of the proposals outlined herein and proposed in Appendix A may overlap with other open Commission proceedings. Specifically, certain proposals here overlap with the Commission's recent *ISAM NPRM;* the Commission's proceeding on orbital debris mitigation; and the Commission's *Foreign Adversary NPRM.* We specify how we propose to handle any overlap between these open proceedings and this proceeding below.

256. For the *ISAM NPRM,* we recognize that many of the proposals we make here, regarding changes to application requirements and application processing, including proposals related to bonds and milestones, overlap with the proposals made in the *ISAM NPRM* on those same issues. As described in depth above, we believe the changes we propose to make in the *NPRM* are preferable to those teed up in the *ISAM NPRM,* given our overall modernization goals and proposed framework. We therefore propose to move forward with the proposals in the *NPRM* rather than the overlapping proposals in the *ISAM NPRM.*

257. For the Commission's orbital debris proceeding, we clarify that other than where clearly identified above, we do not seek comment on any of the proposals outlined in the most recent *2020 Orbital Debris Order and FNPRM.* We recognize that the Commission sought comment on a number of proposals related to the orbital debris rules in that FNPRM. Due to the expansive nature of the *NPRM,* and the numerous proposals we make here to modernize the Commission's space and earth station licensing processes, we do not intend to incorporate the open orbital debris proceeding into this proceeding.

258. Similarly, we do not here re-open or invite any comment on any of the inquiries in the ongoing *NGSO–GSO Spectrum Sharing* proceeding or the *Facilitating More Intensive Use of Upper Microwave Flexible Spectrum* Notice of Proposed Rulemaking. Rather, any rule changes to part 25 adopted in those proceedings will be incorporated into the corresponding rule provisions in part 100, if any changes are adopted.

259. We propose to align our final rules in this proceeding with the final rules established in the *Foreign Adversary NPRM,* including the final decision on whether those requirements should be incorporated into existing licensing rules or whether the Commission should create a single set of new rules that apply to all regulated entities and whether the requirements

should be reflected in FCC Form 312—Main Form. We do not seek comment on any of the substantive proposals in the *Foreign Adversary NPRM* here.

260. Finally, we also propose that for any other pending or subsequent FCC proceedings that propose or adopt changes to the part 25 rules, we will incorporate any final rules in part 100, if adopted.

3. Additional Matters

261. *Basis and Scope.* § 25.101(a) of the Commission's rules contains a recitation of the statutory authority for part 25 that is partially out-of-date and with the authority citation in part 25 required by the Code of Federal Regulations. Accordingly, we propose to delete what is currently paragraph (a) from our rules. We seek comment on this proposal.

262. *Definitions.* We believe it is necessary to update, remove, and add certain definitions to the definition section in the new part 100 that we propose. We do not list all of the proposed definition changes here, we instead highlight some significant changes but invite commenters to provide feedback on all the proposed definitions in Appendix A.

263. We propose to delete several definitions from current part 25 that are duplicative of definitions in part 2 of the Commission's rules. Specifically, we propose to delete the following definitions: Coordination distance, Earth station, Feeder link, Inter-Satellite Service, Ku-band, Land earth station, Land Mobile Earth Station, mobile earth station, Radiodetermination Satellite Service, Satellite system, Selected assignment, Space radiocommunication, Terrestrial radiocommunication, and Terrestrial station. We seek comment on this proposal.

264. In addition, and as discussed more fully above, we propose to establish a definition for expedited processing to make clear what that category of processing an application means. Further, and as discussed above, we propose to create a definition for Variable Trajectory Spacecraft Systems as a category of licensable systems distinct from existing NGSO and GSO categories of licenses.

265. We propose to add a definition of ''Replacement satellite.'' Specifically, we propose to define replacement satellite as ''[a] satellite that is authorized to operate in the same frequency bands and with the same coverage area as the satellite to be replaced, at an orbital location within 0.15° of the assigned location of a GSO satellite to be replaced or in the authorized orbit of an existing NGSO satellite to be replaced, and that is scheduled to be launched so that it will be brought into use at approximately the same time as, but no later than, the existing satellite is retired.'' We seek comment on these proposed definitions and if they provide sufficient clarity to applicants and licensees on the scope and applicability of these terms.

266. *Review in the Public Interest.* Our proposed part 100 rules reflect our view that the Commission's public interest review of authorizations for space-based communications can be described as four categories that correspond to the Commission's statutory remit, our historic practice, and the equities of other federal agencies: (1) harmful interference; (2) spectrum efficiency; (3) space safety; and (4) foreign ownership. We seek comment on the foregoing. To the extent commenters find these categories under- or over-inclusive, they are expected to support such arguments with legal authorities specifically relevant to the Commission's space licensing activities.

267. *EEO and Public Interest Obligations to Parts 73 and 76.* §§ 25.601, 25.701, and 25.702 of the Commission's rules contain political programming and public interest obligations on DBS and SDARS licensees as well as equal employment opportunity requirements for FSS, DBS, and 17/24 GHz BSS operators who provide video programming directly to the public on a subscription basis. These rules cover certain media-related obligations and requirements applicable to these services, which the Commission added to part 25 because the underlying licenses for the operations are part 25 licenses. But the Space Bureau does not administer these rules. Thus, we tentatively conclude that these rule provisions would be best housed outside the new part 100 and we seek comment on the best place to relocate them. As media-related rules, would they make more sense in parts 73 and 76, which concern broadcast and multichannel video programming services? If so, we seek comment on how we can best rewrite and relocate these rule provisions to make clear which entities are subject to the regulations and make it easy for those entities to find those regulations.

268. *Relevancy of Analog Video Provisions.* Part 25 contains several provisions governing analog video transmissions. Given the transition from analog to digital video transmission standards in recent decades, we invite comment on whether any of these provisions are still relevant and should be included in part 100. Are there other part 25 rules governing analog transmissions that are out-of-date or unnecessary?

269. *Enabling Competition in the Commercial Space Industry Executive Order.* The August 2025 Executive Order, ''Enabling Competition in the Commercial Space Industry,'' (E.O.) states that it is the policy of the United States to support commercial space activities, in part by enabling a competitive space launch marketplace and increasing commercial space launches and novel space activities by 2030. The E.O. directs the Federal Government to streamline commercial license and permit approvals for United States-based operators to further these objectives. We believe that the proposals to the Commission's space and earth station licensing framework in the NPRM, as part of the broader initiative in modernizing space licensing, support the goals and directives of the E.O. to foster a competitive space marketplace while aligning with the Commission's priorities to boost the space economy through an improved licensing regime. With this in mind, we seek comment on how the proposed rules in the NPRM support and align with the policy initiatives outlined in the E.O. We invite commenters to provide feedback on this intersection and offer additional or alternative proposals that the Commission may consider to create a more cohesive regulatory environment for commercial space and satellite operators. We note that as other offices and departments within the Federal Government work to revise agency-specific licensing processes as directed by the E.O., the Commission will continue to monitor any developments and will address any necessary revisions or additions to the Commission's rules at a later date.

IV. Initial Regulatory Flexibility Act Analysis

270. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Federal Communications Commission (Commission) has prepared the Initial Regulatory Flexibility Analysis (IRFA) of the policies and rules proposed in the NPRM assessing the possible significant economic impact on a substantial number of small entities. The Commission requests written public comments on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments specified on the first page of the NPRM. The Commission will send a copy of the NPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the NPRM and IRFA

(or summaries thereof) will be published in the **Federal Register**.

A. Need for, and Objectives of, the Proposed Rules

271. In the NPRM, the Commission initiates this rulemaking proceeding seeking comment on its proposals to update part 25 of the Commission's rules to improve the application process for space and earth station applicants and licensees, and remove certain rules and references that are no longer relevant or no longer provide the intended benefit to the Commission. The Commission continues its efforts to modernize and update the regulatory framework to promote investment, innovation, and competition in the space economy proposing to replace part 25 with the new proposed part 100 to implement the proposed revised application framework designed to process review of applications with increased speed and efficiency, while providing applicants with a higher degree of predictability during the licensing process. The Commission also proposes to streamline the information required from space station and earth station applicants and proposes to update the ways in which applications are processed and granted for authorization. We seek comment on these proposals along with a number of other potential changes to the licensing process, operational requirements, reporting and information requirements, and compliance mechanisms.

272. The primary objectives of the proposals in the NPRM are: (1) to increase license processing speed, (2) to provide more predictability to applicants and licensees, (3) to provide more flexibility for innovation and for licensees' operations, and (4) to faithfully meet our statutory responsibilities and international obligations in order to create a space and earth station licensing process that can promote the wide availability and proliferation of communications and new technologies for the public, and efficiently scale with the space economy as it continues to grow. To that end, the cornerstone of the proposed licensing process is whether granting a license will serve the ''public convenience, interest, or necessity'' based on the assessment of harmful interference, spectrum efficiency, space safety, and foreign ownership which could undermine the continued growth of the space economy and hinder the public's access to advanced communications services and emerging technologies if not evaluated. The Commission anticipates the modernization of its space and earth station licensing rules and processes to meet the current needs of the space industry, and allow for future expansion and growth of the space economy will facilitate better access and opportunity for companies to enter and compete in the space industry.

B. Legal Basis

273. The proposed action is authorized pursuant to sections 4(i), 7(a), 301, 303, 307, 308, 309, 310, and 332 of the Communications Act of 1934, as amended, U.S.C. 154(i), 157(a), 301, 303, 307, 308, 309, 310, 332.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

274. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the SBA. A ''small business concern'' is one in which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. The SBA establishes small business size standards that agencies are required to use when promulgating regulations relating to small businesses; agencies may establish alternative size standards for use in such programs, but must consult and obtain approval from SBA before doing so.

275. Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe three broad groups of small entities that could be directly affected herein. First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA's Office of Advocacy, in general, a small business is an independent business having fewer than 500 employees. These types of small business represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses. Next, ''small organizations'' are not-for-profit enterprises that are independently owned and operated and not dominant in their field. The Internal Revenue Service (IRS) uses a revenue benchmark of $50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2022, there were approximately 530,109 small exempt organizations in the U.S. reporting revenues of $50,000 or less according to the registration and tax data for exempt organizations available from the IRS. Finally, ''small governmental jurisdictions'' are defined as cities, counties, towns, townships, villages, school districts, or special districts with populations of less than fifty thousand. Based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 out of 90,835 local government jurisdictions have a population of less than 50,000.

276. The rules proposed in the NPRM will apply to small entities in the industries identified in the chart below by their six-digit North American Industry Classification System (NAICS) codes and corresponding SBA size standard. Based on currently available U.S. Census data regarding the estimated number of small firms in each identified industry, we conclude that the proposed rules will impact a substantial number of small entities. Where available, we also provide additional information regarding the number of potentially affected entities in the industries identified below.

Regulated industry	NAICS code	SBA size standard	Total firms	Small firms	% Small firms in industry
Wired Telecommunications Carriers	517111	1,500 employees	3,054	2,964	97.05
Satellite Telecommunications	517410	$47 million	275	242	88.00
All Other Telecommunications	517810	$40 million	1,079	1,039	96.29

D. Description of Economic Impact and Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

277. The RFA directs agencies to describe the economic impact of proposed rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record.

278. The NPRM proposes a number of rule changes that will affect the application and licensing process and requirements for space and earth station operators. The NPRM proposes to add an additional milestone deployment requirement, increasing the number of milestone requirements for NGSO systems from two to three, each requiring notice to the Commission of meeting the respective milestone. However, the Commission proposes to remove the milestone requirement for GSO system operators.

279. *Licensing Assembly Line.* The Commission proposes an assembly line approach to modernizing the licensing process which would adopt a modular application to replace the submission of one large, narrative-heavy application, with a process that allows applicants to complete specific sections (or modules) that are tailored to their system type and licensing needs. Applicants can file the main application form FCC Form 312—Main Form once and its schedules (Schedules O and F) based on the type of system license for which they are applying. The key information sections for space station applications include the General and Ownership Information on FCC Form 312—Main Form, Orbital Elements on Schedule O, and Frequency Elements on Scheule F. Earth station applicants would file Form 312 and a Schedule B. In addition, for Supplemental Coverage from Space (SCS) and market access requests additional information would be required. The Commission intends to apply this modular application approach to any type of application, including initial space and earth stations applications, requests for market access, amendments, modifications, requests for STA, and any other applications. In future filings, an applicant could reference their FCC Form 312—Main Form, and certify that the information in FCC Form 312—Main Form remains accurate.

280. The NPRM proposes that certain written explanation filings will be replaced with certifications requirements, which will reduce the burdens of administrative preparation and filings. For example, the Commission proposes to align its certification requirements in this proceeding with a May 2025 rulemaking proposing foreign adversary ownership certification and information collection requirements for all entities holding Commission licenses or authorizations. Applicants would still need to include ownership charts and plans for managing orbital debris under this proposal. The Commission also proposes the requirement that all applications must be filed electronically. This new approach is expected to reduce administrative work requirements and delays, making the licensing process more predictable and easier for companies to plan around. It is also designed to be scalable to grow with the industry which will benefit small entities. Cost savings for small entities will result from removing repetitive paperwork, simplifying forms, reducing the need for STA and waiver requests, and allow for future automation. Further, because the proposed process is less cumbersome and more straightforward, it is likely that small applicants will not need to hire lawyers or engineers for routine filings, although more complex cases may still require professional assistance.

281. *Additional Reforms for Licensing Efficiency.* The proposed reporting and recordkeeping requirements clarify when applications may be dismissed as incomplete or non-compliant, which should allow small and other applicants to sufficiently prepare their application to avoid unnecessary delays. The proposed process for amending or modifying applications has been streamlined to allow a licensee to make changes to their systems and operations without notifying or seeking approval from the Commission depending on the type of modification. The reporting/notification requirement for modifications will fall into three groups: (1) those that an applicant can make without informing the Commission; (2) minor modifications, or those that an applicant can make but will need to notify the Commission either before or after the modification; and (3) major modifications, or any modification that meets certain parameters but is also not covered by the first two categories, and that requires Commission authorization. By expanding the scope of permissible modifications the need for STA requests should be reduced. These changes are expected to lower regulatory uncertainty for small and other entities, and speed up decision-making which in turn should spur investment. Small entities should incur cost savings from the elimination of unnecessary filings, and should face lower compliance costs and fewer administrative burdens. Consistent with the impacts of the processes discussed in the preceding paragraph, the removal of requirements, and clarification and simplification of processes for additional efficiency should reduce the need for small entities to hire legal or technical consultants for filing of standard applications.

282. *Operational and Technical Requirements.* The proposed operational and technical requirements in the NPRM introduce several new reporting and recordkeeping obligations aimed at improving space safety and regulatory efficiency. The Commission proposes to eliminate the annual reporting requirement for space station licensees and market access recipients, and proposes to amend the timeline for updating point of contact information from within ten days to within 48 hours of the change. The Commission also proposes to modernize data sharing by requiring the submission of orbital ephemerides data into SSA systems. More specifically, we propose to require space station licensees and market access recipients to submit ephemeris data for all space stations in an authorized satellite system to either the 18th Space Control Squadron, or to one or more U.S. SSA systems as selected by the Commission.

283. To address space system safety and ensure that licensees are monitoring the safety and efficacy of licensed and operating systems, the NPRM proposes a reporting requirement that would require licensed operators of NGSO systems to report on the safety of their operating systems on a biannual basis. The semi-annual reports would cover a preceding six-month period on space system safety, the number of conjunction events, the number of satellites removed from operation or screened from further deployment, and the number of satellites that re-entered the atmosphere. The proposed rules in the NPRM also update requirements for orbital debris mitigation and end-of-life reporting. These measures are expected to promote safer and more efficient operations while reducing long-term costs by helping to prevent collisions and avoid regulatory delays. Small entities are likely to experience additional cost savings from streamlined antenna and radiation hazard rules, as well as the elimination of outdated technical standards and redundant reporting.

284. Next we turn to our discussion to the compliance costs for the reporting, recordkeeping and other proposals in the NPRM. The Commission estimates the total cost for an operator to implement the earth and space station licensing process modernization rules will be $90,000. This estimate is primarily driven by the cost of preparing semi-annual space system safety reports, which require information on the number of conjunction events identified for satellites in the NGSO system during the reporting period, the number of satellites removed from operation or screened from further deployment, and the number of satellites that re-entered the atmosphere. However, overall, we expect that our proposals would significantly reduce regulatory compliance costs, resulting in annual cost savings of at least $165,000 each for small and other operators. We attribute these potential savings to limits on the cases in which operators are required to submit modification filings and STA requests, elimination of the need for applicants to request certain waivers and provide associated showings, elimination of the need for operators to meet certain milestone requirements, elimination of the need for applicants to resubmit an FCC Form 312—Main Form in certain circumstances, ability for applicants to submit an ITU filing without the need for prior filings with the Commission, and elimination of the bond requirement for certain space station operators. Small entities may need to hire professionals to comply with the proposals in the NPRM if adopted however, the degree to which the services of such professionals are required should be reduced in light of the aforementioned elimination of filings, showings and other regulatory requirements. These cost savings are in addition to other benefits that are more difficult to quantify, but nevertheless important, such as reduced harmful interference, increased spectrum efficiency, and space safety.

285. The Commission seeks comment on costs associated with the modernization process we discuss in the NPRM, including but not limited to our estimates, assumptions, calculations, and any costs or other burdens we did not consider and/or include that are relevant to the costs for small and other entities to comply with the proposals in this proceeding.

E. Discussion of Significant Alternatives Considered That Minimize the Significant Economic Impact on Small Entities

286. The RFA directs agencies to provide a description of any significant alternatives to the proposed rules that would accomplish the stated objectives of applicable statutes, and minimize any significant impact on small entities. The discussion is required to include alternatives such as: ''(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.''

287. The NPRM proposes to reorganize the current part 25 rules and both modify and simplify the existing requirements to provide an updated framework for space and earth station applicants under a new proposed part 100 of the Commission's rules. All of these proposals could lessen the burdens of the licensing process and operational requirements for space and earth station operators. Specifically, the NPRM proposes to replace a number of the current information requirements included on space and earth station applications with certifications, intended to significantly cut down on the time required to prepare and complete applications and the related costs to applicants. Additionally, the *NPRM* proposes to permit certain qualified applications to receive a conditional grant of authority prior to submission of the required orbital debris plan materials. The NPRM also proposes to increase the number of permissible space station operations that do not require an application for modification or notification of the operation. These proposals are designed to simplify the overall application process and help to clarify the specific required information as part of the licensing stage for space and earth station operator entities. The NPRM seeks comment on each proposed rule, as well as the application framework in general, as to whether the Commission's proposed revisions would provide the intended increased application processing speed, predictability, and clarity for applicants. The proposed revisions would ultimately lead to benefits for space and earth station operators in the long term. The NPRM also proposes to eliminate unnecessary technical and information filing requirements along with outdated or unused rule provisions.

288. To assist with the Commission's evaluation of the economic impact on small entities that may result from the actions and alternatives that have been discussed in this proceeding, the NPRM seeks alternative proposals, and requests information on the potential costs of such alternatives to small and other licensees. The Commission expects to consider more fully the economic impact on small entities following its review of comments filed in response to the NPRM, including costs and benefits information. Alternative proposals and approaches from commenters could also help the Commission further minimize the economic impact on small entities. The Commission's evaluation of the comments filed in this proceeding will shape the final conclusions it reaches, the final alternatives it considers, and the actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities from the final rules that are ultimately adopted.

289. The NPRM seeks comment from all interested parties. Small entities are encouraged to bring to the Commission's attention any specific concerns that they may have with the proposals outlined in the NPRM.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

290. None.

V. Ordering Clauses

291. *It is ordered,* pursuant to sections 4(i), 4(j), 7(a), 301, 303, 307, 308, 309, 310, 312, 316, 332 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 154(j), 157(a), 301, 303, 307, 308, 309, 310, 312, 316, 332, that the NPRM *is adopted.*

292. *It is further ordered* that the Office of the Secretary, *shall send* a copy of the NPRM, including the Initial Regulatory Flexibility Act Analysis, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with Section 603(a) of the Regulatory Flexibility Act.

List of Subjects 47 CFR Part 25

Administrative practice and procedure, Satellites.

Federal Communications Commission.

Marlene Dortch,

Secretary.

Proposed Rules

For the reasons discussed, the Federal Communications Commission proposes to amend title 47 of the Code of Federal

Regulations to remove part 25 and add part 100, as follows:

PART 25—[REMOVED]

■ 1. Remove part 25.

■ 2. Add part 100 to read as follows:

PART 100—SPACE AND EARTH STATION SERVICES

Subpart A—General

Sec.
100.1 Scope.
100.2 Station Authorization Required.
100.3 Definitions.
100.4 Incorporation by reference.
100.5 Cross-reference.
100.6 Preemption of local zoning of earth stations.

Subpart B—Applications and Licenses

100.100 Filing of applications.
100.101 Application requirements of the FCC Form 312—Main Form.

Space Station Applications

100.110 General space station application requirements.
100.111 Space station orbital information requirements.
100.112 Space station frequency information requirements.
100.113 Additional information for supplemental coverage from space.
100.114 Requests for U.S. market access.

Earth Station Applications

100.120 Earth station licensing application requirements.
100.121 Earth station application processing.

General Application Processing

100.130 Receipt of applications.
100.131 Completeness.
100.132 Public notice.
100.133 Opposition to applications and other pleadings.
100.134 Information requests.
100.135 Dismissal and return of applications.
100.136 Consideration of applications.
100.137 Amendments to applications.
100.138 Application processing timelines.
100.139 Conditional grants.
100.140 Exceptions to expedited processing for applications.
100.141 Processing rounds for NGSO satellite system applications.
100.142 First-come, first-served application processing for GSO systems.
100.143 Modifications.
100.144 Special temporary authorizations.
100.145 Coordination requirements with Federal government users.
100.146 Assignments and transfers of control.
100.147 Milestones for NGSO and Multi-Orbit systems.
100.148 Surety bonds.
100.149 License and market access terms, extensions, NGSO replacements, renewals.

Subpart C—Operational and Frequency Specific Requirements

100.200 Reporting requirements.
100.201 Licensee operations.
100.202 Duties regarding space communications transmissions.
100.203 Telemetry, tracking, and command.
100.204 Default service rules.

General Space Station Rules

100.210 Orbit raising maneuvers.
100.211 Frequency use generally.
100.212 Power flux-density and in-band field strength limits.
100.213 Unwanted emissions limits generally; space stations.
100.214 Licensing provisions for the 1.6/2.4 GHz MSS and 2 GHz MSS.

NGSO Frequency-Specific Rules

100.220 Requirements for the non-voice, non-geostationary MSS.
100.221 Obligation to remedy interference caused by NGSO MSS feeder downlinks in the 6700–6875 MHz band.
100.222 Operating provisions for NGSO FSS space stations.

GSO Frequency-Specific Rules

100.230 Further requirements for license applications for GSO space station operation in the FSS and 17/24 GHz BSS.
100.231 Licensing and domestic coordination requirements for 17/24 GHz BSS space stations and FSS space stations transmitting in the 17.3–17.8 GHz band.
100.232 Requirements to facilitate reverse-band operation in the 17.3–17.8 GHz band.
100.233 Provisions for direct broadcast satellite service.
100.234 Analog video transmissions in the FSS.
100.235 Inclined orbit operations.

Coordination/Interference/Sharing for Space Stations

100.240 NGSO/GSO sharing/coordination.
100.241 Sharing among NGSO FSS space stations.
100.242 Time sharing between NOAA meteorological satellite systems and non-voice, non-geostationary satellite systems in the 137–138 MHz band.
100.243 Time sharing between DoD meteorological satellite systems and non-voice, non-geostationary satellite systems in the 400.15–401 MHz band.
100.244 Inter-service coordination requirements for the 1.6/2.4 GHz MSS.
100.245 Acceptance of interference in 2000–2020 MHz.
100.250 Licensing provisions for the 2.3 GHz satellite digital audio radio service.
100.251 Information sharing requirements for SDARS terrestrial repeater operators.

Orbital Debris

100.260 Operations and end-of-life disposal.
100.261 Specific NGSO space safety rules.

General Earth Station Rules

100.270 Radiofrequency exposure requirements.
100.271 Responsibility of blanket licensed earth station licensees.
100.272 Minimum elevation angle.
100.273 Receive-only earth stations.
100.274 Temporary-fixed earth station operations.
100.275 Period of construction.

General Earth Station Coordination and Performance Requirements

100.276 Earth station coordination requirements.
100.277 Frequency tolerance.
100.278 Emissions limits generally; earth stations.
100.279 Earth station antenna performance standards.
100.280 Off-axis EIRP density limits.

Frequency-Specific Earth Station Rules

100.281 Earth stations in the 24.75–25.25 GHz, 27.5–28.35 GHz, 37.5–40 GHz, 47.2–48.2 GHz, and 50.4–51.4 GHz bands.
100.282 User terminals and earth stations in motion.
100.283 MSS and ATC requirements.
100.284 Requirements for ancillary terrestrial components in Mobile-Satellite Service networks operating in the 1.5./1.6 GHz and 1.6/2.4 GHz Mobile-Satellite Service.
100.285 Procedures for resolving harmful interference related to ATC in the 1.5/1.6 GHz and 1.6/2.4 GHz bands.
100.286 Transmitter identification requirements for video uplink transmissions.

Miscellaneous Rules

100.290 Satellite Emergency Notification Devices (SENDs).

Subpart D—Compliance

100.300 Temporary Measures for Non-Compliance
100.301 Administrative sanctions.
100.302 Automatic termination of station authorization.
100.303 Reinstatement.
100.304 Cause for termination of interference protection for registered receiving earth stations.

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 310, 319, 332, 605, and 721, unless otherwise noted.

Subpart A—General

§ 100.1 Scope.

The rules and regulations in this part are in addition to and supplement the rules and regulations contained in or to be added to, other parts of this chapter currently in force, or which may subsequently be promulgated, and which are applicable to matters relating to communications by space stations and earth stations.

§ 100.2 Station Authorization Required.

No person shall use or operate apparatus for the transmission of energy or communications or signals by space or earth stations except under, and in

accordance with, an appropriate authorization granted by the Federal Communications Commission.

§ 100.3 Definitions.

1.5/1.6 GHz Mobile-Satellite Service. Mobile-Satellite Service that operates in the 1525–1559 MHz space-to-Earth band and the 1626.5–1660.5 MHz Earth-to-space band, or any portion thereof.

1.6/2.4 GHz Mobile-Satellite Service. A Mobile-Satellite Service that operates in the 1610–1626.5 MHz and 2483.5–2500 MHz bands, or in any portion thereof.

2 GHz Mobile-Satellite Service. A Mobile-Satellite Service that operates in the 2000–2020 MHz and 2180–2200 MHz bands, or in any portion thereof.

17/24 GHz Broadcasting-Satellite Service (17/24 GHz BSS). A radiocommunication service involving transmission from one or more feeder-link earth stations to other earth stations via geostationary satellites, in the 17.3–17.7 GHz (space-to-Earth) (domestic allocation), 17.3–17.8 GHz (space-to-Earth) (international allocation) and 24.75–25.25 GHz (Earth-to-space) bands. For purposes of the application processing provisions of this part, the 17/24 GHz BSS is a GSO-like service. Unless specifically stated otherwise, 17/24 GHz BSS systems are subject to the rules in this part applicable to FSS.

Ancillary Terrestrial Component (ATC). A terrestrial communications network used in conjunction with a qualifying satellite network system authorized pursuant to these rules and the conditions established in the Orders issued in IB Docket No. 01–185, *Flexibility for Delivery of Communications by Mobile-Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band.*

Ancillary Terrestrial Component (ATC) base station. A terrestrial fixed facility used to transmit communications to or receive communications from one or more ancillary terrestrial component mobile terminals.

Ancillary Terrestrial Component (ATC) mobile terminal. A terrestrial mobile facility used to transmit communications to or receive communications from an ancillary terrestrial component base station or a space station.

Blanket license. A blanket license is a license for:

(a) Multiple earth stations in the FSS or MSS, or for SDARS terrestrial repeaters, that may be operated anywhere within a geographic area authorized in the license; or

(b) Multiple space stations in non-geostationary-orbit.

Contiguous United States (CONUS). For purposes of subparts B and C of this part, the contiguous United States consists of the contiguous 48 states and the District of Columbia as defined by Partial Economic Areas Nos. 1–41, 43–211, 213–263, 265–297, 299–359, and 361–411, which includes areas within 12 nautical miles of the U.S. Gulf coastline. In this context, the rest of the United States includes the Honolulu, Anchorage, Kodiak, Fairbanks, Juneau, Puerto Rico, Guam-Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and the Gulf of America PEAs (Nos. 42, 212, 264, 298, 360, 412–416). *See* § 27.6(m) of this chapter.

Conventional C-band. The 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) FSS frequency bands.

Conventional Ka-band. The 18.3–18.8 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 28.35–28.6 GHz (Earth-to-space), and 29.25–30.0 GHz (Earth-to-space) frequency bands, which the Commission has designated as primary for GSO FSS operation.

Conventional Ku-band. The 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) FSS frequency bands.

Coordination distance. When determining the need for coordination, the distance on a given azimuth from an earth station sharing the same frequency band with terrestrial stations, or from a transmitting earth station sharing the same bidirectionally allocated frequency band with receiving earth stations, beyond which the level of permissible interference will not be exceeded and coordination is therefore not required.

Direct Broadcast Satellite (DBS) Service. A radiocommunication service in which signals transmitted or retransmitted by Broadcasting-Satellite Service space stations in the 12.2–12.7 GHz band are intended for direct reception by subscribers or the general public. For the purposes of this definition, the term direct reception includes individual reception and community reception.

Earth Station Aboard Aircraft (ESAA). An earth station operating aboard an aircraft that receives from and transmits to Fixed-Satellite Service space stations.

Earth Station in Motion (ESIM). A term that collectively designates ESV, VMES and ESAA earth stations, as defined in this section.

Earth Station on Vessel (ESV). An earth station onboard a craft designed for traveling on water, receiving from and transmitting to Fixed-Satellite Service space stations.

Equivalent diameter. When circular aperture reflector antennas are employed, the size of the antenna is generally expressed as the diameter of the antenna's main reflector. When non-reflector or non-circular-aperture antennas are employed, the equivalent diameter is the diameter of a hypothetical circular-aperture antenna with the same aperture area as the actual antenna. For example, an elliptical aperture antenna with major axis a and minor axis b will have an equivalent diameter of $[a \times b]^{1/2}$. A rectangular aperture antenna with length l and width w will have an equivalent diameter of $[4(l \times w)/\pi]^{1/2}$.

Equivalent Power Flux Density (EPFD). The sum of the power flux densities produced at a geostationary-orbit receive earth or space station on the Earth's surface or in the geostationary orbit, as appropriate, by all the transmit stations within a non-geostationary-orbit Fixed-Satellite Service system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing in its nominal direction.

The equivalent power flux density, in dB(W/m^2) in the reference bandwidth, is calculated using the following formula:

$$10 \log_{10} \left[\sum_{n=1}^{N_a} 10^{\frac{p_i}{10}} \frac{G_t(\theta_i)}{4\pi d_i^2} \cdot \frac{G_r(\phi_i)}{G_{r,max}} \right]$$

Where:

N_a is the number of transmit stations in the non-geostationary orbit system that are visible from the GSO receive station considered on the Earth's surface or in the geostationary orbit, as appropriate;

i is the index of the transmit station considered in the non-geostationary orbit system;

P_i is the RF power at the input of the antenna of the transmit station, considered in the non-geostationary orbit system in dBW in the reference bandwidth;

θ_i is the off-axis angle between the boresight of the transmit station considered in the non-geostationary orbit system and the direction of the GSO receive station;

$G_t(\theta_i)$ is the transmit antenna gain (as a ratio) of the station considered in the non-geostationary orbit system in the direction of the GSO receive station;

d_i is the distance in meters between the transmit station considered in the non-geostationary orbit system and the GSO receive station;

ϕ_i is the off-axis angle between the boresight of the antenna of the GSO receive station and the direction of the *i*th transmit station considered in the non-geostationary orbit system;

$G_r(\theta_i)$ is the receive antenna gain (as a ratio) of the GSO receive station in the direction of the *i*th transmit station considered in the non-geostationary orbit system;

$G_{r,max}$ is the maximum gain (as a ratio) of the antenna of the GSO receive station.

Expedited processing. The processing of applications that are not subject to any exceptions to expedited processing.

Extended C-band. The 3600–3700 MHz (space-to-Earth), 5850–5925 MHz (Earth-to-space), and 6425–6725 MHz (Earth-to-space) FSS frequency bands.

Extended Ka-band. The 17.3–18.3 GHz (space-to-Earth), 18.8–19.4 GHz (space-to-Earth), 19.6–19.7 GHz (space-to-Earth), 27.5–28.35 GHz (Earth-to-space), and 28.6–29.1 GHz (Earth-to-space) FSS frequency bands.

Extended Ku-band. The 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), and 13.75–14.0 GHz bands (Earth-to-space) FSS frequency bands.

Fixed earth station. An earth station intended to be used at a fixed position. The position may be a specified fixed point or any fixed point within a specified area.

Geographically independent area (GIA). Any of the following six areas:

(1) CONUS;

(2) Alaska;

(3) Hawaii;

(4) American Samoa;

(5) Puerto Rico/U.S. Virgin Islands; and

(6) Guam/Northern Mariana Islands.

Geostationary-orbit (GSO) satellite. A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a geosynchronous satellite which remains approximately fixed relative to the Earth.

GSO satellite system. A system composed of one or more geostationary-orbit satellites operating together at a single orbital location and under a single space station call sign.

Immovable earth station. An earth station licensed under either a Nationwide, Non-Site License or an individual location authorization that is located at a single fixed location that must be registered and coordinated before operating.

Inter-Satellite Service. A radiocommunication service providing links between artificial satellites.

(RR)*Ku band.* In this rule part, the terms ''Ku band'' and ''conventional Ku band'' refer to the 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 GHz (Earth-to-space) bands. These paired bands are allocated to the Fixed-Satellite Service and are also referred to as the 12/14 GHz bands.

Licensable System. A system that proports to use an apparatus in space for the use of radio frequency spectrum to communicate with an apparatus or object on the Earth's surface or within the major portion of the Earth's atmosphere or between satellite or spacecraft beyond the major portion of the Earth's atmosphere.

Network Control and Monitoring Center (NCMC). As used in part 100, a facility that has the capability to remotely control earth stations operating as part of a satellite network or system.

NGSO. Non-geostationary orbit.

NGSO FSS gateway earth station. An earth station or complex of multiple earth station antennas that supports the routing and switching functions of an NGSO FSS system and that does not originate or terminate communication traffic. An NGSO FSS gateway earth station may also be used for telemetry, tracking, and command transmissions.

NGSO satellite system. A system of one or more non-geostationary orbit satellites operating together under one space station call sign and that is not a Variable Trajectory Spacecraft System.

Non-Voice, Non-Geostationary (NVNG) Mobile-Satellite Service. A Mobile-Satellite Service reserved for use by non-geostationary satellites in the provision of non-voice communications in the 137–138 MHz (space-to-Earth), 148–150.05 MHz (Earth-to-space), 399.9–400.05 MHz (Earth-to-space), and 400.15–401 MHz (space-to-Earth) bands, which may include satellite links between land earth stations at fixed locations.

Permitted Space Station List. A list of all U.S.-licensed geostationary-orbit space stations providing Fixed-Satellite Service in the extended or conventional C-band, the extended or conventional Ku-band, the conventional Ka-band, or the 24.75–25.25 GHz band, as well as non-U.S.-licensed geostationary-orbit space stations approved for U.S. market access to provide Fixed-Satellite Service in the conventional C-band, conventional Ku-band, or 18.3–18.8 GHz, 19.7–20.2 GHz, 28.35–28.6 GHz, and 29.25–30.0 GHz bands.

Plane perpendicular to the GSO arc. The plane that is perpendicular to the ''plane tangent to the GSO arc,'' as defined below, and includes a line between the earth station in question and the GSO space station that it is communicating with.

Plane tangent to the GSO arc. The plane defined by the location of an earth station's transmitting antenna and a line in the equatorial plane that is tangent to the GSO arc at the location of the GSO space station that the earth station is communicating with.

Power flux density (PFD). The amount of power flow through a unit area within a unit bandwidth. The units of power flux density are those of power spectral density per unit area, namely watts per hertz per square meter. These units are generally expressed in decibel form as $dB(W/Hz/m^2)$, $dB(W/m^2)$ in a 4 kHz band, or $dB(W/m^2)$ in a 1 MHz band.

Power Spectral Density (PSD). The amount of an emission's transmitted carrier power applied at the antenna input falling within the stated bandwidth. The units of power spectral density are watts per hertz and are generally expressed in decibel form as dB(W/Hz) when measured in a 1 Hz bandwidth, dB(W/4kHz) when measured in a 4 kHz bandwidth, or dB(W/MHz) when measured in a 1 MHz bandwidth.

Protection areas. The geographic regions where U.S. Department of Defense meteorological satellite systems or National Oceanic and Atmospheric Administration meteorological satellite systems, or both such systems, receive signals from low earth orbiting satellites. Also, areas around NGSO MSS feeder-link earth stations in the 1.6/2.4 GHz Mobile-Satellite Service determined in the manner specified in § 100.283.

Replacement space station. A space station that is authorized to operate in the same frequency bands and with the same coverage area as the space station to be replaced, at an orbital location within 0.15° of the assigned location of a GSO space station to be replaced or in

the authorized orbit of an existing NGSO space station to be replaced, and that is scheduled to be launched so that it will be brought into use at approximately the same time as, but no later than, the existing space station is retired.

Satellite. A body which revolves around another body of preponderant mass and which has a motion primarily and permanently determined by the force of attraction of that other body. (RR)

Satellite Digital Audio Radio Service (SDARS). A radiocommunication service in which audio programming is digitally transmitted by one or more space stations directly to fixed, mobile, and/or portable stations, and which may involve complementary repeating terrestrial transmitters and telemetry, tracking and command facilities.

SCS earth stations. Any earth station used for the provision of supplemental coverage from space.

Selected assignment. A spectrum assignment voluntarily identified by a 2 GHz MSS licensee at the time that the licensee's first 2 GHz Mobile-Satellite Service satellite reaches its intended orbit.

Shapeable antenna beam. A satellite transmit or receive antenna beam, the gain pattern of which can be modified at any time without physically repositioning a satellite antenna reflector.

Skew angle. The angle between the minor axis of an axially asymmetric antenna beam and the plane tangent to the GSO arc.

Spacecraft. A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere. (RR)

Space radiocommunication. Any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space. (RR)

Space station. A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (RR)

Space system. Any group of cooperating earth stations and/or space stations employing space radiocommunication for specific purposes. (RR)

Supplemental coverage from space (SCS). The provision of coverage to terrestrial wireless subscribers through an arrangement or agreement (see § 1.9047 of this chapter) between one or more NGSO or GSO operator(s) and one or more terrestrial wireless licensee(s), involving transmissions between space stations and SCS earth stations. NGSO and GSO operators and terrestrial wireless service licensees seeking to provide SCS must be authorized in compliance with § 100.113.

Terrestrial station. A station effecting terrestrial radiocommunication.

Two-degree-compliant space station. A GSO FSS space station operating in the conventional or extended C-bands, the conventional or extended Ku-bands, the 24.75–25.25 GHz band, or the conventional or extended Ka-bands within the limits on downlink equivalent isotropically radiated power (EIRP) density or PFD specified in § 25.140(a)(3) or (b)(3) and communicating only with earth stations operating in conformance with routine uplink parameters specified in § 100.278.

Vehicle-Mounted Earth Station (VMES). An earth station, operating from a motorized vehicle that travels primarily on land, that receives from and transmits to Fixed-Satellite Service space stations and operates within the United States.

Variable Trajectory Spacecraft System (VTSS). One or more spacecraft either operating beyond the geosynchronous orbit or operating without fixed or predictable orbital patterns over the course of its lifetime and operating under one space station call sign.

§ 100.4 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at the FCC and the National Archives and Records Administration (NARA).

(b) European Telecommunications Standards Institute (ETSI), 650 Route des Lucioles, 06921 Sophia-Antipolis Cedex, France; *http://www.etsi.org;* Voice: +33 (0)4 92 94 42 00; Fax: +33 (0)4 93 65 47 16; email: *webstore@etsi.org.*

(1) ETSI TS 103 129 V1.1.2 (2014–03), ''Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation of a carrier identification system (DVB–CID) for satellite transmission,'' Version 1.1.2, March 2014. Incorporation by reference approved for § 25.281(b).

(c) International Telecommunication Union (ITU), Place des Nations, 1211 Geneva 20 Switzerland; *www.itu.int;* Voice: +41 22 730 5111; Fax: +41 22 733 7256; email: *itumail@itu.int.*

(1) ITU Radio Regulations, Volume 1: Articles, Article 21, ''Terrestrial and space services sharing frequency bands above 1 GHz,'' Section V, ''Limits of power flux-density from space stations,'' Edition of 2024, copyright 2024, *http://www.itu.int/pub/R-REG-RR-2016.* Incorporation by reference approved for § 100.222(a).

(2) ITU Radio Regulations, Volume 1: Articles, Article 22, ''Space services,'' Section II, ''Control of interference to geostationary-satellite systems,'' Edition of 2024, copyright 2024, *http://www.itu.int/pub/R-REG-RR-2016.* Incorporation by reference approved for §§ 100.222(a), 100.240(a).

(3) ITU Radio Regulations, Volume 2: Appendices, Appendix 30, ''Provisions for all services and associated Plans and List for the broadcasting-satellite service in the frequency bands 11.7–12.2 GHz (in Region 3), 11.7–12.5 GHz (in Region 1) and 12.2–12.7 GHz (in Region 2),'' Edition of 2012, *http://www.itu.int/pub/R-REG-RR-2012.* Incorporation by reference approved for §§ 100.100, 100.143, 100.230, and 100.231.

(4) ITU Radio Regulations, Volume 2: Appendices, Appendix 30A, ''Provisions and associated Plans and List for feeder links for the broadcasting-satellite service (11.7–12.5 GHz in Region 1, 12.2–12.7 GHz in Region 2 and 11.7–12.2 GHz in Region 3) in the frequency bands 14.5–14.8 GHz and 17.3–18.1 GHz in Regions 1 and 3, and 17.3–17.8 GHz in Region 2,'' Edition of 2012, *http://www.itu.int/pub/R-REG-RR-2012.* Incorporation by reference approved for §§ 100.100, 100.143, 100.230, and 100.231.

(5) ITU Radio Regulations, Volume 2: Appendices, Appendix 30B, ''Provisions and associated Plan for the fixed-satellite service in the frequency bands 4 500–4 800 MHz, 6 725–7 025 MHz, 10.70–10.95 GHz, 11.2–11.45 GHz and 12.75–13.25 GHz,'' Edition of 2012, *http://www.itu.int/pub/R-REG-RR-2012.* Incorporation by reference approved for §§ 100.100 and 100.230.

(6) ITU Radio Regulations, Volume 3: Resolutions and Recommendations, Resolution 76 (Rev.WRC–15), ''Protection of geostationary fixed-satellite service and geostationary broadcasting-satellite service networks from the maximum aggregate equivalent power flux-density produced by multiple non-geostationary fixed-satellite service systems in frequency bands where equivalent power flux-density limits have been adopted,'' Edition of 2024, copyright 2024, *http://www.itu.int/pub/R-REG-RR-2016.* Incorporation by reference approved for § 100.222(a).

(7) ITU Radio Regulations, Volume 3: Resolutions and Recommendations, Resolution 85 (WRC–03), ''Application of Article 22 of the Radio Regulations to the protection of geostationary fixed-

satellite service and broadcasting-satellite service networks from non-geostationary fixed-satellite service systems,'' Edition of 2024, copyright 2024, *http://www.itu.int/pub/R-REG-RR-2016.* Incorporation by reference approved for § 100.222(b).

(8) Recommendation ITU–R M.1186 ''Technical Considerations for the Coordination Between Mobile Satellite Service (MSS) Networks Utilizing Code Division Multiple Access (CDMA) and Other Spread Spectrum Techniques in the 1–3 GHz Band'' (1995). Incorporation by reference approved for § 100.284.

(d) Radio Technical Commission for Maritime Services (RTCM). 2200 Wilson Blvd., Suite 102–109, Arlington, VA 22201; email: *info@rtcm.org;* website: *www.rtcm.org.*

(1) RTCM 12800.0, ''Satellite Emergency Notification Devices (SENDs),'' dated August 1, 2011. Incorporation by reference approved for § 100.2901.

§ 100.5 Cross-reference.

(a) Space and SCS earth stations providing SCS are subject to technical rules in parts 2, 22, 24, and 27 of this chapter where applicable.

(b) Space and earth stations in the Experimental Radio Service may be subject to licensing under part 5 of this chapter.

(c) Space and earth stations in the 3700–4200 MHz band may be subject to transition rules in part 27 of this chapter.

(d) Ship earth stations in the Maritime Mobile-Satellite Service transmitting in the 1626.5–1646.5 MHz band are subject to licensing under part 80 of this chapter.

(e) Earth stations in the Aeronautical Mobile-Satellite (Route) Service are subject to licensing under part 87 of this chapter.

(f) Space and earth stations in the Amateur Satellite Service are licensed under part 97 of this chapter.

§ 100.6 Preemption of local zoning of earth stations.

(a) Any state or local zoning, land-use, building, or similar regulation that materially limits transmission or reception by satellite earth station antennas or imposes more than minimal costs on users of such antennas, is preempted unless the promulgating authority can demonstrate that such regulation is reasonable, except that nonfederal regulation of radio frequency emissions is not preempted by this section. For purposes of this paragraph (a), reasonable means that the local regulation:

(1) Has a clearly defined health, safety, or aesthetic objective that is stated in the text of the regulation itself; and

(2) Furthers the stated health, safety or aesthetic objective without unnecessarily burdening the federal interests in ensuring access to satellite services and in promoting fair and effective competition among competing communications service providers.

(b)

(1) Any state or local zoning, land-use, building, or similar regulation that affects the installation, maintenance, or use of a satellite earth station antenna that is two meters or less in diameter and is located or proposed to be located in any area where commercial or industrial uses are generally permitted by non-federal land-use regulation shall be presumed unreasonable and is therefore preempted subject to paragraph (b)(2) of this section. No civil, criminal, administrative, or other legal action of any kind shall be taken to enforce any regulation covered by this presumption unless the promulgating authority has obtained a waiver from the Commission pursuant to paragraph (e) of this section, or a final declaration from the Commission or a court of competent jurisdiction that the presumption has been rebutted pursuant to paragraph (b)(2) of this section.

(2) Any presumption arising from paragraph (b)(1) of this section may be rebutted upon a showing that the regulation in question:

(i) Is necessary to accomplish a clearly defined health or safety objective that is stated in the text of the regulation itself;

(ii) Is no more burdensome to satellite users than is necessary to achieve the health or safety objective; and

(iii) Is specifically applicable on its face to antennas of the class described in paragraph (b) of this section.

(c) Any person aggrieved by the application or potential application of a state or local zoning or other regulation in violation of paragraph (a) of this section may, after exhausting all nonfederal administrative remedies, file a petition with the Commission requesting a declaration that the state or local regulation in question is preempted by this section. Nonfederal administrative remedies, which do not include judicial appeals of administrative determinations, shall be deemed exhausted when:

(1) The petitioner's application for a permit or other authorization required by the state or local authority has been denied and any administrative appeal and variance procedure has been exhausted;

(2) The petitioner's application for a permit or other authorization required by the state or local authority has been on file for ninety days without final action;

(3) The petitioner has received a permit or other authorization required by the state or local authority that is conditioned upon the petitioner's expenditure of a sum of money, including costs required to screen, pole-mount, or otherwise specially install the antenna, greater than the aggregate purchase or total lease cost of the equipment as normally installed; or

(4) A state or local authority has notified the petitioner of impending civil or criminal action in a court of law and there are no more nonfederal administrative steps to be taken.

(d) Procedures regarding filing petitions requesting declaratory rulings and other related pleadings will be set forth in subsequent Public Notices. All allegations of fact contained in petitions and related pleadings must be supported by affidavit of a person or persons with personal knowledge thereof.

(e) Any state or local authority that wishes to maintain and enforce zoning or other regulations inconsistent with this section may apply to the Commission for a full or partial waiver of this section. Such waivers may be granted by the Commission in its sole discretion, upon a showing by the applicant that local concerns of a highly specialized or unusual nature create a necessity for regulation inconsistent with this section. No application for waiver shall be considered unless it specifically sets forth the particular regulation for which waiver is sought. Waivers granted in accordance with this section shall not apply to later-enacted or amended regulations by the local authority unless the Commission expressly orders otherwise.

(f) A satellite earth station antenna that is designed to receive direct broadcast satellite service, including direct-to-home satellite services, that is one meter or less in diameter or is located in Alaska is covered by the regulations in § 1.4000 of this chapter.

Subpart B—Applications and Licenses

General Application Requirements

§ 100.100 Filing of applications.

(a) For purposes of this section, applications include all filings by an entity related to any application or authorization under this part including space and earth station applications, requests for market access, amendments, modifications, and requests for special

temporary authority and any other applications, supplements, addenda, requests, or notifications.

(b) All applications must be filed electronically and submitted via the International Communications Filing System (ICFS), or any successor system designated by the Space Bureau.

(c) The Commission delegates to the Space Bureau the authority to issue public notices directing changes in the form and format for filing all space station and earth station applications and other filings under this part. Filing in the specified form and format is a requirement of the application.

(d) All applicants must submit FCC Form 312—Main Form.

(e) Space station applicants must submit the information required in §§ 100.110, 100.111, and 100.112 on FCC Form 312—Main Form, Schedule O, and Schedule F.

(f) An application for a multi-orbit or multi-service system must provide the required information for each of the proposed orbits and services that are described in § 100.110.

(g) Earth station applicants must submit the general information required in § 100.120 and the information required by §§ 100.120 and 100.121 on FCC Form 312—Main Form and Schedule B.

(h) Applications for Commission consent to the assignment of a license or the transfer of control of a licensee, and notifications of assignment or transfer of control when permitted under this part, must be filed on FCC Form 312—Main Form and Schedule A.

(i) Requests for U.S. market access must include all additional information required by § 100.114.

(j) Applicants may submit required or additional information as a supplement or exhibit to the application filed contemporaneously with the FCC Form 312—Main Form, or any other required schedule or form, in the case of technical limitations with the designated forms.

(k) Application fees must be paid at the time of filing your application in ICFS. A schedule of application fees applicable to this part can be found at § 1.1107 in this chapter. If an application is dismissed, the applicant will generally not be entitled to a refund of the filing fee.

(l) Applicants must respond completely and accurately to all questions and certifications.

(m) Each applicant is responsible for the continuing accuracy and completeness of information furnished in a pending application consistent with the requirements of § 1.65 of this chapter.

§ 100.101 Application requirements of the FCC Form 312—Main Form.

(a) Applicants filing the FCC Form 312—Main Form must include the following information:

(1) *Contact information.*

(i) The name, email, and phone number of the applicant and a designated contact, if different from the applicant; and

(ii) The name, mailing address, email, and telephone number of the person(s), including counsel, to whom inquiries or correspondence should be directed.

(2) *Ownership information.*

(i) *Ownership definitions and methodology.* Applicants under this section must use the definitions and methodology found in § 1.5000 of this chapter.

(ii) *Ownership.* Applicants must disclose the names, citizenship/place of organization, principal place of business, and mailing address of any individual or entity holding a 10% or greater direct or indirect equity or voting interest in the applicant, or a controlling interest, along with the percentages of those interests held.

(iii) *Officers and directors.* Applicants must provide the names, addresses, and citizenship of each individual officer and director of the applicant entity.

(iv) *Ownership diagram.* Applicants must provide a diagram illustrating the applicant's vertical ownership structure, including the direct and indirect equity and voting interests held by each individual and entity listed in response to paragraph (a)(2)(ii) of this section. For assignment and transfer of control applications, the ownership diagram must include both the pre-transaction and post-transaction ownership of the authorization holder.

(3) *Certifications.*

(i) A certification waiving any claim to the use or ownership of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise as required by 47 U.S.C. 304.

(ii) A certification that neither the applicant nor any party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to the Anti-Drug Act of 1988, 21 U.S.C. 862, because of a conviction for possession or distribution of a controlled substance.

(iii) An attestation under penalty of perjury that all information submitted on or associated with any FCC Form 312—Main Form, or that will be associated with FCC Form 312—Main Form, has been verified for accuracy and believed to be complete and accurate at the time of submission.

(b) A single FCC Form 312—Main Form may be associated with multiple applications filed by the same applicant or licensee. If an applicant or licensee already has a current FCC Form 312—Main Form on file when it files an additional authorization request, it may certify that it has a current FCC Form 312—Main Form on file that is complete and accurate.

Space Station Applications

§ 100.110 General space station application requirements.

(a) Applicants for space station licenses must submit the following information:

(1) Type of authorization requested;

(2) Requested license term in years, if different than the default terms in § 100.149;

(3) Contact information, if different than the contact information listed on the FCC Form 312—Main Form associated with the applicant:

(i) Name, address, email, and telephone number of the applicant;

(ii) Name, address, email, and telephone number of the person(s), including counsel, to whom inquiries or correspondence should be directed;

(iii) Name, address, email, and telephone number of the person(s) or entity with the authority and capability to cease transmissions of any service for which the application seeks authorization and who must be available 24/7 365 days a year and located within the United States;

(4) A comprehensive statement describing the satellite system, including orbits, any service(s) to be provided, and planned operations (including the service areas); and

(5) A brief description of how the proposed operations would serve the public interest.

(b) An operator may apply for multiple GSO satellites under a single call sign so long as all necessary information is provided for each space station listed in the application.

(c) To the extent that satellites in an NGSO satellite system will be technically identical, the applicant may submit an application for a blanket license for those satellites that are technically identical. If the satellites and space stations in the NGSO satellite system will not be technically identical, the applicant must provide the information required for each distinct type.

§ 100.111 Space station orbital information requirements.

(a) *General requirements.* Space station applicants must identify whether they are applying for a GSO satellite system, an NGSO satellite system, a multi-orbit satellite system, or a VTSS authorization. Applicants must submit the following information, depending on the type of application. If an application includes more than one system type, the applicant must submit the required information for each system type.

(b) *GSO satellite systems.* An applicant for a GSO satellite system must provide the following information, except that applications filed pursuant to § 100.139(a)(2) do not need to provide the information in paragraph (b)(3):

(1) *Orbital location.* The requested orbital location(s) of the satellite(s), the east-west, north-south station-keeping range and the accuracy to which the antenna axis (yaw, pitch and roll) attitude will be maintained.

(2) *Certifications.* Certification whether the following criteria will or will not be met for all space station(s) to be operated under the license:

(i) For operations on the U.S. Arc, the operator will comply with the 2-degree spacing requirements; and

(ii) The space station(s) will comply with the orbital debris rules in § 100.260.

(3) *Orbital debris.* An orbital debris mitigation plan and end-of-life disposal plan that demonstrates how the operator will or will not comply with § 100.260 and that supports the certifications made according to paragraph (b)(2) of this section.

(4) *Conditional grant.* Whether the applicant is requesting a grant conditioned on a deferred orbital debris showing under § 100.139(a)(2).

(c) *NGSO satellite systems.* An application for an NGSO satellite system must provide the following information, except that applications filed pursuant to § 100.139(a)(2) do not need to provide the information required by paragraphs (c)(3) and (c)(4)(ii)–(iv) of this section.

(1) *Technical information.*

(i) The number of satellites in the constellation,

(ii) The number of in-orbit spares if any,

(iii) The orbital planes and the number of satellites in each plane,

(iv) The inclination of the orbital plane(s),

(v) The orbital period,

(vi) The apogee,

(vii) The perigee,

(viii) The argument(s) of perigee,

(ix) Active service arc(s),

(x) Right ascension of the ascending node(s),

(xi) The initial phase angle at the reference time for each satellite in each orbital plane,

(xii) The tolerances with which the orbital parameters will be maintained, including apogee, perigee, inclination, and the right ascension of the ascending node(s), and

(xiii) Estimated operational lifetime of each satellite in the constellation.

(2) *Certifications.* Applicants must certify whether the following criteria will or will not be met for all satellites that the applicant proposes to operate under the license:

(i) The space station(s) will operate only in non-geostationary orbit;

(ii) The space station(s) will be identifiable by a unique signal-based telemetry marker distinguishing it from other space stations or space objects;

(iii) The satellite(s) will be 10 cm or larger in the smallest dimension;

(iv) The operator will take appropriate steps to assess and mitigate collision risk upon receipt of a space situational awareness conjunction warning, including, but not limited to: contacting the operator of any active spacecraft involved in such a warning, sharing ephemeris data and other appropriate operational information with any such operator, and modifying satellite attitude and/or operations.

(v) The probability that any individual satellite will become a source of debris by collision with small debris or meteoroids that would cause loss of control and prevent disposal is 0.01 (1 in 100) or less, as calculated using the most current at the time of filing NASA Debris Assessment Software or a higher fidelity assessment tool;

(vi) The probability of collision between each satellite and any large object (10 centimeters or larger) during the orbital lifetime of the space station, including any de-orbit phases is 0.001 (1 in 1,000) or less, as calculated using the most current at the time of filing NASA Debris Assessment Software or higher fidelity tool. The collision risk may be assumed zero for a satellite during any period in which the satellite will be maneuvered effectively to avoid colliding with large objects;

(vii) The probability of human casualty from portions of the spacecraft surviving re-entry and reaching the surface of the Earth with a kinetic energy in excess of 15 joules is 0.0001 (1 in 10,000) or less, as calculated using the most current at the time of filing NASA Debris Assessment Software or higher fidelity tool;

(viii) The stored energy will be removed at the end of life for each satellite, by depleting residual fuel and leaving all fuel line valves open, venting any pressurized system, leaving all batteries in a permanent discharge state, and removing any remaining source of stored energy, or through other equivalent procedures;

(ix) The space station(s) will be disposed of via atmospheric re-entry;

(x) The space station(s) will de-orbit no later than five years after the end of the mission; and

(xi) The system will maintain a probability of success of disposal of 0.9 or greater for any individual space station.

(3) *Orbital debris.* An orbital debris mitigation plan and end-of-life disposal plan that demonstrates how the proposal will or will not comply with §§ 100.260 and 100.261 and that supports the certifications made pursuant to paragraph (c)(2) of this section.

(4) *Additional information.* Applicants must provide the following information:

(i) Whether the applicant is requesting an authorization conditioned on a deferred orbital debris showing under § 100.139(a)(2).

(ii) If at any time during the space station(s)' mission or de-orbit phase the space station(s) will transit through any orbits used by any inhabitable spacecraft, a description of the design and operational strategies, if any, that will be used to minimize the risk of collision and avoid posing any operational constraints to the inhabitable spacecraft.

(iii) A description of the design, operation, capability and reliability of maneuverability and deorbit systems, if any, including the quantity of fuel that will be reserved for disposal maneuvers, as well as the anticipated evolution over time of the orbit of the proposed satellite(s).

(iv) If the space station(s) will not terminate operations in an orbit in or passing through the low-Earth orbit region below 2000 km altitude, the operator must submit a statement indicating whether disposal will involve use of a storage orbit or long-term atmospheric re-entry. If disposal will involve the use of a storage orbit, provide a plot of the long-term (100 years or more) stability of the orbit reflecting the orbit variations over time.

(d) *Variable Trajectory Spacecraft System.* An application for a VTSS authorization must provide the following information, except that applications filed pursuant to § 100.139(a)(2) do not need to provide the information required by paragraph (d)(4) of this section:

(1) *Technical information:*

(i) The number of spacecraft and the maximum number of spacecraft operating at any one time if the number of operational spacecraft will vary during the course of the license period;

(ii) The range of altitudes (or orbital shell(s)) in which the space station(s) will operate;

(iii) The initial deployment apogee, perigee, and inclination, and

(iv) The planned amount of time expected to be spent in any particular phase of the operations, including earth's orbit, transiting to the moon, lunar orbit, lunar surface, transiting beyond the moon, and/or operating on another celestial body, as applicable to the individual application.

(2) *Certifications.* Applicants must certify whether the following criteria will be met for all space station(s) proposed for operation under the license:

(i) The space station(s) will be identifiable by a unique signal-based telemetry marker distinguishing it from other space stations or space objects.

(ii) The spacecraft will be 10 cm or larger in the smallest dimension.

(iii) The operator will take appropriate steps to assess and mitigate collision risk upon receipt of a space situational awareness conjunction warning, including, but not limited to: contacting the operator of any active spacecraft involved in such a warning, sharing ephemeris data and other appropriate operational information with any such operator, and modifying spacecraft attitude and/or operations.

(iv) Prior to, and during, any planned maneuvers or rendezvous and proximity operations, the operator will share and update propagated ephemeris and covariance data according to § 100.200(c).

(v) If the spacecraft will terminate its mission beyond the geosynchronous orbit, the spacecraft will be disposed of beyond Earth's orbit.

(vi) For all related space stations under paragraph (d)(5)(iv)(A), operations will be conducted only with the consent of the operator of the related station, and with certification from the other operator to be submitted when consent is finalized.

(vii) For all related space stations under paragraph (d)(5)(iv)(A), the applicant is or will consult with other relevant federal agencies, including but not limited to the State Department and the Commerce Department, as necessary.

(viii) Operations that will terminate in low-earth orbit will comply with § 100.260(e).

(ix) Operations that will terminate at or near the GSO arc will comply with § 100.260(b).

(3) *Negative certifications.* If an applicant certifies in the negative to the certifications required under paragraph (d)(2)(iii) or paragraph (d)(2)(iv) of this section, the applicant may submit one of the following to avoid an exception to expedited processing under § 100.140:

(i) A completed agreement with one or more relevant government entities, (*i.e.,* NOAA), approving of the system's space safety plan; or

(ii) Affirmative certifications to all required certifications for an NGSO satellite system in paragraph (c)(2) of this section or a GSO satellite system in paragraph (b)(2) of this section, depending on the applicant's proposed operations. The applicant must also provide the required orbital debris mitigation plan pursuant to paragraph (b)(3) or (c)(3) of this section.

(4) *Orbital debris.* An orbital debris and end-of-life disposal plan that demonstrates how the proposal will or will not comply with §§ 100.260 and 100.261 and supports the certifications pursuant to paragraph (d)(2) of this section.

(5) *Additional information.* Applicants must provide the following information:

(i) Whether the applicant is requesting a grant conditional on a deferred orbital debris showing under § 100.139(a)(2).

(ii) If at any time during the space station(s)' mission or de-orbit phase the space station(s) will transit through any orbits used by any inhabitable spacecraft, a description of the design and operational strategies, if any, that will be used to minimize the risk of collision and avoid posing any operational constraints to the inhabitable spacecraft.

(iii) Applicants planning to travel beyond the geosynchronous orbit must provide the following information, if known at the time of filing. In the case where such information is not known at the time of filing, the applicant must affirmatively certify that this information will be provided to the Commission as soon as practicable once the information is known, and prior to beginning any such operations.

(A) A description of any instruments or rovers onboard the spacecraft that will engage in radiofrequency communications with the spacecraft while in transit or on the surface of the moon or any other celestial body.

(B) A description of completed or planned coordination with relevant government entities such as the National Science Foundation (NSF), National Radio Astronomy Observatory (NRAO), or other similar groups regarding radio astronomy or space research considerations that may be impacted by any instruments or experiments to be conducted on board or other mitigation of contamination of the lunar environment or other celestial bodies.

(iv) Applicants planning to engage in servicing or otherwise planning to interact with additional spacecraft on-orbit must provide the following information, if known at the time of filing. In the case where such information is not known at the time of filing, the applicant must affirmatively certify that this information will be provided to the Commission as soon as practicable once the information is known, and prior to beginning any such operations.

(A) All FCC file numbers or call signs for any applications or Commission grants related to the proposed operations (*e.g.,* experimental license grants, other space station or earth station applications or grants), including client space stations or spacecraft, spacecraft that have become debris the applicant seeks to remediate, and other space stations or spacecraft the applicant plans to interact with as part of its operations.

(B) A list of the International Telecommunications Union filings and United Nations Registration information, or the expected State of United Nations Registry, for any space stations or spacecraft not licensed or granted market access by the United States that are related to the proposed operations, including client space stations or spacecraft, spacecraft that have become debris the applicant seeks to remediate, and other space stations or spacecraft the applicant plans to interact with or collaborate with as part of its operations.

(C) A statement disclosing planned proximity operations and addressing debris generation that will or may result from the proposed operations, including any planned release of debris, the risk of accidental explosions, the risk of accidental collision, and measures taken to mitigate those risks.

§ 100.112 Space station frequency information requirements.

(a) *Services identified.* Space station applicants must identify all services included in the proposed system.

(b) *Required information.* Applications must provide the following information:

(1) The frequencies that the satellite proposes to both transmit and receive on and the polarization and channelization plan (with carrier

frequency and bandwidth of each channel) for each beam. For space stations in which the channels are dynamically generated and the bandwidth varies, specify only the range of frequencies in that band over which the beam can operate and the polarization plan.

(2) An explanation of how uplink frequency bands would be connected to downlink frequency bands.

(3) Identification of any requested bands for which there are Federal allocations. Applicants shall provide sufficient information to evaluate electromagnetic compatibility with the federal government use of the spectrum, and any additional information requested by the Commission. As part of the coordination process, applicants shall show that they will not cause harmful interference to authorized federal government users, based upon existing system information provided by the federal government.

(4) For each space station, the maximum EIRP, maximum EIRP density and emission bandwidth for each transmitting beam. If the satellite uses shapeable antenna beams, specify instead the maximum possible EIRP, maximum possible EIRP density and emission bandwidth within each shapeable beam's proposed coverage area. Provide this information for each frequency band in which the transmitting antenna would operate. For bands below 15 GHz, specify EIRP density in dBW/4 kHz; for bands at and above 15 GHz, specify EIRP density in dBW/MHz. If the EIRP density varies, specify the maximum possible EIRP density.

(5) For each space station, the receive antenna gain and the gain-to-temperature ratio at beam peak for each receiving beam. For receiving beams fed into transponders, also specify the minimum and maximum saturation flux density at beam peak. If the satellite uses shapeable beams, specify the minimum and maximum gain-to-temperature ratio and the corresponding receive antenna gains within each shapeable beam's proposed coverage area. For shapeable receiving beams fed into transponders, specify the minimum and maximum saturation power flux density within the 0 dB relative antenna gain isoline. Provide this information for each frequency band in which the receiving beam can operate.

(6) For GSO space stations, the predicted antenna gain contour(s) for each transmit and receive antenna beam. The contours should be plotted on an area map with the beam depicted on the surface of the earth with the space station's peak antenna gain pointed at nadir to a latitude and longitude within the proposed service area. The contour(s) should be plotted at 2 dB intervals down to 10 dB below the peak gain and at 5 dB intervals between 10 dB and 20 dB below the peak gain. The plots should be presented in a Graphical Interference Management System (GIMS)-readable format. For intersatellite links, applicants must specify the peak antenna gain and 3 dB beamwidth.

(7) For requests involving NGSO satellites, the predicted antenna gain contour(s) plotted on an area map with the beam depicted on the surface of the earth for each transmit and each receive antenna beam for one space station for each orbital plane if all space stations in the orbital plane are identical. If individual space stations in the NGSO constellation have different antenna beam configurations, specify the predicted antenna gain contours for each transmit and each receive beam for each space station type in each orbital plane requested. The contour(s) should be plotted on an area map with the beam depicted on the surface of the earth with the space stations' peak antenna gain pointed at nadir to a latitude and longitude within the proposed service area. The contour(s) should be plotted at 2 dB intervals down to 10 dB below the peak gain and at 5 dB intervals between 10 dB and 20 dB below the peak gain. The plots should be presented in a Graphical Interference Management System (GIMS)-readable format. For intersatellite links, applicants must specify the peak antenna gain and 3 dB beamwidth.

(8) For space stations with shapable antenna beams, the antenna gain contours, as specified in (6) or (7) of this section, as applicable, for the transmitting beam configuration that results in the highest EIRP density, and the receiving beam configuration with the smallest gain-to-temperature ratio and the highest saturation power flux density for the beams listed in (5) of this section. If the beams are also steerable, include the contours, plotted on an area map, of the 0 dB and -3 dB relative antenna gain isolines that that would result from moving the beam peak around the limit of the effective beam peak area. The proposed maximum coverage area must be clearly specified.

(9) For space stations with steerable antenna beams that are not shapeable, in addition to (6) or (7) of this section, the contours, plotted on an area map, of the 0 dB and -3 dB relative antenna gain isolines that would result from moving the beam peak around the limit of the effective beam peak area. The proposed maximum coverage area must be clearly specified.

(10) In addition to (6) through (9) of this section, area maps showing all of the transmit beams, and all of the receive beams, depicted on the surface of the Earth.

(11) Transmitter and receiver characteristics (transmit power, transmit antenna gain, EIRP density, emission bandwidth, receive antenna gain, receiver noise temperature and receiver bandwidth) and link budget for each of the different links.

(12) For each space station emission (space-to-Earth), the power flux-density at the Earth's surface for the various angles of arrival (0–5°, 5–25°, 25–90°) above the horizontal plane under free-space propagation conditions.

(13) A description how the requested spectrum can be shared with both current and future operators, (*e.g.,* antenna design, earth station geographic locations) and whether operations will materially constrain other operations in the requested frequency band(s).

(14) Whether the space station will operate on a common carrier basis.

(c) *Certifications.* Applicants for space station licenses must certify whether the following criteria will be met for all requested space station(s):

(1) The space station(s) will comply with and operate within the applicable service and frequency requirements and technical and operational parameters outlined in the Commission's rules;

(2) The space station(s) will operate under ITU coordination procedures and agreements; and

(3) The space station(s) can be commanded to immediately cease transmissions and the licensee will have the capability to eliminate harmful interference when required under the terms of the license or other applicable regulations.

(d) *Service-specific application requirements.*

(1) Applications for SCS must also provide the information required in § 100.113.

(2) In the Direct Broadcast Satellite service, applicants and licensees shall also provide the Commission with all information it requires in order to modify the plans for the Broadcasting-Satellite Service (BSS) in Appendix 30 of the ITU Radio Regulations (RR) and associated feeder-link plans in Appendix 30A of the ITU RR, if the system has technical characteristics differing from those specified in the Appendix 30 BSS Plans, the Appendix 30A feeder link Plans, Annex 5 to Appendix 30, or Annex 3 to Appendix 30A. For such systems, no protection from interference caused by radio

stations authorized by other Administrations is guaranteed until the agreement of all affected Administrations is obtained and the frequency assignment becomes a part of the appropriate Region 2 BSS and feeder-link Plans. Authorizations for which coordination is not completed and/or for which the necessary agreements under Appendices 30 and 30A have not been obtained may be subject to additional terms and conditions as required to effect coordination or obtain the agreement of other Administrations. Applicants and licensees shall also provide the Commission with the information required by Appendix 4 of the ITU RR for advance publication and notification or coordination of the frequencies to be used for tracking, telemetry and control functions of DBS systems.

(3) Space station license applications must also include any additional information required by applicable provisions in subpart C of this part:

(i) *NVNG MSS in 137–138 MHz, 148–150.05 MHz, 399.9–400.05 MHz, and 400.15–401. See* § 100.220.

(ii) *1.6/2.4 GHz and 2 GHz MSS. See* § 100.214.

(iii) *SDARS in 2.3 GHz. See* § 100.250.

(iv) *NGSO FSS in 10.7–30 GHz. See* § 100.222.

(v) *DBS in 12.2–12.7 GHz. See* § 100.233.

(vi) *GSO FSS or BSS in 17.3–17.8 GHz. See* § 100.231 and § 100.232.

(vii) *GSO FSS and 17/24 GHz BSS. See* § 100.230 and § 100.234.

(viii) *Inter-satellite service.* See § 100.240(c).

(ix) *Default service rules.* For space station operations in a frequency band where band-specific service rules have not yet been adopted, *see* § 100.204.

§ 100.113 Additional information for supplemental coverage from space.

(a) *SCS entry criteria.* This section applies only to applicants seeking to provide SCS. An applicant for SCS space station authorization must hold either an existing NGSO or GSO license or grant of U.S. market access under this part, or must be seeking an NGSO or GSO license or grant of U.S. market access under this part, and must have a lease arrangement(s) or agreement pursuant to § 1.9047 of this chapter with one or more terrestrial wireless licensee(s) that hold, collectively or individually, all co-channel licenses throughout a GIA in a band identified in § 2.106(d)(33)(i) of this chapter. Applicants for SCS space stations must comply with the requirements set forth in paragraph (b) of this section.

(b) *SCS space station application requirements.* An applicant seeking a space station authorization to provide SCS must either submit an application requesting modification of a current NGSO or GSO license or grant of U.S. market access under this part, or an application seeking a new NGSO or GSO license or grant of U.S. market access under this part.

(1) The application must certify that:

(i) A lease notification(s) or application(s), pursuant to § 1.9047 of this chapter, where a single terrestrial wireless licensee holds or multiple co-channel licensees collectively hold all co-channel licenses within the relevant Geographically Independent Area (GIA) in the bands identified in § 2.106(d)(33)(i) of this chapter, or as it pertains to FirstNet, an agreement, is on file with the Commission;

(ii) The current space station licensee under this part or grantee of market access for NGSO or GSO satellite operation under this part seeks modification of authority to provide SCS in the same geographic areas covered in the relevant GIA, or the applicant for a space station license under this part or grant of market access for NGSO or GSO satellite operation under this part seeks to provide SCS in the same geographic areas covered in the relevant GIA; and

(iii) SCS earth stations will qualify as ''licensed by rule'' earth stations under § 100.120(e).

(2) The application must include a proposal for the prospective SCS system and the certifications described in paragraph (b)(1) of this section.

(3) The application must include a list of the file and identification numbers associated with the relevant leasing notifications under part 1 of this chapter, application(s), and FCC Form 601(s).

(4) The application must provide a description of the coverage areas that will be served both domestically and internationally, as applicable.

(5) If the licensee is seeking to provide SCS in a foreign administration with a foreign terrestrial partner then the licensee must submit a request for authorization via ICFS to operate in a foreign country which must include a letter from the communications authority approving the SCS operations as well as a letter from the mobile operator certifying that there is a lease agreement between them and the licensee. This request must include the frequencies of operation and a certification that cross-border interference has been assessed and the operations proposed will not cause harmful interference to stations in other countries.

(c) *Equipment authorization for SCS earth stations.* Each SCS earth station used to provide SCS under this section must meet the equipment authorization requirements under paragraph (d) of this section and all equipment authorization requirements for all intended uses of the device pursuant to the procedures specified in part 2 of this chapter and the requirements of at least one of part 22, 24, or 27 of this chapter.

(d) *SCS earth station equipment certification requirements.* Applicants for certification for SCS earth stations for use with a satellite system must meet all requirements for equipment certification and equipment test data necessary to demonstrate compliance with pertinent standards under parts 22, 24, or 27 of this chapter as applicable.

(e) *Effective date and continued operation of SCS authorization.* SCS authorization will be deemed effective in the Commission's records and for purposes of the application of the rules set forth in this section after each of the following requirements is satisfied:

(1) Grant of:

(i) A modification application under this part or request for modification of a grant of market access; or

(ii) An application to launch and operate or for market access;

(2) Approval of a leasing arrangement(s) or agreement(s) under part 1 of this chapter; and

(3) Grant of a valid SCS earth station equipment certification under part 2 of this chapter.

§ 100.114 Requests for U.S. market access.

(a) Petitioners for a grant of U.S. market access must provide all the applicable information for the type of system for which they are requesting market access as described in §§ 100.110 through 100.113 and the application requirements general to all applications described in §§ 100.100 and 100.101.

(b) Entities filing a petition for declaratory ruling seeking to access the United States market using a non-U.S.-licensed space station must provide an exhibit demonstrating:

(1) That U.S.-licensed space stations have effective competitive opportunities to provide analogous services in the country in which the non-U.S. licensed space station is licensed; and

(2) For requests to operate using a space station that is not licensed by, or seeking a license from, a member nation of the World Trade Organization for services covered under the WTO BTA, that U.S.-licensed space stations have effective competitive opportunities to provide analogous services in all countries in which communications

will originate or terminate. The application must include a statement that grant is in the public interest, and the applicant bears the burden of showing that there are no practical or legal constraints that limit or prevent access of U.S. space stations in the relevant foreign markets.

(c) Entities filing a petition for declaratory ruling seeking to access the United States must demonstrate that the system, at the time of filing:

(1) Is in orbit and operational;

(2) Has a license from another administration; or

(3) Has been submitted for coordination to the ITU and has been published as ''as received.''

(d) Entities filing a petition for declaratory ruling to access the United States market must certify that the non-U.S. licensed space station has complied with all applicable Commission requirements, including but not limited to the following:

(1) Milestones.

(2) Reporting requirements.

(3) Any other applicable service rules.

(4) The surety bond requirement pursuant to § 100.148, for non-U.S.-licensed space stations that are not in orbit and operating.

(5) Entities that have one market access request on file with the Commission for NGSO satellite system operations in a particular frequency band will not be permitted to request access to the U.S. market for another NGSO satellite system in that frequency band in the same processing round subject to §§ 100.141 and 100.241.

(e) Non-U.S. licensed space station operators may file initial petitions for U.S. market access, amendments to petitions, petitions for modification of U.S. market access, petitions for special temporary market access, and other requests for Commission action using the same procedures as space station license applicants, provided they comply with all relevant application and operational requirements, and unless otherwise provided in this part.

(f) A non-U.S. licensed space station operator with a grant of market access may seek special temporary access for operations under the procedures set forth in § 100.144.

Earth Station Applications

§ 100.120 Earth station licensing application requirements.

(a) *Requirements for all earth station license applications.*

(1) All applicants must provide the name, address, email, and telephone number of the person(s) or entity with the authority and capability to cease transmissions of any service for which the application seeks authority. This person or entity must be available 24/7, 365 days a year and be located within the United States.

(2) Earth station applicants must certify whether the applicant will operate the earth station at the lowest power level to close the link as required by § 100.201.

(3) A certification whether the application complies with all the Commission's rules or if a waiver is requested of any Commission rule.

(4) Earth station applicants must provide the following technical information:

(i) Whether the request is for a blanket license;

(ii) The frequencies that the earth station(s) propose(s) to use;

(iii) If requesting a location area other than nationwide blanket authorization, the applicant must provide the geographic coordinates and operating radius of the earth station(s);

(iv) The proposed relevant power, out of band emission, off axis limits, and power density limits as described in §§ 100.270–100.280;

(v) The antenna type;

(vi) The number of antennas or devices if not requesting an unlimited number;

(vii) If the applicant is not seeking 360 degree coordination, the maximum and minimum elevation and azimuth angles for intended operations for the antenna; and

(viii) Any additional information necessary to complete coordination with federal entities.

(b) *Additional service-specific information.*

(1) *Type of application.* Earth station applicants must identify whether their application is for an Immovable earth station, user terminal including VSATs and transportable, ESIM, or mobile earth station.

(2) *Additional requirements for Immovable earth station authorizations.*

(i) Applicants must certify whether the following criteria will or will not be met for all Immovable Earth Stations to be operated under the license:

(A) For non-Nationwide, Non-Site Licenses, that the applicant has completed all required location and frequency specific coordination.

(B) For Nationwide, Non-Site Licenses, that the applicant will register all site locations in ICFS or a successor system and will complete all required location and frequency specific coordination for the registered sites prior to operation.

(C) That the proposed operations meet the relevant power, out of band emission, off axis limits, and power density limits as described in §§ 100.270–100.280.

(ii) Applicants must also provide the geographic coordinates of the proposed Immovable Earth Station for those applications that do not affirmatively certify to all application requirements, or that request a waiver of the Commission's rules, or are subject to an exception outlined in § 100.140 other than federal coordination, or that are not seeking Nationwide, Non-Site License.

(3) *Additional requirements for user terminals and Earth Stations in Motion authorizations.* Applicants must certify whether the following will be met for all User Terminals or Earth Stations in Motion to be operated under the license:

(i) That the proposed operations meet the relevant power, out of band emission, off axis limits, and power density limits as described in § 100.282.

(ii) The radiofrequency exposure meets the requirements of § 100.270.

(iii) The applicant has completed all required location and frequency specific coordination.

(4) *Additional requirements for mobile earth station authorizations.* Applicants must certify whether the following will be met for all mobile earth stations to be operated under the license:

(i) The proposed operations meet the relevant power, out of band emission, off axis limits, and power density limits as described in §§ 100.270–100.280 and 100.283.

(ii) The radiofrequency exposure meets the requirements of § 100.270.

(c) *Earth stations subject to § 100.281.* Earth stations proposing to operate in frequencies subject to § 100.281 must provide all information required under § 100.281 and any additional information required under paragraph (b) of this section.

(d) *SCS earth stations application requirements.*

(1) An applicant seeking to use SCS earth stations to provide Supplemental Coverage from Space must comply with § 100.113.

(2) A satellite operator licensed under § 100.113 to provide SCS is permitted to communicate with all terrestrial wireless licensee(s)-associated SCS earth stations that have been approved for such use under part 2 of this chapter.

(i) Such earth stations must show compliance with this part and at least one of either part 22, 24, or 27 of this chapter to provide SCS within the technical parameters and provisions associated with the device certification.

(ii) The device certification must show compliance with the licensed parameters of the terrestrial wireless

license(s) and at least one of either part 22, 24, or 27 of this chapter, as applicable.

(3) An earth station may be used for the provision of SCS when:

(i) The satellite operator licensed under § 100.113 is a party to a valid and approved spectrum leasing arrangement or agreement pursuant to § 1.9047 of this chapter with at least one terrestrial wireless licensee(s) licensed under one of either part 22, 24, or 27 of this chapter; and

(ii) That terrestrial wireless licensee(s) has met and operates within all conditions associated with the relevant terrestrial wireless license(s).

(4) A satellite operator authorized to provide SCS under § 100.113 is authorized under this section to communicate with SCS earth stations for any period during which each of the following apply:

(i) The service is provided during the valid duration of any spectrum leasing arrangement or agreement pursuant to § 1.9047 of this chapter between the terrestrial wireless licensee(s) and satellite operator;

(ii) The devices to which service is provided are certified under part 2 of this chapter; and

(iii) The terrestrial wireless licensee(s) is a valid licensee(s) under part 22, 24, or 27 of this chapter.

(5) A satellite operator with SCS authorization via a grant of market access can avail itself of the provisions of this paragraph but, in addition to the parameters established in this section, must also comply with any additional parameters included in the satellite operator's space station market access grant.

(6) A space station licensee operating in conformance with the parameters established in this part does not need a separate earth station authorization for the provision of SCS under this part.

(e) *Other requirements in subpart C.* Applicants for earth station authorizations must also submit any information required by applicable provisions in subpart C of this part:

(1) *Radiofrequency exposure reports.* See § 100.270,

(2) *Siting.* See § 100.276.

(3) *MSS and ATC.* See § 100.283.

(4) *Receive-only earth stations.* See § 100.273.

(5) *Analog video transmissions in 5925–6425 MHz and 14–14.5 GHz.* See § 100.234.

(6) *Temporary-fixed earth stations.* See § 100.274.

(7) *UMFUS.* See § 100.281.

(8) *Coordination and sharing requirements.* See § 100.276.

§ 100.121 Earth station application processing.

(a) For applications for which there are no exceptions to expedited processing pursuant to § 100.140:

(1) The application will be placed on public notice pursuant to § 100.132(2)(i);

(2) When an application is placed on public notice pursuant to this subsection, the applicant may begin operating pursuant to the parameters requested in the underlying application that have already been coordinated, if coordination is required as reflected in the filed coordination report. These operations must be on a non-interference, unprotected basis until further action is taken by the Commission on the application.

(b) For applications that are subject to one of the exceptions in § 100.140:

(1) The application will be placed on public notice pursuant to § 100.132(2)(ii).

(2) An application placed on public notice pursuant to this subsection may not begin operations until authorized to do so by the Commission.

(3) An applicant for an immovable earth station that affirmatively certifies to all application requirements in § 100.120 may apply for a Nationwide, Non-Site License. Applicants who seek to operate in frequency bands subject to federal coordination may apply for a blanket authorization or a Nationwide, Non-Site License pursuant to the limits and requirements established in §§ 100.139 and 100.140.

(c) A licensee with a Nationwide, Non-Site License for Immovable Earth Stations must register earth station sites in accordance with the Commission's guidance and certify that any necessary location and frequency specific coordination has been completed prior to operations within the period described in § 100.275.

General Application Processing

§ 100.130 Receipt of applications.

Applications received by the Commission are given a file number and a unique station identifier for administrative convenience. Neither the assignment of a file number and/or other identifier nor the listing of the application on public notice as received for filing indicates that the application has been found acceptable for filing or precludes subsequent return or dismissal of the application if it is found to be defective or not in accordance with the Commission's rules.

§ 100.131 Completeness.

(a) An application will be considered complete if, under the relevant rule section(s), all required information, forms, certifications, exhibits, and showings are included in the application.

(b) Applications with negative certifications and without the appropriate waiver requests or additional information are incomplete and may be dismissed.

(c) If an application is determined to be complete, the Commission will place the application on public notice pursuant to § 100.132.

(d) If an application is determined to be incomplete, the Commission will provide notice within 30 days of filing to the applicant identifying deficiencies related to the completeness of the application. An applicant receiving such notice must either amend or supplement the filed application within 30 days from the date of receipt of notice or the application will be dismissed subject to § 100.135.

§ 100.132 Public notice.

(a) *Public notices for space station license or market access requests.*

(1) At regular intervals, the Commission will issue public notices listing:

(i) The receipt of applications for new space station licenses that have been accepted for filing;

(ii) The receipt of applications for major amendments to pending applications;

(iii) The receipt of applications for major modifications to space station authorizations;

(iv) Applications for special temporary authority filed pursuant to § 100.144(d);

(v) Significant Commission actions regarding applications; or

(vi) Information that the Commission in its discretion believes to be of public significance.

(2) The following public notice periods will apply to applications that are accepted for filing:

(i) Applications not subject to any identified exceptions under § 100.140 or paragraph (a)(2)(iii) of this section and STAs filed pursuant to § 100.144(d)(2) will be placed on public notice for a period of seven days.

(ii) Applications subject to an identified exception under § 100.140 and major amendments under 100.143(c) will be placed on public notice for a period of 15 days.

(iii) Notwithstanding paragraphs (a)(2)(i)–(ii) of this section, applications for stations in the broadcasting or common carrier services, or stations listed in § 309(b)(2)(A)–(E), subject to Section 309 of the Communications Act will be placed on public notice

following the procedures described in Section 309 of the Communications Act for a period of at least 30 days.

(b) *Public notices for earth station license requests.*

(1) At regular intervals, the Commission will issue public notices listing:

(i) The receipt of new earth station applications that have been accepted for filing;

(ii) The receipt of applications for major amendments to pending applications;

(iii) The receipt of applications for major modifications to earth station authorizations;

(iv) Applications for special temporary authority filed pursuant to § 100.144(d); and

(v) Information that the Commission in its discretion believes to be of public significance or where speed is of the essence and efficiency of Commission process will be served thereby.

(2) The following public notice periods will apply to applications that are accepted for filing:

(i) Applications will be subject to the operation procedures described in § 100.121.

(ii) Applications eligible for expedited processing and STAs filed pursuant to §§ 100.144(b)(2)(iv) and (d)(2) or of this chapter will be placed on public notice for a period of seven days.

(iii) Applications that that are not eligible for expedited processing under § 100.140 and major amendments under § 100.143(c) will be placed on public notice for a period of 15 days.

(iv) Notwithstanding paragraphs (b)(2)(i)–(iii) of this section, applications for stations in the broadcasting or common carrier services, or stations listed in § 309(b)(2)(A)–(E), subject to Section 309 of the Communications Act will be placed on public notice following the procedures described in section 309 of the Communications Act for a period of at least 30 days.

(c) *Time periods for public notice.* The Commission may, in its sole discretion or upon request by an applicant, petitioner, or commenter, extend or shorten the public notice periods outlined herein, except for applications subject to the requirements of § 309(b) of the Communications Act.

§ 100.133 Opposition to applications and other pleadings.

(a) Oppositions, including petitions to deny, petitions for other forms of relief, and other objections must:

(1) Identify the application(s) (including applicant's name, station location, Commission file numbers, and radio service and frequencies involved) with which it is concerned;

(2) Contain the specific allegations of fact to support the relief requested, which shall be supported by affidavit of a person or persons with personal knowledge thereof, and which shall be sufficient to demonstrate that the petitioner (or respondent) is a party in interest and that a grant of, or other Commission action regarding, the application would be inconsistent with any of the rules in this chapter or the Communications Act, or otherwise inconsistent with the public interest;

(3) Be timely filed within the designated public notice period, unless designated otherwise by the Commission;

(4) Be filed in accordance with the pleading limitations, periods, and other applicable provisions of §§ 1.41 through 1.52 of this chapter, except that such pleadings or filings must be filed electronically through ICFS; and

(5) Contain a certificate of service showing that it has been served on the applicant in accordance with § 1.47 of this chapter no later than the date the pleading is filed with the Commission.

(b) Reply comments by the party who filed the original pleading must be filed within five days after the expiration of the time for filing oppositions.

(c) Pleadings, oppositions, and comments filed pursuant to this section must address the merits and/or public interest considerations of the application(s) with which they are concerned. Pleadings, oppositions, and comments outside the scope of the application or applications will not be considered.

(1) Pleadings, oppositions, and comments may only be filed during the public notice period. Pleadings, oppositions, and comments filed outside of the public notice period will not be considered without a petition requesting the Commission for leave to file.

(2) An applicant may reply to any pleadings, oppositions, or comments filed against their application within five days of a filing filed pursuant to this section even if the public notice period has closed and need not file a request for leave to file.

(d) The Commission may, in its sole discretion upon request by a petitioner, commenter, or applicant, extend or shorten the filing periods outlined herein, except that the Commission may not shorten the 30-day notice period for applications subject to the requirements of section 309(b) of the Communications Act.

§ 100.134 Information requests.

(a) The Commission may request additional information from applicants and licensees to:

(1) Determine completeness of an application;

(2) Understand the facts of informational showings, inconsistencies, execution, or other technical matters, if the factual issue is directly material to the review;

(3) Determine whether an exception in § 100.140 applies to an application;

(4) Resolve matters of concern raised in pleadings, objections, or comments;

(5) Evaluate compliance with the Commission's rules, the Communications Act, or other requirements; or

(6) Consider issues which are directly material and necessary for the Commission to evaluate the merits of an application, including evaluating exceptions in § 100.140, under the Commission's rules.

(b) Following any filing period pursuant to §§ 100.132 and 100.133, the Commission will identify all deficiencies requiring additional information or clarification and notify the applicant as follows:

(1) The Commission must clearly identify any deficiencies with an application as soon as practicable;

(2) The Commission must raise all known or identified deficiencies in an initial request for information;

(3) Applicants must respond completely to all deficiencies raised in a request for additional information within the prescribed time frame and in the manner required by the information request;

(4) If an applicant's response raises additional issues outside the scope of an initial information request the Commission may request additional information from the applicant; and

(5) Nothing in this rule part prevents the Commission from issuing subsequent information requests if the applicant fails to fully respond to the initial information request except that the Commission must adhere to the requirements of paragraphs (b)(2) and (b)(4) of this section when issuing any subsequent information requests.

§ 100.135 Dismissal and return of applications.

(a) Unless otherwise specified, dismissal or return of an application is without prejudice.

(b) An application will be deemed unacceptable for filing and may be dismissed with a brief statement identifying the reason if:

(1) The application is determined incomplete pursuant to § 100.131 and

the applicant does not complete the application within 30 days of a notice of deficiency from the Commission;

(2) The application does not contain all necessary forms, unless the applicant is filing the FCC Form 312—Main Form without any associated schedules pursuant to § 100.101;

(3) The application fails to propose a Licensable System as defined in § 100.3;

(4) The application is filed for a specific type of authority (*i.e.,* NGSO satellite system, GSO satellite system, VTSS) that does not align with the proposed operations;

(5) The application or any associated waiver requests do not comply with the relevant application requirements as described §§ 100.100 through 100.121;

(6) The application is duplicative of a pending application on file with the Commission; or

(7) The application contains, or clearly appears to contain, materially false information.

(c) Applications for space station licenses found defective under paragraph (b)(1) of this section may be accepted for filing if:

(1) The application is accompanied by a request which sets forth the reasons in support of a waiver of (or exception to), in whole or in part, any specific rule, regulation, or requirement with which the application is in conflict; or

(2) The Commission, upon its own motion, waives (or allows an exception to), in whole or in part, any rule, regulation, or requirement.

(d) The Commission will dismiss an application for failure to prosecute or failure to respond substantially within a specified time period to official correspondence or requests for additional information.

(e) An application that is not accompanied by the appropriate application fee in accordance with part 1, subpart G of this chapter will be dismissed by the Commission.

(f) An applicant may request that an application be dismissed or returned without action at any time prior to final action by the Commission but will not be entitled to a refund of filing fees.

(g) Applicants may withdraw an application at any time prior to final action by the Commission. Withdrawal will be without prejudice.

§ 100.136 Consideration of applications.

(a) Applications for a new space station or earth station authorization, or for modification or renewal of an existing station authorization, will be reviewed under the presumption that any requested authorization is in the public interest if the application demonstrates compliance with the Commission's rules, regulations, and policies.

(b) An application will be granted if, upon examination of the application, any pleadings or objections filed, and upon consideration of such other matters as it may officially notice, the Commission finds that the applicant is legally, technically, and otherwise qualified, that the proposed facilities and operations comply with all applicable rules, regulations, and policies, and that grant of the application will serve the public interest, convenience, and necessity.

§ 100.137 Amendments to applications.

(a) *General.* Except as specified in this section, any pending application may be amended prior to final action being taken by the Commission. Amendments will not be placed on public notice under § 100.132 unless the Commission determines that the amendment qualifies as a major amendment under paragraph (b) of this section or that placing the amendment on public notice is otherwise in the public interest.

(b) *Major amendments.* Major amendments submitted pursuant to paragraph (a) of this section establish a new filing date for the part of the application being amended and are subject to the process for initial applications, including completeness, public notice, and dismissal rules. Major amendments may not be filed later than 45 days from the date of filing of associated pending application. Major amendments filed 45 days or later from the initial date of filing will be dismissed pursuant to § 100.135. An amendment will be deemed as a major amendment under the following circumstances:

(1) It would result in an exception under § 100.140;

(2) It requests a waiver of the Commission's rules;

(3) It would increase power, power density, or increase in the out-of-band emissions beyond what is permitted in the Commission's rules;

(4) It would result in modification of the antenna pattern(s) or antenna gain characteristics beyond what is permitted in the Commission's rules;

(5) It would require operations outside of already coordinated ranges or require re-coordination with federal agencies;

(6) It seeks to add frequencies;

(7) It would cause an increased risk of radiofrequency exposure to humans beyond what is permitted pursuant to § 100.270;

(8) For non-blanket licensed earth stations, it proposes a change of more than 10 seconds from the initially requested location; or

(9) If the amendment, or the cumulative effect of the amendment, is determined by the Commission otherwise to be substantial pursuant to section 309 of the Communications Act.

§ 100.138 Application processing timelines.

(a) *Processing timelines for space stations.*

(1) For an application for a space station authorization, no later than 30 days after the application is filed and application fee has been paid as reflected in the FCC's fee filing system, the Commission will place the application on public notice, dismiss the application, or identify for the applicant additional information required to achieve completeness.

(2) The Space Bureau will place an application on public notice as soon as practicable once an application is determined to be complete pursuant to § 100.131.

(3) If full action (*i.e.,* grant, conditional grant, denial, dismissal) has not been taken on the space station application within 60 days following the end of the public notice period, the Commission will inform the applicant and the public of the reason(s) preventing grant with particular note to any and all identified exceptions under § 100.140.

(b) *Processing timelines for earth stations.*

(1) For an earth station application filed pursuant to § 100.120, no later than 30 days after the application is filed and application fees have been received as reflected in the FCC's fee filing system, the Commission will place the application on Public Notice, dismiss the application, or identify for the applicant additional information required to achieve completeness.

(2) The Bureau will place an application on Public Notice as soon as practicable once an application is determined to be complete.

(3) If full action (*i.e.,* grant, conditional grant, denial, dismissal) has not been taken on the earth station application within 60 days following the end of the public notice period, the Commission will inform the applicant and the public of the reason(s) preventing grant with particular note to any and all identified exceptions under § 100.140.

(4) Applications for earth station renewals that affirmatively certify to all certifications described in § 100.120 and do not request a waiver of any of the Commission's rules will be deemed granted 30 days after filing the

application and payment of any application fees unless the Commission notifies the applicant otherwise prior to the expiration of the 30 days.

§ 100.139 Conditional grants.

(a) The Commission may conditionally grant an application under the circumstances described in this section.

(1) *Expedited processing conditional grant.* An application that is not subject to any of the exceptions under § 100.140, that is deemed complete and accepted for filing, placed on public notice and for which no objections, comments, or other petitions are filed will be conditionally granted upon the expiration of the public notice period, subject to the outcome of the Commission's determination on the application and any terms and conditions of grant following completion of review.

(2) *Operations.* A licensee of a conditional grant under this section, issued under § 100.139(a)(1), must operate subject to the following conditions:

(i) Operations authorized by the conditional grant under this section must be on an unprotected, non-interference basis and are limited only to the operations requested and coordinated, if coordination is required, in the underlying application;

(ii) The space station may be launched or integrated into a launch vehicle only with express approval from the Commission;

(iii) Operations under a conditional grant are entirely at the grant holder's own risk and the Commission may revoke the conditional grant at any time. Upon receipt of revocation notice from the Commission, the conditional licensee or grantee must immediately cease all operations, other than those required to maintain control of the apparatus.

(3) *Orbital debris deferral.* The Commission may issue a conditional grant to an applicant if the applicant elects to defer providing the required orbital debris showing, subject to the following requirements:

(i) The applicant must provide all information required by §§ 100.110, 100.111, 100.112, and 100.113, as necessary, except the orbital debris plan and related certifications.

(ii) The applicant must certify that the finished and operational satellite system detailed in the application will comply with all the requirements in § 100.260 and § 100.111, including affirmative certifications.

(iii) The applicant must certify that it will submit a complete orbital debris plan that demonstrates compliance with § 100.260 and supports the affirmative orbital debris certifications in § 100.111 at least 6 months prior to integration of any satellites for which authority is sought with a launch vehicle.

(iv) A licensee conditionally authorized under this section that cannot demonstrate compliance with § 100.260 or provide an orbital debris mitigation plan that supports the affirmative orbital debris certifications in § 100.111 at least 6 months prior to integration with a launch vehicle must file a major modification application pursuant to § 100.143 and receive Commission approval prior to beginning operations.

(A) The filing of a major modification under paragraph (a)(3)(iv) of this section will render the conditional grant null and void.

(B) The major modification will be placed on public notice pursuant to § 100.132.

(4) *Commercial coordination.* If an applicant is coordinating with other operators in certain frequency bands not subject to federal coordination, but the application is otherwise eligible for grant, the Commission may grant the application conditioned upon any portion(s) of the application not subject to ongoing coordination and condition grant of the remaining portion(s) of the application on notice to the Commission of successful coordination, provided that the applicant is coordinating in good faith.

(5) *Withholding conditional grants.* The Commission may, at its discretion and after providing notice to the applicant, withhold conditional grant and instead complete its review of the application without conditionally granting the application prior to completion of review. A conditional grant is not a final determination on the merits of the application and does not convey any rights to the applicant to receive a license under §§ 100.100 through 100.121.

§ 100.140 Exceptions to expedited processing for applications.

(a) For complete applications, exceptions to expedited processing will be identified based on the materials available to the Commission.

(b) Applications for which there are no exceptions identified are presumed eligible for grant in the public interest and generally will be acted upon as soon as practicable while applications with identified exceptions will require additional review to determine if a grant is in the public interest.

(c) Exceptions to expedited processing are as follows:

(1) *Negative certifications.*

(i) If an applicant does not affirmatively certify to all of the certifications required in the application and described in §§ 100.100 through 100.121, that are applicable to the request, the Commission will remove the application from expedited processing.

(ii) The Commission will review materials supplied regarding any negative certifications to determine with respect to that element of the application whether grant is in the public interest.

(2) *Requests for waiver.*

(i) If an application is accompanied by a request for waiver of the Commission's rules the Commission will remove the request from expedited processing unless the waiver request is deemed to be for a purely administrative issue;

(ii) The Commission will review materials supplied regarding the waiver request to determine whether grant of the waiver is in the public interest.

(3) *Foreign ownership.* The Commission will review materials supplied regarding reportable foreign ownership to determine whether grant is in the public interest.

(4) *Processing round.*

(i) If the Commission determines that an application or petition for declaratory ruling to access the U.S. market should be subject to processing round procedures, the Commission will place an application into the appropriate processing round pursuant to the procedures described in § 100.141.

(ii) The Commission will place an application into a processing round if it determines:

(A) the application seeks to operate in a frequency band identified by the Commission as a ''processing round-eligible'' frequency band; and

(B) the applicant is subject to the surety bond requirement pursuant to § 100.148(a); or

(C) If the applicant is not subject to the surety bond requirement but requests inclusion into a processing round for a processing-round eligible frequency band.

(iii) If the Commission grants an authorization for an NGSO satellite system outside of a processing round, then the operations of the NGSO satellite system must be compatible with existing operations in the authorized frequency band(s) and must not materially constrain future space station entrants from using the authorized frequency band(s).

(5) *Spectral constraints.* Based upon review of the application, the Commission determines that the

frequencies that the applicant seeks to use are limited in the use either by rule, by existing users, or by international arrangement.

(6) *Federal coordination.* Applications requesting use of bands shared with federal operations will be removed from expedited processing.

(7) *Market access.* Petitions for declaratory ruling for U.S. market access will be removed from expedited processing and handled pursuant to § 100.114.

(d) The Commission will determine whether a request for authorization is in the public interest despite any identified exceptions, after reviewing materials provided by the applicant and any comments received with respect to each element of a request related to the identified exception.

(e) In addition to applying any other applicable Commission rules, statutory requirements, and public interest considerations, the Commission will determine whether an element of a request related to an identified exception is in the public interest based on whether granting the request would result in a net benefit to the United States.

§ 100.141 Processing rounds for NGSO satellite system applications.

(a) The Commission will annually determine specific frequency bands that will be subject to processing rounds. The Commission will announce the list of frequency bands automatically subject to processing rounds via public notice.

(b) Band-specific processing rounds will open on January 1st at 12:00 a.m. Eastern Time of every year and will close the processing round at 11:59 p.m. Eastern Time on October 31st of the same year.

(1) All applications that are granted in the same year that meet the criteria of § 100.140(c)(4)(ii) will automatically be considered part of the band-specific processing round for that year.

(2) FSS system licensees authorized in the same processing round must share spectrum in accordance with § 100.241(c).

(3) If two or more non-FSS system licensees are authorized in the same processing round, they will be required to coordinate on an equal basis to share the spectrum among all operators licensed in the same processing round. A licensee authorized in an earlier processing round may not prevent licensees granted in later processing rounds from accessing spectrum.

(4) Applications granted in the same processing round will have equal priority that will sunset ten years after the close of the processing round.

(5) Applications granted in subsequent processing rounds must coordinate with and protect already granted operations for a period of ten years from the date of grant.

(c) If an NGSO satellite system operator is licensed in a frequency band prior to the first processing round for that frequency band, the operator must comply with any sharing requirements later applied to licensees authorized in the first processing round in that band.

§ 100.142 First-come, first-served application processing for GSO systems.

Applications processed on a first-come, first-served basis will be placed in a queue and considered in the order in which they are filed. Such applications will be granted only if the proposed operation will not cause harmful interference to any previously authorized operations, and the application otherwise meets the criteria for grant.

§ 100.143 Modifications.

(a) *General.* A licensee may request to modify any portion of a license subject to the requirements described in this section and any conditions placed on the license.

(b) *Modifications not requiring notification.* A licensee may modify system operations without notifying the Commission unless the change is a major or minor modification pursuant to paragraphs (c) and (d) of this section.

(c) *Major modifications.*

(1) Major modification requests will be considered as initial requests for licenses under this paragraph.

(2) A major modification is any modification that would:

(i) Result in an exception under § 100.140;

(ii) Require a waiver of the Commission's rules;

(iii) Increase power, power density, or increase in the out-of-band emissions beyond what is permitted in the Commission's rules or limits placed on a license;

(iv) Modify the antenna pattern(s) or antenna gain characteristics or expand the coverage area beyond what is permitted under the licensee's authorization;

(v) Require operations outside of already coordinated ranges or require re-coordination with federal agencies;

(vi) Add frequencies;

(vii) Increase any orbital debris risk beyond that permitted in the licensee's authorization;

(viii) Cause an increased risk of radiofrequency exposure to humans beyond what is permitted pursuant to § 100.270; or

(ix) Remove or change conditions on a license.

(3) A licensee granted a conditional authorization pursuant to § 100.139(a)(2) that is unable to certify in the affirmative to all orbital debris certification requirements at the time of submitting orbital debris information must file a major modification pursuant to this section.

(4) Major modifications require prior authorization from the Commission before a licensee may begin any operations as proposed in the modification.

(5) Applications for major modifications must comply with the application and processing requirements described in §§ 100.100 through 100.121.

(6) Applications for major modifications will be placed on public notice pursuant to § 100.132.

(d) *Minor modifications.*

(1) *Notification required within 30 days after modification.*

(i) A licensee may move and locate satellites across already authorized orbital shells and altitudes but must submit a notification via ICFS no later than 30 days after the change.

(ii) Satellite operators may commence operations in inclined orbit mode without obtaining prior Commission authorization provided that the Commission is notified no later than 30 days after the last north-south station keeping maneuver. The notification must include:

(A) The operator's name;

(B) The date of commencement of inclined orbit operation;

(C) The initial inclination;

(D) The rate of change in inclination per year; and

(E) The expected end-of-life of the satellite accounting for inclined orbit operation, and the maneuvers specified under § 100.260 of the Commission's rules for end-of-life disposal.

(2) *Notification required prior to modification.*

(i) Space station operators may change an antenna, sensor, or microelectronics upon 30 days prior notification to the Commission, if the changes do not cause a change that would result in a major modification.

(ii) An earth station operator may add a point of communication upon seven days prior notification to the Commission.

(A) An earth station applicant may begin operations with the added point of communication under this rule part after filing the FCC Form 312—Main Form and Schedule B in ICFS in

accordance with the applicable provisions of part 1, subpart Y of this chapter and paying the applicable filing fee, subject to the following provisions:

(1) The operator has permission from the satellite operator to communicate with the satellite system;

(2) The earth station operator has completed frequency coordination with other potentially affected licensees as required by Commission rules;

(3) Adding the point of communication does not result in a change classified as a major modification; and

(4) The added point of communication has either an FCC space station license or U.S. market access.

(B) This notification shall constitute a conditional authorization. The conditional authorization will automatically expire and the operator must terminate operations immediately using the new point of communication if, within 15 days of paying the filing fee, the Commission notifies the earth station operator that the added point of communication does not comply with requirements of this paragraph. If the Commission does not provide the foregoing notice within the prescribed period, the conditional authorization will automatically expire and the license will be modified in ICFS to add the point of communication as of the date of payment of the filing fee. Nothing in this rule part prohibits the Commission from pursuing enforcement action after the lapse of the 15-day period for noncompliant operation, including noncompliant operation occurring during the period of conditional authorization.

(iii) A space station licensee may conduct telemetry, tracking and command functions necessary to relocate a U.S.-licensed GSO space station to, and maintain the space station at, a different orbital location on the geostationary arc, without prior authorization, but must provide seven days prior notice to the Commission. The notice must include the following information:

(A) A notification of the date on which the space station is planned to depart from its current orbital location, the planned duration of the drift and the planned date of arrival at the new location.

(B) A certification that the licensee will limit operations of the space station to tracking, telemetry, and command functions.

(C) A description of the frequencies and radiocommunication services to be provided during and after the space station relocation.

(D) A certification that the space station will be relocated to a position within ±0.15° of an orbital location for which a filing of the administration of the United States of America has been recorded in the Master International Frequency Register of the International Telecommunications Union (ITU).

(E) A certification that the space station has coordinated all operations at the relocated site location under the ITU filing of the administration of the United States of America at that location.

(F) A certification that that the space station will conduct all operations after the relocation within the technical parameters coordinated under the ITU filing of the administration of the United States of America at that location.

(G) A certification that all operations, including any non-telemetry, tracking and command operations, during and after the relocation will be conducted on an unprotected, non-harmful interference basis and that all operations will be coordinated with any existing geostationary space stations to ensure that no harmful interference results from operations during or after the relocation.

(H) A certification that the licensee will file an application to modify the license of the space station to reflect operations at the new location within 60 days.

(I) A certification that the relocation will not result in a lapse of service for any current customer and provides a list of any frequency bands that will not be in use by the licensee at the current orbital location after the relocation of the space station.

(J) A certification that the space station will not be used to bring into use, or maintain the use of, any ITU filing of an administration other than the United States of America.

(K) A certification that:

(1) The licensee has assessed and limited the probability of the satellite(s) becoming a source of debris as a result of collisions with large debris or other operational satellites during or after the relocation;

(2) The proposed station-keeping volume of the space station(s) following relocation will not overlap a station-keeping volume reasonably expected to be occupied by any other space station, including those authorized by the Commission, applied for and pending before the Commission, or otherwise the subject of an ITU filing and either in orbit or progressing towards launch; and

(3) The relocation will not result in any changes to the previously approved orbital debris mitigation plans for the satellite(s), including the end-of-life disposal plans for the satellite(s) and the quantity of fuel that will be reserved for disposal maneuvers.

(L) A certification that the licensee acknowledges that any action taken or expense incurred as a result of the relocation is solely at the licensee's own risk and is without prejudice to any potential enforcement action by the Commission.

(3) Minor modifications are not subject to the public notice requirements in § 100.132, unless the Commission determines that the minor modification, or effect of the minor modification, would qualify as or amount to a major modification under § 100.143(c)(2).

§ 100.144 Special temporary authorizations.

(a) In circumstances requiring immediate or temporary use of facilities, a request may be made for special temporary authority (STA) to install and/or operate new or modified equipment or for modified operations.

(b) A request for STA must be filed in the manner and meeting the requirements of the applicable license type as described in §§ 100.100 through 100.121. Alternatively, a request for STA may instead reference a pending license application if the requested STA is for identical operations as requested in the license application.

(c) No request for temporary authority will be considered unless it is received by the Commission at least 3 business days prior to the date of proposed operation, pursuant to § 1.4 of this chapter. A request received within less than 3 business days may be accepted only upon due showing of extraordinary reasons for the delay in submitting the request which could not have been reasonably foreseen by the applicant.

(d) Other than for those services expressly enumerated in § 309(b) of the Communications Act, the Commission may grant a temporary authorization pursuant to the following:

(1) The Commission may grant a temporary authorization only if there are extraordinary circumstances requiring temporary operations in the public interest and that delay in the institution of these temporary operations would seriously prejudice the public interest.

(2) If placed on public notice, subject to the 7-day public notice period pursuant to § 100.132, the Commission may grant an STA for up to 180 days that may not be renewed or extended. Temporary authorization holders authorized under this paragraph may file for a new STA for up to another 180

days no sooner than 60 days and no later than 30 days before the end of the prior grant of special temporary authority.

(3) If not placed on public notice, the Commission may grant an STA for a period of up to 60 days.

(4) An STA for an earth station not placed on public notice and not subject to federal coordination requirements will be deemed granted upon filing and paying of the application fee and notice of the grant will appear in the actions taken public notice.

(5) An STA holder authorized pursuant to paragraph (d)(3) of this section cannot file for subsequent STAs without going on public notice pursuant to paragraph (d)(2) of this section.

(e) For operations expressly enumerated in section 309(b) of the Communications Act, the Commission may grant an STA pursuant to the following:

(1) The Commission may grant a temporary authorization only upon a finding that there are extraordinary circumstances requiring temporary operations in the public interest and that delay in the institution of these temporary operations would seriously prejudice the public interest. Convenience to the applicant, such as marketing considerations or meeting scheduled customer in-service dates, will not be deemed sufficient for this purpose.

(2) The Commission may grant a temporary authorization for a period not to exceed 180 days, with additional periods not exceeding 180 days, if the Commission has placed the STA request on public notice.

(3) The Commission may grant a temporary authorization for a period not to exceed 60 days, if the STA request has not been placed on public notice, and the applicant plans to file a request for regular authority for the service.

(4) The Commission may grant a temporary authorization for a period not to exceed 30 days, if the STA request has not been placed on public notice, and an application for regular authority is not contemplated.

(f) Temporary authorizations granted pursuant to this subsection are not of a continuing nature or subject to § 1.62 of this chapter.

(g) All operations authorized by and pursuant to this rule part are on a non-interference, unprotected basis and cannot be modified.

(h) A special temporary authorization shall automatically terminate upon the expiration date specified therein, or upon failure of the grantee to comply with any terms or conditions in the authorization.

§ 100.145 Coordination requirements with Federal government users.

The Commission will coordinate with the National Telecommunications Information Administration regarding the operations of any application for license or market access requesting to operate in a shared government/non-government frequency band. The Commission will use its procedures for liaison with NTIA to reach agreement with respect to achieving compatible operations between federal government users under the jurisdiction of NTIA and commercial applicants of the Commission in shared government/non-government frequency bands through the frequency assignment and coordination practices established by NTIA and the Interdepartment Radio Advisory Committee (IRAC) or any successor organization.

§ 100.146 Assignments and transfers of control.

(a) *Prior approval required.* An application for Commission authorization must be filed, and granted, prior to the transfer, assignment, or disposal of a construction permit or station license, or accompanying rights, under this part, whether voluntarily or involuntarily, directly or indirectly, or by transfer of control of any entity, unless otherwise provided in this section.

(b) *Transfers of control.* Transfers of control requiring Commission approval, for purposes of this section, include all transactions that:

(1) Change the party controlling the affairs, operations, or management of the licensee; or

(2) Effect any change in a controlling interest in the ownership of the licensee, including changes in legal or equitable ownership.

(c) *Pro forma transactions.*

(1) *Pro forma transactions involving a telecommunications carrier.* No prior Commission approval is required for a non-substantial (pro forma) transfer of control or assignment of license involving a telecommunications carrier as defined in 47 U.S.C. 153(51). The pro forma transferee or assignee must file a notification with the Commission no later than 30 days after the transfer or assignment is complete and include a certification that the transfer of control or assignment was pro forma and, together with all previous pro forma transactions, did not result in a change of the actual controlling party.

(2) *Pro forma transactions not involving a telecommunications carrier.* An application for Commission approval of a non-substantial (pro forma) transfer of control or assignment of a license not involving a telecommunications carrier, as defined in 47 U.S.C. 153(51), will be deemed granted one business day after filing, provided that:

(i) Approval does not require a waiver of, or declaratory ruling pertaining to, any applicable Commission rule; and

(ii) The application includes a certification that the proposed transfer of control or assignment is pro forma and that, together with all previous pro forma transactions, it would not result in a change in the actual controlling party.

(d) *Market access.*

(1) A non-U.S.-licensed satellite operator that acquires control of a non-U.S.-licensed space station that is permitted to serve the United States must notify the Commission within 30 days after consummation of the transaction.

(2) If the transferee or assignee is not licensed by, or seeking a license from a country that is a WTO member for services covered under the WTO BTA, the non-U.S.-licensed satellite operator must provide the showings under the market access application procedures in § 100.114.

(3) A non-U.S.-licensed satellite that is transferred to new owners may continue to provide service in the United States unless and until the Commission determines otherwise.

(e) *Receive-only earth station registrations.* No prior Commission approval is required for the assignment or transfer of control of a receive-only earth station registration. For all such transactions other than non-substantial (pro forma) transfers of control, the transferee or assignee must file a notification with the Commission no later than 30 days after the assignment or transfer of control is completed. No notification is required for a pro forma transfer of control of a receive-only earth station registrant.

(f) *Involuntary assignments or transfers of control.* Applications for assignment or transfer of control on an involuntary basis (*e.g.,* by bankruptcy, death, or legal disability) must be filed within ten days of the event causing the assignment or transfer of control.

(g) *Applications with multiple authorizations.* A single application or notification may be filed to cover a group of station authorizations held by the same entity, provided the authorizations are in the same radio service for the same class of facility and would be transferred or assigned to a single transferee or assignee.

(h) *Consummation.* Assignments and transfers of control shall be completed within 180 days from the date of

authorization. Within 30 days of consummation, the Commission shall be notified via ICFS of the date of consummation and the file numbers of the applications involved in the transaction.

(i) *Good faith intent to construct.* The Commission retains discretion in reviewing assignments and transfers of control of space station and earth station licenses to determine whether the initial license was obtained in good faith with the intent to construct the licensed system.

§ 100.147 Milestones for NGSO and Multi-Orbit systems.

(a) Recipients of an initial authorization for an NGSO satellite system or grant of U.S. market access, other than a SDARS space station license or VTSS authorization, are required to launch, deploy, and operate at least one satellite in accordance with the space station authorization for a continuous period of ninety (90) days and no later than seven years after the grant of the authorization, unless a different schedule is established by Title 47, Chapter 1 or by the Commission.

(b) For recipients of an initial authorization for an NGSO satellite system meeting the requirements of paragraphs (a) and (c)(1) of this section, other than a SDARS space station license or VTSS authorization, the following milestone requirements apply:

(1) *Preliminary milestone.* The recipient of an initial authorization for an NGSO satellite system or grant of U.S. market access must launch ten percent of the maximum number of satellites authorized for service, place them in their orbits, and operate them in accordance with the station authorization no later than nine years after grant of the authorization unless a different schedule is established by Title 47, Chapter 1 or by the Commission.

(2) *Interim milestone.* The recipient of an initial authorization for an NGSO satellite system or grant of U.S. market access that satisfies the requirement in paragraph (b)(1) of this section must launch 50% of the maximum number of satellites authorized for service, place them in their orbits, and operate them in accordance with the station authorization no later than 12 years after the grant of the authorization, unless a different schedule is established by Title 47, Chapter 1 or by the Commission.

(3) *Final milestone.* The recipient of an initial authorization for an NGSO satellite system or grant of U.S. market access that satisfies the requirements in paragraphs (b)(1) and (b)(2) of this section must launch the remaining satellites necessary to complete its authorized NGSO satellite system, or grant of U.S. market access, place them in their assigned orbits, and operate each of them in accordance with the station authorization no later than 14 years after the grant of the authorization.

(c) A licensee subject to the milestone requirements in paragraphs (a) and (b) of this section must either demonstrate compliance with the applicable milestone or notify the Commission in writing that the milestone was not met, within 15 days of the specified deadline.

(1) Compliance with paragraphs (a) of this section may be demonstrated by certifying that a satellite has been launched, placed in an authorized orbital location or non-geostationary orbit(s), and that in-orbit operation of the satellite has been tested, maintained, and found to be consistent with the terms of the authorization for a continuous period of 90 days.

(2) Compliance with the milestone requirements in paragraph (b) of this section may be demonstrated by certifying that the satellites in question have been launched and placed in the authorized orbital location or non-geostationary orbit(s) and that in-orbit operation of the satellites have been tested and found to be consistent with the terms of the authorization.

(d) A space station authorization shall be automatically terminated in whole or in part without further notice to the licensee if the licensee fails to meet an applicable milestone required by paragraph (a) of this section or any other milestone imposed on a NGSO satellite system license as a condition to the license authorization.

(1) If a licensee fails to meet the requirements in paragraphs (a) and (c)(1) of this section, the station authorization shall be automatically terminated in whole.

(2) If at least one authorized satellite is functional in an authorized orbit by the milestone date specified in paragraph (a) of this section or imposed as a condition to the license authorization, but fails to meet the milestone requirements in paragraphs (b) or (c)(2) of this section or by a condition of authorization, the space station authorization shall be terminated in part, resulting in the termination of authority to launch and operate additional satellites beyond those already in operation.

(3) After termination of a space station authorization under paragraph (d)(2) of this section, licensees may continue to launch and operate technically identical replacements, such that the total number of satellites operating at any one time is not greater than the number of functional satellites in an authorized orbit at the time of the applicable milestone in paragraph (b) of this section or as imposed as a condition to the license authorization.

(e) Licensees of multi-orbit systems must meet the applicable requirements of this section for each type of satellite in its system.

(f) In cases where the Commission grants more than one space station authorization for the same system in different stages, the milestone schedule as applied to the first authorization will be applied to the entire satellite system.

§ 100.148 Surety bonds.

(a) For all recipients of a license to operate an NGSO satellite system under §§ 100.110 through 100.113 and authorized to operate 200 or more satellites, excluding replacements, the licensee must post a surety bond within 30 days from the date of the license grant.

(b) An NGSO licensee authorized pursuant to § 100.141 must post a bond in accordance with paragraph (d) of this section within 30 days from the date of the license grant, regardless of the number of authorized satellites.

(c) Failure to post a required bond within 30 days will automatically render the license null and void.

(d) An NGSO licensee subject to paragraph (a) or (b) of this section must have on file with the Commission a surety bond requiring payment in the event of a default as defined in paragraph (g) of this section, in an amount, at a minimum, determined by the applicable formula:

(1) An NGSO licensee with 200 or more authorized satellites subject to paragraph (a) of this section must have a surety bond on file in an amount determined by the following formula, with the resulting dollar amount rounded to the nearest dollar: $B = \$10{,}000 * ((0.9 * A) - D)$, where B is the bond amount, D is the number of satellites deployed, and A is the number of satellites authorized, excluding replacements.

(2) An NGSO licensee authorized pursuant to § 100.141 with fewer than 200 satellites subject to paragraph (b) of this section must have a surety bond on file in an amount determined by the following formula, with the resulting dollar amount rounded to the nearest dollar: $B = \$1{,}800{,}000 * (1 - D/(0.9 * A))$, where B is the bond amount, D is the number of satellites deployed, and A is the number of satellites authorized, excluding replacements.

(e) A licensee may reduce the amount of the surety bond required, as determined by paragraph (d)(1) or (d)(2)

of this section, upon written notification to the Commission providing an update on the total number of deployed satellites (D) in the authorized system.

(f) A licensee will be relieved of the surety bond obligation under paragraph (a) or (b) of this section once the amount of the surety bond, as calculated under paragraph (d)(1) or (d)(2) of this section, is zero dollars.

(g) A licensee will be in default of its surety bond obligation filed pursuant to paragraph (a) or (b) of this section if it surrenders the license before the amount of the bond required, as calculated under paragraph (d)(1) or (d)(2) of this section, is zero dollars.

(h) The licensee must use a surety company deemed acceptable within the meaning of 31 U.S.C. 9304 *et seq.* (*See, e.g.,* Department of Treasury Fiscal Service, Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and As Acceptable Reinsurance Companies, 57 FR 29356, July 1, 1992.) The bond must name the U.S. Treasury as beneficiary in the event of the licensee's default. The licensee must provide the Commission with a copy of the performance bond, including all details and conditions.

§ 100.149 License and market access terms, extensions and renewals, NGSO replacements.

(a) *General.* License and market access grant terms shall be as set forth in this section, unless a shorter term is specified by the Commission, in its discretion, or requested by the applicant.

(b) *GSO satellite systems.*

(1) *License terms.* Licenses and market access grants for GSO satellite system authorizations will be issued for a period of 20 years beginning on the date of grant of the license, except as follows:

(i) *Broadcast and SDARS.* Licenses and market access grants for DBS space stations and 17/24 GHz BSS space stations licensed as broadcast facilities, and for SDARS space stations and terrestrial repeaters, will be issued for a period of eight years.

(ii) *Non-broadcast DBS.* Licenses for DBS space stations not licensed as broadcast facilities will be issued for a period of 10 years.

(2) *Extensions.* For GSO satellite systems issued an authorization initial license or market access term for a period of twenty years, licensees may apply for a major modification to extend the license term in increments of five years or less. GSO satellite system licensees seeking a license or market access term extension through a license or market access modification application must provide a statement that includes the following:

(i) The requested duration of the license or market access extension;

(ii) The estimated total remaining space station lifetime;

(iii) A description of any single points of failure or other malfunctions, defects, or anomalies during the satellite's operation that could affect its ability to conduct end-of-life procedures as planned, and an assessment of the associated risk;

(iv) A certification that remaining fuel reserves are adequate to complete de-orbit as planned; and

(v) A certification that telemetry, tracking, and command links are fully functional.

(c) *NGSO satellite systems and VTSS.*

(1) *License terms.* Licenses and market access grants for NGSO satellite systems and VTSS authorizations will be issued for a period of 20 years beginning on the date of grant of the license.

(2) *Renewals.* Applications for renewals of authorizations for NGSO satellite systems or VTSS authorizations shall be filed no earlier than 12 months, and no later than 30 days, before the expiration date of the license.

(3) *NGSO replacement satellites.* NGSO satellite system licensees or recipients of market access grants that include a blanket license may replace satellites in their constellation with satellites up to the number of satellites authorized, without application or notification to the Commission, provided the replacement does not result in a modification under § 100.143, unless otherwise specified in the authorization.

(d) *Earth stations.*

(1) *Transmitting stations.* Licenses for transmitting earth stations will be issued for a period of 20 years beginning on the date of grant of the license. Earth station site registrations for Immovable earth stations will be valid until the date identified in the underlying Nationwide, Non-Site License grant.

(2) *Receive-only stations.* Licenses and registrations for receive-only earth stations will be issued for a period of 20 years from the date on which the application was filed.

(3) *Renewals.* Applications for renewals of earth station licenses or receive-only registrations must be submitted on FCC Form 312R no earlier than 12 months, and no later than 30 days, before the expiration date of the license. Immovable Earth Stations registered pursuant to § 100.120 will be renewed in conjunction with renewal of the underlying Nationwide, Non-Site License authorization.

Subpart C—Operational and Frequency Specific Requirements

§ 100.200 Reporting requirements.

(a) *Point of contact.*

(1) *Space stations.* If, at any time, a space station licensee's or market access recipient's point of contact information on file changes, the licensee or market access recipient must file the updated information within 48 hours of the change.

(2) *Earth stations.* The licensee of any transmitting earth station licensed under this part must update the contact information provided in the most recent license application for the station within 10 days of any change therein. The updated information must be filed in the station's current authorization file.

(b) *Space station control arrangements.* The operator of any space station licensed by the Commission or granted U.S. market access must file the following information with the Commission in ICFS prior to commencing operation with the space station, or, in the case of a non-U.S.-licensed space station, prior to commencing operation with U.S. earth stations.

(1) The call signs of any telemetry, tracking, and command earth station(s) communicating with the space station from any site in the United States.

(2) The location, by city and country, of any telemetry, tracking, and command earth station that communicates with the space station from any point outside the United States.

(3) Alternatively, instead of listing the call signs and/or locations of earth stations currently used for telemetry, tracking, and command, the space station operator may provide 24/7 contact information for a satellite control center and a list of the call signs of any U.S. earth stations, and the locations of any non-U.S. earth stations, that are used or may be used for telemetry, tracking, and command communication with the space station(s) in question.

(4) If call sign or location information provided pursuant to this paragraph becomes invalid due to a change of circumstances, the space station operator must file updated information in ICFS within 30 days, except with respect to changes less than 30 days in duration, for which no update is necessary.

(c) *Ephemeris data.*

(1) Space station licensees and market access recipients must submit accurate and timely ephemeris data for all spacecraft in their authorized system(s),

including the propagated ephemeris data and covariance for any planned maneuvers, to the following:

(i) The 18th Space Control Squadron or a successor entity as identified by the Commission; or

(ii) One or more U.S. space situational awareness systems which have been identified by the Commission as satisfying this requirement.

(2) Space station operators are responsible for ensuring the quality of data submitted to space situational awareness systems in accordance with the requirements of such systems.

(d) *Space system safety reports.* Beginning after the launch of the first satellite in an NGSO satellite system, space station operators must provide a semi-annual report, by January 1 and July 1 each year, covering the preceding six-month period, respectively, from June 1 to November 30 and December 1 to May 31, that includes the following information:

(1) The number of conjunction events identified for satellites in the NGSO satellite system during the reporting period, including the number of events that resulted in an action such as maneuver or coordination with another operator;

(2) The number of satellites that were removed from operation or screened from further deployment; and

(3) The number of satellites that re-entered the atmosphere.

§ 100.201 Licensee operations.

Licensees under this part may operate within the boundaries of their authorizations, the rules in this part, and any other relevant provision of this chapter, the Communications Act of 1934, as amended, or other statute, subject to any Commission action and any conditions or constraints placed on the license or licensee in any such grant of authority.

§ 100.202 Duties regarding space communications transmissions.

(a) *Unauthorized transmissions.* No person shall:

(1) Transmit to a space station unless the specific transmission is first authorized by the satellite network control center;

(2) Conduct transmissions over a space station unless the operator is authorized to transmit at that time by the space station licensee;

(3) Transmit communications to or from earth stations in the United States unless such communications are authorized under a service contract with the holder of a pertinent FCC earth station license or under a service contract with another party with authority for such operation delegated by such a licensee; or

(4) Transmit in any manner that causes harmful interference to the authorized transmission of another licensee unless that licensee is authorized on an unprotected basis.

(b) *Cessation of emissions.* Space stations and earth stations shall be made capable of ceasing radio emissions by the use of appropriate devices (battery life, timing devices, ground command, etc.) that will ensure definite cessation of emissions.

(c) *Operations at lowest level necessary to close the link.* Each earth and space station transmission shall be conducted at the lowest power level necessary to close the link for the required signal quality as indicated in the application and further amended by any coordination agreement(s).

(d) *Unauthorized access.* Licensees shall ensure that the licensed facilities are properly secured against unauthorized access or use. For space station operations, this includes securing satellite commands against unauthorized access and use.

(e) *ITU filings.* Space station licensees must operate in accordance with any filings submitted to the ITU by the Commission on behalf of the licensee, unless otherwise conditioned by the Commission. No protection from interference caused by radio stations authorized by other Administrations is guaranteed unless ITU procedures are timely completed or, with respect to individual Administrations, coordination agreements are successfully completed. A license for which such procedures have not been completed may be subject to additional terms and conditions required for coordination of the frequency assignments with other Administrations.

(f) *Coordination agreements.* Any coordination agreements, both domestic and international, concerning specific frequency usage constraints, including non-use of any particular frequencies within the frequency bands listed in the station authorization, are considered to be conditions of the station authorization.

(g) *Sharing of operational information and resolution of interference.*

(1) Space station licensees are responsible for maintaining complete and accurate technical details of current and planned transmissions over their satellites and shall require that authorized users of transponders on their satellites, whether by tariff or contract, provide any necessary technical information in this regard including that required by § 100.240.

(2) Based on this information, space station licensees shall exchange among themselves general technical information concerning current and planned transmission parameters as needed to identify and promptly resolve any potential cases of harmful interference between their satellite systems.

(3) Space station licensees shall provide upon request by the Commission, and by earth station licensees authorized to transmit on their satellites, relevant information needed to avoid harmful interference to other users, including the polarization angles for proper illumination of a given transponder.

(4) Where the operations of a space station or earth station are suspected of causing harmful interference, the station operator shall take reasonable measures to determine whether its operations are the source of interference, and if they are, shall take all measures necessary to resolve the interference.

(5) A record shall be maintained by the space station licensee and/or earth station licensee of all harmful interference incidents and their resolution. These records shall be made available to the Commission upon request.

(6) All licensees are required to cooperate fully with the Commission in any investigation of interference problems.

(h) *Station identification.* The requirement to transmit station identification is waived for all radio stations licensed under this part with the exception of earth stations subject to the requirements of § 100.233.

§ 100.203 Telemetry, tracking, and command.

(a) Telemetry, tracking, and command signals may be transmitted in frequencies within the assigned bands that are not at a band edge only if the transmissions cause no greater interference and require no greater protection from harmful interference than the communications traffic on the satellite network or, for GSO space stations, have been coordinated with operators of authorized co-frequency space stations at orbital locations within six degrees of the assigned orbital location.

(b) Frequencies, polarization, and coding of telemetry, tracking, and command transmissions must be selected to minimize interference into other satellite networks.

§ 100.204 Default service rules.

(a) *Scope.* The technical rules in this section only apply to licenses to operate

a satellite service in a frequency band granted after a domestic frequency allocation has been adopted for that band, but before any frequency band-specific rules have been adopted for that frequency band.

(b) *NGSO satellite systems.* For all NGSO satellite system licenses authorizing operations in a frequency band for which the Commission has not adopted frequency band-specific service rules at the time the license is granted, the licensee will be required to comply with the applicable technical requirements of the Commission's rules.

(c) *GSO satellite systems.* For all GSO satellite system licenses authorizing operations in a frequency band for which the Commission has not adopted frequency band-specific service rules at the time the license is granted, the licensee will be required to comply with the applicable technical requirements in the Commission's rules.

(d) *Earth stations.*

(1) Earth station licensees authorized to operate with one or more space stations described in paragraph (c)(1) of this section shall comply with the earth station antenna performance verification requirements in § 100.279.

(2) Earth station licensees with a gain equivalent or higher than the gain of a 1.2 meter antenna operating in the 14.0–14.5 GHz band, authorized to operate with one or more space stations described in paragraph (c)(1) of this section in frequency bands greater than 14.5 GHz shall be required to comply with the antenna input power density requirements set forth in § 100.279.

(3) Mobile earth station licensees authorized to operate with one or more space stations must comply with the requirements in § 100.282. In addition, earth station licensees authorized to operate with one or more space stations in frequency bands shared with terrestrial wireless services shall comply with the requirements in § 100.276.

(e) *Later-adopted service rules.* In the event that the Commission adopts frequency band-specific service rules for a particular frequency band after it has granted one or more space station or earth station licenses for operations in that frequency band, those licensees will be required to come into compliance with the frequency band-specific service rules within 30 days of the effective date of those rules, unless otherwise specified by either the Commission or Space Bureau.

General Space Station Rules

§ 100.210 Orbit raising maneuvers.

A space station authorized to operate under this part is also authorized to transmit in connection with short-term, transitory maneuvers directly related to post-launch, orbit-raising or orbit-lowering maneuvers, provided that the following conditions are met:

(a) Authority is limited to those tracking, telemetry, and control frequencies in which the space station is authorized to operate once it reaches its assigned orbital location;

(b) The space station operator will coordinate in good faith on an operator-to-operator basis with any potentially affected satellite networks; and

(c) The space station licensee is required to accept interference from any lawfully operating satellite network or radio communication system.

§ 100.211 Frequency use generally.

(a) *Frequency-use restrictions.* In addition to the frequency-use restrictions set forth in § 2.106 of this chapter, the following restrictions apply:

(1) In the 27.5–28.35 GHz band, the FSS (Earth-to-space) is secondary to the Upper Microwave Flexible Use Service authorized pursuant to part 30 of this chapter, except for FSS operations associated with earth stations authorized pursuant to § 100.281.

(2) Use of the 37.5–40 GHz band by the FSS (space-to-Earth) is limited to individually licensed earth stations. Earth stations in this band must not be ubiquitously deployed and must not be used to serve individual consumers.

(3) The U.S. non-Federal Table of Frequency Allocations, in § 2.106 of this chapter, is applicable between Commission space station licensees relying on a U.S. ITU filing and transmitting to or receiving from anywhere on Earth, including airborne earth stations, in the 17.3–20.2 GHz or 27.5–30.0 GHz bands.

(b) *Frequency tolerance, space stations.* The carrier frequency of each space station transmitter authorized in these services shall be maintained within 0.002% of the reference frequency.

(c) *Cross-polarization isolation.* Space station antennas operating in the DBS or operating in the FSS for reception of feeder links for DBS must be designed to provide a cross-polarization isolation such that the ratio of the on-axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency band is at least 27 dB within the primary coverage area.

(d) *Full frequency re-use.* All space stations in the FSS operating in any portion of the 3600–4200 MHz, 5091–5250 MHz, 5850–7025 MHz, 10.7–12.7 GHz, 12.75–13.25 GHz, 13.75–14.5 GHz, 15.43–15.63 GHz, 17.3–17.8 GHz, 18.3–20.2 GHz, 24.75–25.25 GHz, or 27.5–30.0 GHz bands, including feeder links for other space services, and in the BSS in the 17.3–17.8 GHz band (space-to-Earth), shall employ state-of-the-art full frequency reuse, either through the use of orthogonal polarizations within the same beam and/or the use of spatially independent beams. This requirement does not apply to telemetry, tracking, and command operation.

§ 100.212 Power flux-density and in-band field strength limits.

(a) *SCS.* The aggregate field strength at the earth's surface produced by all visible beams and satellites at and beyond the service boundary of each satellite constellation providing SCS service as they move over any given point or area in bands authorized by NG33A in the United States Table of Frequency Allocations must not exceed:

(1) 40 dBμV/m for the 600 MHz, 700 MHz, and 800 MHz bands; and

(2) 47 dBμV/m for the AWS and PCS bands; and

(3) Licensees must comply with all applicable provisions and requirements of treaties and other international agreements between the United States Government and the governments of other countries, including Canada and Mexico. Absent specific international agreements regarding SCS, licensees must comply with the limits provided in this section.

(b) *2496–2500 MHz—NGSO.* In the 2496–2500 MHz band, the power flux-density at the Earth's surface produced by emissions from non-geostationary space stations for all conditions and all methods of modulation shall not exceed the following values (these values are obtained under assumed free-space propagation conditions):

(1) −144 dB (W/m^2) in 4 kHz for all angles of arrival between 0 and 5 degrees above the horizontal plane; −144 dB (W/m^2) + 0.65(δ − 5) in 4 kHz for all angles of arrival between 5 and 25 degrees above the horizontal plane;

(2) −131 dB (W/m^2) in 4 kHz and for all angles of arrival between 25 and 90 degrees above the horizontal plane;

(3) −126 dB (W/m^2) in 1 MHz for all angles of arrival between 0 and 5 degrees above the horizontal plane; −126 dB (W/m^2) + 0.65(δ − 5) in 1 MHz for all angles of arrival between 5 and 25 degrees above the horizontal plane; and

(4) −113 dB (W/m^2) in 1 MHz and for all angles of arrival between 25 and 90 degrees above the horizontal plane.

(c) *3650–4200 MHz.* In the 3650–4200 MHz band, the power flux density at the Earth's surface produced by emissions from a space station for all conditions

and for all method/s of modulation shall not exceed the following values:

(1) −152 dB(W/m2) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane.

(2) −152 + (δ−5)/2 dB(W/m2) in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane.

(3) −142 dB(W/m2) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plan.

(4) These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

(d) *6700–7075 MHz.* The power-flux density at the Earth's surface produced by emissions from a space station in the FSS (space-to-Earth), for all conditions and for all methods of modulation, shall not exceed the limits given in Table N. These limits relate to the power flux-density which would be obtained under assumed free-space conditions.

TABLE 1—LIMITS OF POWER-FLUX DENSITY FROM SPACE STATIONS IN THE BAND 6700–7075 MHZ

Frequency band	Limit in dB (W/m²) for angle of arrival (δ) above the horizontal plane			Reference bandwidth
	0°–5°	5°–25°	25°–90°	
6700–6825 MHz	−137	−137 + 0.5(δ−5)	−127	1 MHz.
6825–7075 MHz	−154 and −134	−154 + 0.5(δ−5) and −134 + 0.5(δ−5)	−144 and −124	4 kHz. 1 MHz.

(e) *10.7–11.7 GHz.* In the 10.95–11.2 and 11.45–11.7 GHz bands for GSO FSS space stations and 10.7–11.7 GHz band for NGSO FSS space stations, the power flux-density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the lower of the following values:

(1) −150 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; −150 + (δ−5)/2 dB(W/m²) in any 4 kHz band for angles of arrival (δ) (in degrees) between 5 and 25 degrees above the horizontal plane; and −140 dB(W/m²) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane; or

(2) −126 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane; −126 + (δ−5)/2 dB(W/m²) in any 1 MHz band for angles of arrival (δ) (in degrees) between 5 and 25 degrees above the horizontal plane; and −116 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

Note to paragraph (e): These limits relate to the power flux density, which would be obtained under assumed free-space propagation conditions.

(f) *12.2–12.7 GHz—NGSO.* In the 12.2–12.7 GHz band, for NGSO FSS space stations, the specified low-angle power flux-density at the Earth's surface produced by emissions from a space station shall not be exceeded into an operational MVDDS receiver:

(1) −158 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 2 degrees above the horizontal plane; and

(2) −158 + 3.33(δ−2) dB(W/m²) in any 4 kHz band for angles of arrival (δ) (in degrees) between 2 and 5 degrees above the horizontal plane.

Note to paragraph (f): These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

(g) *17.7–24.75 GHz.* For a GSO space station in the 17.7–19.7 GHz, 22.55–23.55 GHz, or 24.45–24.75 GHz bands, or for an NGSO space station in the 22.55–23.55 GHz or 24.45–24.75 GHz bands, the PFD at the Earth's surface produced by emissions for all conditions and for all methods of modulation must not exceed the following values:

(1) −115 dB (W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane.

(2) −115 + 0.5 (δ−5) dB (W/m²) in any 1 MHz band for angles of arrival d (in degrees) between 5 and 25 degrees above the horizontal plane.

(3) −105 dB (W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

(h) *25.25–27.5 GHz.* The power flux-density at the Earth's surface produced by emissions from a space station in either the Earth exploration-satellite service in the 25.5–27 GHz band or the inter-satellite service in the 25.25–27.5 GHz band for all conditions and for all methods of modulation shall not exceed the following values:

(1) −115 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane.

(2) −115 + 0.5(−5) dB(W/m²) in any 1 MHz band for angles of arrival between 5 and 25 degrees above the horizontal plane.

(3) −105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

(4) These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

(i) *37.5–40 GHz—NGSO.* In the 37.5–40.0 GHz band, the power flux-density at the Earth's surface produced by emissions from a non-geostationary space station for all methods of modulation shall not exceed the following values:

(1) This limit relates to the power flux-density which would be obtained under assumed free space conditions (that is, when no allowance is made for propagation impairments such as rain-fade):

(i) −132 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(ii) −132 + 0.75 (δ−5) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

(iii) −117 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

(2) This limit relates to the maximum power flux-density which would be obtained anywhere on the surface of the Earth during periods when FSS system raises power to compensate for rain-fade conditions at the FSS earth station:

(i) −120 dB(W/m²) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(ii) −120 + 0.75 (δ−5) dB(W/m²) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

(iii) −105 dB(W/m²) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

Note to paragraph (i): The conditions under which satellites may exceed these power flux-density limits for normal free space propagation described in this section to compensate for the effects of rain fading are under study and have therefore not yet been defined. Such conditions and the extent to which these limits can be exceeded will be

the subject of a further rulemaking by the Commission on the satellite service rules.

(j) *37.5–40 GHz—GSO.* In the 37.5–40.0 GHz band, the power flux-density at the Earth's surface produced by emissions from a geostationary space station for all methods of modulation shall not exceed the following values.

(1) This limit relates to the power flux-density which would be obtained under assumed free space conditions (that is, when no allowance is made for propagation impairments such as rain-fade):

(i) -139 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(ii) $-139 + 4/3\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 20 degrees above the horizontal plane;

(iii) $-119 + 0.4\ (\delta - 20)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 20 and 25 degrees above the horizontal plane; and

(iv) -117 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

(2) This limit relates to the maximum power flux-density which would be obtained anywhere on the surface of the Earth during periods when FSS system raises power to compensate for rain-fade conditions at the FSS earth station:

(i) -127 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(ii) $-127 + 4/3\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 20 degrees above the horizontal plane;

(iii) $-107 + 0.4\ (\delta - 20)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 20 and 25 degrees above the horizontal plane; and

(iv) -105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

Note to paragraph (h): The conditions under which satellites may exceed the power flux-density limits for normal free space propagation described in this section to compensate for the effects of rain fading are under study and have therefore not yet been defined. Such conditions and the extent to which these limits can be exceeded will be the subject of a further rulemaking by the Commission on the satellite service rules.

(k) *40–40.5 GHz.* In the 40.0–40.5 GHz band, the power flux density at the Earth's surface produced by emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values (these values are obtained under assumed free-space propagation conditions):

(1) -115 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(2) $-115 + 0.5\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

(3) -105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

(l) *40.5–42 GHz—NGSO.* In the 40.5–42.0 GHz band, the power flux density at the Earth's surface produced by emissions from a non-geostationary space station for all conditions and for all methods of modulation shall not exceed the following values (these values are obtained under assumed free-space propagation conditions):

(1) -115 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(2) $-115 + 0.5\ (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane; and

(3) -105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

(m) *40.5–42 GHz—GSO.* In the 40.5–42.0 GHz band, the power flux-density at the Earth's surface produced by emissions from a geostationary space station for all conditions and for all methods of modulation shall not exceed the following values (these values are obtained under assumed free-space propagation conditions):

(1) -120 dB(W/m^2) in any 1 MHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

(2) $-120 + (\delta - 5)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 5 and 15 degrees above the horizontal plane;

(3) $-110 + 0.5\ (\delta - 15)$ dB(W/m^2) in any 1 MHz band for angles of arrival δ (in degrees) between 15 and 25 degrees above the horizontal plane; and

(4) -105 dB(W/m^2) in any 1 MHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

§ 100.213 Unwanted emissions limits generally; space stations.

(a) *General.* The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (a)(1)–(a)(4) of this section.

(1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB.

(2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB.

(3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: an amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

(4) In any event, when an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in paragraphs (a)(1) through (3) of this section.

(b) *23.6–24 GHz—NGSO.* The following unwanted emissions power limits for non-geostationary satellites operating in the inter-satellite service that transmit in the 22.55–23.55 GHz band shall apply in any 200 MHz of the 23.6–24 GHz passive band, based on the date that complete advance publication information is received by the ITU's Radiocommunication Bureau:

(1) For information received before January 1, 2020: -36 dBW.

(2) For information received on or after January 1, 2020: -46 dBW.

(c) *SCS.* Space station downlinks operating as SCS under the provisions of § 100.113 and § 2.106(d)(33)(i) of this chapter are subject to the following rules.

(1) *Out of band emission limits.* Notwithstanding the emission limitations of § 100.213, the aggregation of all space station downlink emissions outside a licensee's SCS frequency band(s) of operation shall not exceed a power flux density of -120 dBW/m^2/MHz at 1.5 meters above ground level.

(2) *Interference caused by out of band emissions.* If any emission from a transmitter operating in the SCS service results in harmful interference to users of another radio service, the FCC may require a greater attenuation of the emission than specified in this section.

§ 100.214 Licensing provisions for the 1.6/2.4 GHz MSS and 2 GHz MSS.

(a) *Technical qualifications.* In addition to providing the information specified in §§ 100.110 through 100.112, each applicant and petitioner must demonstrate the following:

(1) That a proposed system in the 1.6/2.4 GHz MSS frequency bands employs a non-geostationary constellation or constellations of satellites;

(2) That a system proposed to operate using non-geostationary satellites be capable of providing MSS to all locations as far north as 70° North

latitude and as far south as 55° South latitude for at least 75% of every 24-hour period, *i.e.,* that at least one satellite will be visible above the horizon at an elevation angle of at least 5° for at least 18 hours each day within the described geographic area;

(3) That a system proposed to operate using non-geostationary satellites be capable of providing MSS on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, *i.e.,* that at least one satellite will be visible above the horizon at an elevation angle of at least 5° at all times within the described geographic areas; and

(4) That a system only using geostationary orbit satellites, at a minimum, be capable of providing MSS on a continuous basis throughout the 50 states, Puerto Rico, and the U.S. Virgin Islands, if technically feasible.

(5) That operations will not cause harmful interference to other authorized users of the spectrum.

(b) *Safety and distress communications.*

(1) Stations operating in the 1.6/2.4 GHz MSS and 2 GHz MSS that are voluntarily installed on a U.S. ship or are used to comply with any statute or regulatory equipment carriage requirements may also be subject to the requirements of sections 321(b) and 359 of the Communications Act. Licensees are advised that these provisions give priority to radio communications or signals relating to ships in distress and prohibits a charge for the transmission of maritime distress calls and related traffic.

(2) Licensees offering distress and safety services should coordinate with the appropriate search and rescue organizations responsible for the licensees' service area.

NGSO Frequency-Specific Rules

§ 100.220 Requirements for the non-voice, non-geostationary MSS.

(a) *NVNG MSS space station application requirements.*

(1) *General.* Each application for a space station license in the non-voice, non-geostationary mobile-satellite service (NVNG MSS) shall describe in detail the proposed NVNG MSS system, setting forth all pertinent technical and operational aspects of the system, and the technical and legal qualifications of the applicant. In addition to the information specified in §§ 100.110 through 100.112, applicants must also file information demonstrating compliance with all requirements of this section, and showing, based on existing system information publicly available at the Commission at the time of filing, that they will not cause harmful interference to any NVNG MSS system authorized to construct or operate.

(2) *Power flux density.* Applicants for a NVNG MSS space station license must identify the power flux density produced at the Earth's surface by each space station of their system in the 137–138 MHz and 400.15–401 MHz bands, to allow determination of whether coordination with terrestrial services is required under any applicable footnote to the Table of Frequency Allocations in § 2.106 of this chapter. In addition, applicants must identify the measures they would employ to protect the radio astronomy service in the 150.05–153 MHz and 406.1–410 MHz bands from harmful interference from unwanted emissions.

(3) *Emission limitations.*

(i) Applicants in the NVNG MSS shall show that their space stations will not exceed the emission limitations of § 100.213, as calculated for a fixed point on the Earth's surface in the plane of the space station's orbit, considering the worst-case frequency tolerance of all frequency determining components, and maximum positive and negative Doppler shift of both the uplink and downlink signals, taking into account the system design.

(ii) Applicants in the NVNG MSS service shall show that no signal received by their space stations from sources outside of their system shall be retransmitted with a power flux density level, in the worst 4 kHz, higher than the level described by the applicants in paragraph (a)(2) of this section.

(b) *Operating conditions.* In order to ensure compatible operations with authorized users in the frequency bands to be utilized for operations in the NVNG MSS, NVNG MSS systems must operate in accordance with the conditions specified in this section.

(1) *Service limitation.* Voice services may not be provided.

(2) *Coordination among non-voice, non-geostationary mobile-satellite service systems.* All affected applicants, permittees, and licensees shall, at the direction of the Commission, cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum; however, the permittee or licensee being coordinated with is not obligated to suggest changes or re-engineer an applicant's proposal in cases involving conflicts.

(3) *Safety and distress communications.* Stations operating in the NVNG MSS that are used to comply with any statutory or regulatory equipment carriage requirements may also be subject to the provisions of sections 321(b) and 359 of the Communications Act. Licensees are advised that these provisions give priority to radio communications or signals relating to ships in distress and prohibit a charge for the transmission of maritime distress calls and related traffic.

§ 100.221 Obligation to remedy interference caused by NGSO MSS feeder downlinks in the 6700–6875 MHz band.

If an NGSO MSS satellite transmitting in the 6700–6875 MHz band causes harmful interference to previously licensed co-frequency Public Safety facilities, the satellite operator has an obligation to remedy the interference.

§ 100.222 Operating provisions for NGSO FSS space stations.

(a) NGSO FSS system licensees and market access recipients operating in the 10.7–30 GHz frequency range must comply with:

(1) Any applicable power flux-density levels in Article 21, Section V, Table 21–4 of the ITU Radio Regulations (incorporated by reference, § 100.4), except:

(i) In the 19.3–19.4 GHz and 19.6–19.7 GHz bands, applicants must comply with the ITU power flux-density limits governing NGSO FSS systems in the 17.7–19.3 GHz band; and

(ii) In the 17.3–17.7 GHz band, applicants must comply with the ITU power flux-density limits governing NGSO FSS systems in the 17.7–17.8 GHz band.

(2) Any applicable equivalent power flux-density levels in Article 22, Section II, and Resolution 76 of the ITU Radio Regulations (both incorporated by reference, § 100.4), except that for operations in the 17.3–17.8 GHz band, operators must comply with the ITU equivalent power flux-density limits applicable to NGSO FSS system operations in the 17.8–18.4 GHz band.

(b) Prior to the initiation of service, an NGSO FSS operator licensed or holding a market access authorization to operate in the 10.7–30 GHz frequency range must receive a ''favorable'' or ''qualified favorable'' finding by the ITU Radiocommunication Bureau, in accordance with Resolution 85 of the ITU Radio Regulations (incorporated by reference, § 100.4), regarding its compliance with applicable ITU EPFD limits. In addition, a market access holder in these bands must:

(1) Communicate the ITU finding to the Commission; and

(2) Submit the input data files used for the ITU validation software.

GSO Frequency-Specific Rules

§ 100.230 Further requirements for license applications for GSO space station operation in the FSS and 17/24 GHz BSS.

(a) *Additional information requirements for GSO space stations.* In addition to the information required by §§ 100.110 through 100.112, an applicant for GSO FSS space station operation in the FSS and 17/24 GHz BSS must comply with the following:

(1) An applicant for GSO FSS space station operation involving transmission of analog video signals must certify that the proposed analog video operation has been coordinated with operators of authorized co-frequency space stations within six degrees of the requested orbital location.

(2) An applicant for GSO FSS space station operation, including applicants proposing feeder links for space stations operating in the 17/24 GHz BSS, that will be located at an orbital location less than two degrees from the assigned location of an authorized co-frequency GSO space station, must either certify that the proposed operation has been coordinated with the operator of the co-frequency space station or submit an interference analysis demonstrating the compatibility of the proposed system with the co-frequency space station. Such an analysis must include, for each type of radio frequency carrier, the link noise budget, modulation parameters, and overall link performance analysis. (See Appendices B and C to Licensing of Space Stations in the Domestic Fixed-Satellite Service, FCC 83–184, and the following public notices, copies of which are available in the Commission's EDOCS database, available at *https://www.fcc.gov/edocs:* DA 03–3863 and DA 04–1708.) The provisions in this paragraph (a)(2) do not apply to proposed analog video operation, which is subject to the requirement in paragraph (a)(1) of this section.

(3) An applicant for a GSO FSS space station, including applicants proposing feeder links for space stations operating in the 17/24 GHz BSS, must provide the following for operation other than analog video operation:

(i) With respect to proposed operation in the conventional or extended C-bands, a certification that downlink EIRP density will not exceed 3 dBW/4kHz for digital transmissions or 8 dBW/4kHz for analog transmissions and that associated uplink operation will not exceed applicable EIRP density envelopes in § 100.280 unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location of the proposed space station and except as provided in paragraph (d) of this section.

(ii) With respect to proposed operation in the conventional or extended Ku-bands, a certification that downlink EIRP density will not exceed 13 dBW/4kHz for digital transmissions or 17 dBW/4kHz for analog transmissions and that associated uplink operation will not exceed applicable EIRP density envelopes in § 100.280 unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location of the proposed space station and except as provided in paragraph (d) of this section.

(iii) With respect to proposed FSS operation in the conventional or extended Ka-bands, a certification that the proposed space station will not generate power flux density at the Earth's surface in excess of the limits in paragraphs (a)(3)(iii)(A) and (B) of this section, and that associated uplink operation will not exceed applicable EIRP density envelopes in § 25.218(i) unless the non-routine uplink and/or downlink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location and except as provided in paragraph (d) of this section.

(A) −118 dBW/m²/MHz, except as provided in paragraph (a)(3)(iii)(B) of this section.

(B) For space-to-Earth FSS transmissions in the 17.3–17.8 GHz band in the region of the contiguous United States, located west of 100 West Longitude: −121 dBW/m²/MHz.

(iv) With respect to proposed operation in the 24.75–25.25 GHz band (Earth-to-space), a certification that the proposed uplink operation will not exceed the applicable EIRP density envelopes in § 100.280 and that the associated space station will not generate a power flux density at the Earth's surface in excess of the applicable limits in this part, unless the non-routine uplink and/or downlink FSS operation is coordinated with operators of authorized co-frequency space stations at assigned locations within six degrees of the orbital location and except as provided in paragraph (d) of this section.

(v) With respect to proposed operation in the 4500–4800 MHz (space-to-Earth), 6725–7025 MHz (Earth-to-space), 10.70–10.95 GHz (space-to-Earth), 11.20–11.45 GHz (space-to-Earth), and/or 12.75–13.25 GHz (Earth-to-space) bands, a statement that the proposed operation will take into account the applicable requirements of Appendix 30B of the ITU Radio Regulations (incorporated by reference, see § 100.4) and a demonstration that it is compatible with other U.S. ITU filings under Appendix 30B.

(vi) With respect to proposed operation in other FSS bands, an interference analysis demonstrating compatibility with any previously authorized co-frequency space station at a location two degrees away or a certification that the proposed operation has been coordinated with the operator(s) of the previously authorized space station(s). If there is no previously authorized space station at a location two degrees away, the applicant must submit an interference analysis demonstrating compatibility with a hypothetical co-frequency space station two degrees away with the same receiving and transmitting characteristics as the proposed space station.

(b) *Operations in the 17.3–17.8 GHz band.*

(1) Each applicant for a license to operate a space station transmitting in the 17.3–17.8 GHz band must provide the following information:

(2) An applicant for a license to operate a 17/24 GHz BSS space station transmitting in the 17.3–17.8 GHz band must certify that the downlink power flux density on the Earth's surface will not exceed the regional power flux density limits listed in paragraphs (b)(2)(i) through (iv) of this section:

(i) In the region of the contiguous United States, located south of 38° North Latitude and east of 100° West Longitude: −115 dBW/m²/MHz.

(ii) In the region of the contiguous United States, located north of 38° North Latitude and east of 100° West Longitude: −118 dBW/m²/MHz.

(iii) In the region of the contiguous United States, located west of 100° West Longitude: −121 dBW/m²/MHz.

(iv) For all regions outside of the contiguous United States including Alaska and Hawaii: −115 dBW/m²/MHz.

(3) Except as described in paragraph (b)(5) of this section, the following applicants must either certify that their proposed operations have been coordinated with the adjacent operator of a previously authorized or proposed co-frequency space station, or must provide an interference analysis of the kind described in this section, except that the applicant must demonstrate that its proposed network will not cause more interference to the adjacent space station transmitting in the 17.3–17.8

GHz band operating in compliance with the technical requirements of this part, than if the applicant were located at an orbital separation of four degrees from the previously licensed or proposed space station:

(i) Applicants for a 17/24 GHz BSS space station transmitting in the 17.3–17.8 GHz band to be located less than four degrees from a previously authorized or proposed co-frequency 17/24 GHz BSS space station;

(ii) Applicants for a FSS space station transmitting in the 17.3–17.8 GHz band to be located less than four degrees from a previously authorized or proposed co-frequency 17/24 GHz BSS space station; and

(iii) Applicants for a 17/24 GHz BSS space station transmitting in the 17.3–17.8 GHz band to be located less than four degrees from a previously authorized or proposed co-frequency FSS space station transmitting in the 17.3–17.8 GHz band.

(4) Where an authorized or proposed 17/24 GHz BSS or FSS space station is located within four degrees of a previously authorized or proposed 17/24 GHz BSS space station, no new third proposed 17/24 GHz BSS or FSS space station may be located within eight degrees of the first authorized or proposed space station in the same direction as the second authorized or proposed space station, unless the applicant for the third space station certifies that its proposed operation has been coordinated with the operator of the first previously authorized or proposed 17/24 GHz BSS space station, or the applicant for the third proposed space station provides an interference analysis of the kind described in this section, or the applicant for the third proposed space station demonstrates that its proposed network will not cause more interference to the first previously authorized or proposed space station than if the applicant for the third proposed space station were located at an orbital separation of eight degrees from the first previously authorized or proposed 17/24 GHz BSS space station.

(5) In addition to the requirements of paragraphs (b)(1)–(4) of this section, the link budget for any satellite transmitting in the 17.3–17.8 GHz band (space-to-Earth) must take into account longitudinal station-keeping tolerances. Any applicant for a space station transmitting in the 17.3–17.8 GHz band that has reached a coordination agreement with an operator of another space station to allow that operator to exceed the PFD levels specified in paragraph (a)(3)(iii) or (b)(2) of this section, must use those higher PFD levels for the purpose of this showing.

(c) *GSO FSS operations in certain bands.*

(1) An operator of a GSO FSS space station in the conventional or extended C-bands, conventional or extended Ku-bands, 24.75–25.25 GHz band (Earth-to-space), or conventional or extended Ka-bands may notify the Commission of its non-routine transmission levels and be relieved of the obligation to coordinate such levels with later applicants and petitioners.

(2) The letter notification must include the downlink off-axis EIRP density levels or power flux density levels and/or uplink off-axis EIRP density levels, specified per frequency range and space station antenna beam, that exceed the relevant routine limits set forth in paragraphs (a)(3)(i) through (iii) of this section and § 100.280.

(3) Non-routine transmissions notified pursuant to this section need not be coordinated with operators of authorized co-frequency space stations that filed their complete applications or petitions after the date of filing of the notification with the Commission. Such later applicants and petitioners must accept any additional interference caused by the notified non-routine transmissions.

(4) An operator of a replacement space station, may operate with non-routine transmission levels to the extent permitted under this section for the replaced space station.

(d) *Geographic service requirements.*

(1) Each operator of a 17/24 GHz BSS space station that is used to provide video programming directly to consumers in the 48 contiguous United States (CONUS) must provide comparable service to Alaska and Hawaii, unless such service is not technically feasible or not economically reasonable from the authorized orbital location.

(2) Each operator of a 17/24 GHz BSS space station subject to paragraph (d)(1) of this section must design and configure its space station to be capable of providing service to Alaska and Hawaii, that is comparable to the service that such satellites will provide to CONUS subscribers, from any orbital location capable of providing service to either Alaska or Hawaii to which it may be located or relocated in the future.

(3) If an operator of a 17/24 GHz BSS space station that is used to provide video programming directly to consumers in the United States relocates or replaces a 17/24 GHz BSS space station at a location from which service to Alaska and Hawaii had been provided by another 17/24 GHz BSS space station, the operator must use a space station capable of providing at least the same level of service to Alaska and Hawaii as previously provided from that location.

§ 100.231 Licensing and domestic coordination requirements for 17/24 GHz BSS space stations and FSS space stations transmitting in the 17.3–17.8 GHz band.

(a) A 17/24 GHz BSS or FSS applicant seeking to transmit in the 17.3–17.8 GHz band may be authorized to operate a space station at levels up to the maximum power flux density limits defined in paragraphs (a)(1) and (2) of this section without coordinating its power flux density levels with adjacent licensed or permitted operators, as follows:

(1) For 17/24 GHz BSS applicants, up to the power flux density levels specified in § 100.230 only if there is no licensed space station, or prior-filed application for a space station transmitting in the 17.3–17.8 GHz band at a location less than four degrees from the orbital location at which the applicant proposes to operate; and

(2) For FSS space station applicants transmitting in the 17.3–17.8 GHz band, up to the maximum power flux density levels in § 100.230, only if there is no licensed 17/24 GHz BSS space station, or prior-filed application for a 17/24 GHz BSS space station, at a location less than four degrees from the orbital location at which the FSS applicant proposes to operate, and there is no licensed FSS space station, or prior-filed application for an FSS space station transmitting in the 17.3–17.8 GHz band, at a location less than two degrees from the orbital location at which the applicant proposes to operate.

(b) Any U.S. licensee or permittee authorized to transmit in the 17.3–17.8 GHz band that does not comply with the applicable power flux-density limits set forth in § 100.230 shall bear the burden of coordinating with any future co-frequency licensees and permittees of a space station transmitting in the 17.3–17.8 GHz band.

(c) If no good faith agreement can be reached, the operator of the FSS space station transmitting in the 17.3–17.8 GHz band that does not comply with § 100.230 or the operator of the 17/24 GHz BSS space station that does not comply with § 100.230 shall reduce its power flux-density levels to be compliant with those specified in § 100.230 as appropriate.

(d) Any U.S. licensee or permittee of a space station transmitting in the 17.3–17.8 GHz band that is required to provide information in its application pursuant to § 100.230 must accept any increased interference that may result from adjacent space stations

transmitting in the 17.3–17.8 GHz band that are operating in compliance with the rules for such space stations specified in this part.

(e) Notwithstanding the provisions of this section, licensees and permittees will be allowed to apply for a license or authorization for a replacement space stations that will be operated at the same power level and interference protection as the satellite to be replaced.

§ 100.232 Requirements to facilitate reverse-band operation in the 17.3–17.8 GHz band.

(a) Each applicant or licensee for a space station transmitting in the 17.3–17.8 GHz band must submit a series of tables or graphs containing predicted off-axis gain data for each antenna that will transmit in any portion of the 17.3–17.8 GHz band, in accordance with the following specifications. Using a Cartesian coordinate system wherein the X axis is tangent to the geostationary orbital arc with the positive direction pointing east, *i.e.,* in the direction of travel of the satellite; the Y axis is parallel to a line passing through the geographic north and south poles of the Earth, with the positive direction pointing south; and the Z axis passes through the satellite and the center of the Earth, with the positive direction pointing toward the Earth, the applicant or licensee must provide the predicted transmitting antenna off-axis antenna gain information:

(1) In the X–Z plane, *i.e.,* the plane of the geostationary orbit, over a range of ±30 degrees from the positive and negative X axes in increments of 5 degrees or less.

(2) In planes rotated from the X–Z plane about the Z axis, over a range of ±60 degrees relative to the equatorial plane, in increments of 10 degrees or less.

(3) In both polarizations.

(4) At a minimum of one measurement frequency at the center of the portion of the 17.3–17.8 GHz frequency band over which the space station is designed to transmit. Applicants or licensees must provide additional measurement data at 5 MHz above the lower edge of the band and/or at 5 MHz below the upper edge of the band, upon request by the Commission staff.

(5) Over a greater angular measurement range, if necessary, to account for any planned spacecraft orientation bias or change in operating orientation relative to the reference coordinate system. The applicant or licensee must state the reasons for including such additional information.

(b) A space station applicant or licensee transmitting in any portion of the 17.3–17.8 GHz band must submit PFD calculations based on the predicted gain data submitted in accordance with paragraph (a) of this section, as follows:

(1) The PFD calculations must be provided at the location of all prior-filed U.S. DBS space stations where the applicant's PFD level exceeds the coordination trigger of −117 dBW/m²/100 kHz in the 17.3–17.8 GHz band. In this rule, the term prior-filed U.S. DBS space station refers to any co-frequency Direct Broadcast Satellite service space station for which an application was filed with the Commission, or an authorization was granted by the Commission, prior to the filing of the information and certifications required by paragraphs (a) and (b) of this section. The term prior-filed U.S. DBS space station does not include any applications (or authorizations) that have been denied, dismissed, or are otherwise no longer valid. Prior-filed U.S. DBS space stations may include foreign-licensed DBS space stations seeking authority to serve the United States market, but do not include foreign-licensed DBS space stations that have not filed applications with the Commission for market access in the United States.

(2) The calculations must take into account the aggregate PFD levels at the DBS receiver at each measurement frequency arising from all antenna beams on the space station transmitting in the 17.3–17.8 GHz band. They must also take into account the maximum permitted longitudinal station- keeping tolerance, orbital inclination and orbital eccentricity of both the space station transmitting in the 17.3–17.8 GHz band and DBS space stations, and must:

(i) Identify each prior-filed U.S. DBS space station at whose location the coordination threshold PFD level of −117 dBW/m²/100 kHz is exceeded; and

(ii) Indicate the extent to which the calculated PFD of the space station's transmissions in the 17.3–17.8 GHz band exceed the threshold PFD level of −117 dBW/m²/100 kHz at those prior-filed U.S. DBS space station locations.

(3) If the calculated PFD exceeds the threshold level of −117 dBW/m²/100 kHz at the location of any prior-filed U.S. DBS space station, the applicant or licensee must also provide with the PFD calculations a certification that all affected DBS operators acknowledge and do not object to such higher off-axis PFD levels. No such certification is required in cases where the frequencies assigned to the DBS and to the space station transmitting in the 17.3–17.8 GHz band do not overlap.

(4) The information and any certification required by paragraph (b) of this section must be submitted to the Commission for each license application that is filed for a space station transmitting in any portion of the 17.3–17.8 GHz band no later than two years after license grant for the space station.

(c) No later than two months prior to launch, each licensee of a space station transmitting in any portion of the 17.3–17.8 GHz band must update the predicted transmitting antenna off-axis gain information provided in accordance with paragraph (a) of this section by submitting measured transmitting antenna off-axis gain information over the angular ranges, measurement frequencies and polarizations specified in paragraphs (a)(1) through (5) of this section. The transmitting antenna off-axis gain information should be measured under conditions as close to flight configuration as possible. As an alternative, licensees authorized to operate at locations one degree or greater from a prior-filed DBS space station may submit simulated transmitting antenna off-axis gain data in lieu of measured data, over the same angular ranges, frequencies and polarizations.

(d) No later than two months prior to launch, or when applying for authority to change the location of a space station transmitting in any portion of the 17.3–17.8 GHz band that is already in orbit, each such space station licensee must provide PFD calculations based on the measured off-axis gain data submitted in accordance with paragraph (c) of this section, as follows:

(1) The PFD calculations must be provided:

(i) At the location of all prior-filed U.S. DBS space stations as defined in paragraph (b)(1) of this section, where the applicant's PFD level in the 17.3–17.8 GHz band exceeds the coordination trigger of −117 dBW/m²/100 kHz; and

(ii) At the location of any subsequently filed U.S. DBS space station where the PFD level in the 17.3–17.8 GHz band calculated on the basis of measured gain data exceeds −117 dBW/m²/100 kHz. In paragraph (d)(1)(ii) of this section, the term ''subsequently filed U.S. DBS space station'' refers to any co-frequency DBS service space station proposed in a license application filed with the Commission after the operator of a space station transmitting in any portion of the 17.3–17.8 GHz band submitted the predicted data required by paragraphs (a) and (b) of this section but before submission of the

measured data required by this paragraph. Subsequently filed U.S. DBS space stations may include foreign-licensed DBS space stations seeking authority to serve the United States market. The term does not include any applications (or authorizations) that have been denied, dismissed, or are otherwise no longer valid, nor does it include foreign-licensed DBS space stations that have not filed applications with the Commission for market access in the United States.

(2) The PFD calculations must take into account the maximum permitted longitudinal station-keeping tolerance, orbital inclination and orbital eccentricity of both the transmitting 17.3–17.8 GHz and DBS space stations, and must:

(i) Identify each prior-filed U.S. DBS space station at whose location the coordination threshold PFD level of −117 dBW/m²/100 kHz is exceeded; and

(ii) Demonstrate the extent to which the applicant's or licensee's transmissions in the 17.3–17.8 GHz band exceed the threshold PFD level of −117 dBW/m²/100 kHz at those prior-filed U.S. DBS space station locations.

(e) If the aggregate PFD level calculated from the measured data submitted in accordance with paragraph (d) of this section is in excess of the threshold PFD level of −117 dBW/m²/100 kHz:

(1) At the location of any prior-filed U.S. DBS space station as defined in paragraph (b)(1) of this section, then the operator of the space station transmitting in any portion of the 17.3–17.8 GHz band must either:

(i) Coordinate its operations that are in excess of the threshold PFD level of −117 dBW/m²/100 kHz with the affected prior-filed U.S. DBS space station operator, or

(ii) Adjust its operating parameters so that at the location of the prior-filed U.S. DBS space station, the PFD level of −117 dBW/m²/100 kHz is not exceeded.

(2) At the location of any subsequently filed U.S. DBS space station as defined in paragraph (d)(1) of this section, where the aggregate PFD level submitted in accordance with paragraph (d) of this section is also in excess of the PFD level calculated on the basis of the predicted data submitted in accordance with paragraph (a) of this section that were on file with the Commission at the time the DBS space station application was filed, then the operator of the space station transmitting in the 17.3–17.8 GHz band must either:

(i) Coordinate with the affected subsequently-filed U.S. DBS space station operator all of its operations that are either in excess of the PFD level calculated on the basis of the predicted antenna off-axis gain data, or are in excess of the threshold PFD level of −117 dBW/m²/100 kHz, whichever is greater; or

(ii) Adjust its operating parameters so that at the location of the subsequently-filed U.S. DBS space station, either the PFD level calculated on the basis of the predicted off-axis transmitting antenna gain data, or the threshold PFD level of −117 dBW/m²/100 kHz, whichever is greater, is not exceeded.

(3) No coordination or adjustment of operating parameters is required in cases where there is no overlap in frequencies assigned to the DBS and the space station transmitting in the 17.3–17.8 GHz band.

(f) The applicant or licensee for the space station transmitting in the 17.3–17.8 GHz band must modify its license, or amend its application, as appropriate, based upon new information:

(1) If the PFD levels submitted in accordance with paragraph (d) of this section, are in excess of those submitted in accordance with paragraph (b) of this section at the location of any prior-filed or subsequently-filed U.S. DBS space station as defined in paragraphs (b)(1) and (d)(1) of this section, or

(2) If the operator of the space station transmitting in the 17.3–17.8 GHz band adjusts its operating parameters in accordance with paragraph (e)(1)(ii) or (e)(2)(ii) or this section.

(g) Absent an explicit agreement between operators to permit more closely spaced operations, U.S. authorized 17/24 GHz BSS or FSS space stations transmitting in the 17.3–17.8 GHz band and U.S. authorized DBS space stations with co-frequency assignments may not be licensed to operate at locations separated by less than 0.2 degrees in orbital longitude.

(h) All operational space stations transmitting in the 17.3–17.8 GHz band must be maintained in geostationary orbits that:

(1) Do not exceed 0.075° of inclination.

(2) Operate with an apogee less than or equal to 35,806 km above the surface of the Earth, and with a perigee greater than or equal to 35,766 km above the surface of the Earth (*i.e.,* an eccentricity of less than $4.7 \times 10-4$).

(i) U.S. authorized DBS networks may claim protection from space path interference arising from the reverse-band operations of U.S. authorized space stations transmitting in the 17.3–17.8 GHz band to the extent that the DBS space station operates within the bounds of inclination and eccentricity listed in paragraphs (i)(1) and (2) of this section. When the geostationary orbit of the DBS space station exceeds these bounds on inclination and eccentricity, it may not claim protection from any additional space path interference arising as a result of its inclined or eccentric operations and may only claim protection as if it were operating within the bounds listed in paragraphs (i)(1) and (2) of this section:

(1) The DBS space station's orbit does not exceed 0.075° of inclination; and

(2) The DBS space station's orbit maintains an apogee less than or equal to 35,806 km above the surface of the Earth, and a perigee greater than or equal to 35,766 km above the surface of the Earth (*i.e.,* an eccentricity of less than $4.7 \times 10-4$).

§ 100.233 Provisions for direct broadcast satellite service.

(a) *Geographic service requirements.* Applicants for DBS service must provide DBS service to Alaska and Hawaii where such service is technically feasible from the authorized orbital location. This requirement does not apply to DBS satellites authorized to operate at the 61.5° W.L. orbital location. DBS applicants seeking to operate from locations other than 61.5° W.L. who do not provide service to Alaska and Hawaii must provide technical analyses to the Commission demonstrating that such service is not feasible as a technical matter, or that while technically feasible such services would require so many compromises in satellite design and operation as to make it economically unreasonable.

(b) *Technical qualifications.* DBS operations must be in accordance with the sharing criteria and technical characteristics contained in Appendices 30 and 30A of the ITU's Radio Regulations. Operation of systems using differing technical characteristics may be permitted, with adequate technical showing, and if a request has been made to the ITU to modify the appropriate Plans to include the system's technical parameters.

§ 100.234 Analog video transmissions in the FSS.

(c) All conventional C-band analog video transmissions must contain an energy dispersal signal at all times with a minimum peak-to-peak bandwidth set at whatever value is necessary to meet the power flux density limits specified in § 100.212 and successfully coordinated internationally and accepted by adjacent U.S. satellite operators based on the use of state of the

art space and earth station facilities. All transmissions in frequency bands described in § 100.212 must also contain an energy dispersal signal at all times with a minimum peak-to-peak bandwidth set at whatever value is necessary to meet the power flux density limits specified in § 100.212 and successfully coordinated internationally and accepted by adjacent U.S. satellite operators based on the use of state of the art space and earth station facilities.

(d) All initial analog video transmissions shall be preceded by a video test transmission at an uplink e.i.r.p. at least 10 dB below the normal operating level. The earth station operator shall not increase power until receiving notification from the satellite network control center that the frequency and polarization alignment are satisfactory pursuant to the procedures specified in § 100.240. The stationary earth station operator that has successfully transmitted an initial video test signal to a satellite pursuant to this paragraph is not required to make subsequent video test transmissions if subsequent transmissions are conducted using exactly the same parameters as the initial transmission.

(e) An earth station may be routinely licensed for transmission of full-transponder analog video services in the 5925–6425 MHz band or 14.0–14.5 GHz band provided:

(1) The application includes certification, of conformance with the antenna performance standards in § 100.279;

(2) For transmission in the 5925–6425 MHz band, the input power into the antenna will not exceed 26.5 dBW; or

(3) For transmission in the 14.0–14.5 GHz band, the input power into the antenna will not exceed 27 dBW.

§ 100.235 Inclined orbit operations.

Licensees operating in inclined-orbit are required to:

(a) Periodically correct the satellite attitude to achieve a stationary spacecraft antenna pattern on the surface of the Earth and centered on the satellite's designated service area;

(b) Control all electrical interference to adjacent satellites, as a result of operating in an inclined orbit, to levels not to exceed that which would be caused by the satellite operating without an inclined orbit;

(c) Not claim protection in excess of the protection that would be received by the satellite network operating without an inclined orbit; and

(d) Continue to maintain the space station at the authorized longitude orbital location in the geostationary satellite arc with the appropriate east-west station-keeping tolerance.

Coordination/Interference/Sharing for Space Stations

§ 100.240 NGSO/GSO sharing/coordination.

(a) *Protection of GSO networks by NGSO systems.* Unless otherwise provided in this chapter, an NGSO system licensee must not cause harmful interference to, or claim protection from, a GSO FSS or GSO BSS network. An NGSO licensee operating in compliance with the applicable equivalent power flux-density limits in Article 22, Section II of the ITU Radio Regulations (incorporated by reference, § 100.4) will be considered as having fulfilled this obligation with respect to any GSO network.

(b) 10.7–12.75 GHz NGSO/GSO coordination. Coordination will be required between NGSO FSS systems and GSO FSS earth stations in the 10.7–12.75 GHz band when:

(1) The GSO satellite network has receive earth stations with earth station antenna maximum isotropic gain greater than or equal to 64 dBi; G/T of 44 dB/K or higher; and emission bandwidth of 250 MHz; and

(2) The $EPFD_{down}$ radiated by the NGSO satellite system into the GSO specific receive earth station, either within the U.S. for domestic service or any points outside the U.S. for international service, as calculated using the ITU software for examining compliance with EPFD limits exceeds -174.5 dB(W/(m^2/40kHz)) for any percentage of time for NGSO systems with all satellites only operating at or below 2500 km altitude, or -202 dB(W/(m^2/40kHz)) for any percentage of time for NGSO systems with any satellites operating above 2500 km altitude.

(c) *Coordination among inter-satellite service systems.* Applicants for authority to establish inter-satellite service are encouraged to coordinate their proposed frequency usage with existing permittees and licensees in the inter-satellite service whose facilities could be affected by the new proposal in terms of frequency interference or restricted system capacity. All affected applicants, permittees, and licensees, shall at the direction of the Commission, cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum; however, the permittee or licensee being coordinated with is not obligated to suggest changes or re-engineer an applicant's proposal in cases involving conflicts.

§ 100.241 Sharing among NGSO FSS space stations.

(a) *Scope.* This section applies to NGSO FSS operation with earth stations with directional antennas anywhere in the world under a Commission license, or in the United States under a grant of U.S. market access.

(b) *Coordination.* NGSO FSS licensees and market access recipients must coordinate in good faith the use of commonly authorized frequencies regardless of their processing round status.

(c) *Default procedure for NGSO FSS space stations.* Absent coordination between two or more satellite systems, whenever the increase in system noise temperature of an earth station receiver, or a space station receiver for a satellite with on-board processing, of either system, $\Delta T/T$, exceeds six percent due to interference from emissions originating in the other system in a commonly authorized frequency band, such frequency band will be divided among the affected satellite networks in accordance with the following procedure:

(1) Each of n (number of) satellite networks involved that were licensed or granted market access through the same processing round, except as provided in paragraph (e) of this section, must select 1/n of the assigned spectrum available in each of these frequency bands. The selection order for each satellite network will be determined by the date that the first space station in each satellite system is launched and capable of operating in the frequency band under consideration;

(2) The affected station(s) of the respective satellite systems may operate in only the selected (1/n) spectrum associated with its satellite system while the $\Delta T/T$ of six percent threshold is exceeded;

(3) All affected station(s) may resume operations throughout the assigned frequency bands once the threshold is no longer exceeded.

(d) *Protection of earlier-round systems.* Prior to commencing operations, an NGSO FSS licensee or market access recipient must either certify that it has completed a coordination agreement with any operational NGSO FSS system licensed or granted U.S. market access in an earlier processing round, or submit for Commission approval a compatibility showing which demonstrates by use of a degraded throughput methodology that it will not cause harmful interference to any such system with which coordination has not been completed. If an earlier-round system becomes operational after a later-round

system has commenced operations, the later-round licensee or market access recipient must submit a certification of coordination or a compatibility showing with respect to the earlier-round system no later than 60 days after the earlier-round system commences operations as notified pursuant to § 100.149 or otherwise.

(1) Compatibility showings must contain the following elements:

(i) A demonstration that the later-round system will cause no more than three percent time-weighted average degraded throughput of the link to the earlier-round system, for links with a baseline link availability of 99.0% or higher at a C/N threshold of 0 dB;

(ii) A demonstration that the later-round system will cause no more than 0.4% absolute change in link availability to the earlier-round system using a C/N threshold value of 0 dB, for links with a baseline link availability of 99.0% link availability or higher; and

(iii) With respect to an earlier-round system that has not yet satisfied its 50% deployment milestone pursuant to § 100.147, the compatibility showing may consider only 50% deployment of the earlier-round system; if the 50% deployment milestone has been satisfied, the showing must consider 100% deployment of the authorized system.

(2) Compatibility showings will be placed on public notice pursuant to § 100.132.

(3) While a compatibility showing remains pending before the Commission, the submitting NGSO FSS licensee or market access recipient may commence operations on an unprotected, non-interference basis with respect to the operations of the system that is the subject of the showing.

(4) A later-round NGSO FSS system will be required to conform its operations to its compatibility showing submitted for the protection of an earlier-round system to the extent necessary to protect the actual number of deployed and operating space stations of the earlier-round system.

(e) *Sunsetting.* Ten years after the first authorization or grant of market access in a processing round, the systems approved in that processing round will no longer be required to protect earlier-rounds systems under paragraph (d) of this section, and instead will be required to share spectrum with earlier-round systems under paragraph (c) of this section.

§ 100.242 Time sharing between NOAA meteorological satellite systems and non-voice, non-geostationary satellite systems in the 137–138 MHz band.

(a) The space stations of a non-voice, non-geostationary Mobile-Satellite Service (NVNG MSS) system time-sharing downlink spectrum in the 137–138 MHz band with National Oceanic and Atmospheric Administration (NOAA) satellites shall not transmit signals into the ''protection areas'' of the NOAA satellites.

(1) With respect to transmission in the 137.333–137.367 MHz, 137.485–137.515 MHz, 137.605–137.635 MHz, and 137.753–137.787 MHz bands, the protection area for a NOAA satellite is the area on the Earth's surface in which the NOAA satellite is in line of sight from the ground at an elevation angle of five degrees or more above the horizon. No NVNG MSS satellite shall transmit in these bands when it is in line of sight at an elevation angle of zero degrees or more from any point on the ground within a NOAA satellite's protected area for that band.

(2) With respect to transmission in the 137.025–137.175 MHz and 137.825–138 MHz bands, the protection area for a NOAA satellite is the area on the Earth's surface in which the NOAA satellite is in line of sight from the ground at any elevation angle above zero degrees. No NVNG MSS satellite shall transmit in these bands when at a line-of-sight elevation angle of zero degrees or more from any point on the ground within a NOAA satellite's protected area for that band. In addition, such an NVNG MSS satellite shall cease transmitting when it is at an elevation angle of less than zero degrees from any such point, if reasonably necessary to protect reception of the NOAA satellite's signal.

(3) An NVNG MSS licensee is responsible for obtaining the ephemeris data necessary for compliance with these restrictions. The ephemeris information must be updated system-wide on at least a weekly basis. For calculation required for compliance with these restrictions an NVNG MSS licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by NOAA.

(b) An NVNG licensee time sharing spectrum in the 137–138 MHz band must establish a 24-hour per day contact person and telephone number so that claims of harmful interference into NOAA earth stations and other operational issues can be reported and resolved expeditiously. This contact information must be made available to NOAA or its designee. If the NTIA notifies the Commission that NOAA is receiving harmful interference from a NVNG licensee, the Commission will require such NVNG licensee to terminate its interfering operations immediately unless it demonstrates to the Commission's reasonable satisfaction, and that of NTIA, that it is not responsible for causing harmful interference into the worldwide NOAA system. An NVNG licensee assumes the risk of any liability or damage that it and its directors, officers, employees, affiliates, agents and subcontractors may incur or suffer in connection with an interruption of its MSS, in whole or in part, arising from or relating to its compliance or noncompliance with the requirements of this paragraph.

(c) Each satellite in a NVNG licensee's system time-sharing spectrum with NOAA in the 137–138 MHz band shall automatically turn off and cease satellite transmissions if, after 72 consecutive hours, no reset signal is received from the NVNG licensee's gateway earth station and verified by the satellite. All satellites in such NVNG licensee's system shall be capable of instantaneous shutdown on any sub-band upon command from such NVNG licensee's gateway earth station.

§ 100.243 Time sharing between DoD meteorological satellite systems and non-voice, non-geostationary satellite systems in the 400.15–401 MHz band.

(a) The space stations of a non-voice, non-geostationary Mobile-Satellite Service (NVNG MSS) system time-sharing downlink spectrum in the 400.15–401.0 MHz band with Department of Defense (DoD) satellites shall not transmit signals into the ''protection areas'' of the DoD satellites.

(1) The protection area for such a DoD satellite is the area on the Earth's surface in which the DoD satellite is in line of sight from the ground at an elevation angle of five degrees or more above the horizon.

(2) An NVNG MSS space station shall not transmit in the 400.15–401 MHz band when at a line-of-sight elevation angle of zero degrees or more from any point on the ground within the protected area of a DoD satellite operating in that band.

(3) An NVNG MSS licensee is responsible for obtaining the ephemeris data necessary for compliance with this restriction. The ephemeris information must be updated system-wide at least once per week. For calculation required for compliance with this restriction an NVNG MSS licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by DoD.

(b) An NVNG licensee time sharing spectrum in the 400.15–401 MHz band must establish a 24-hour per day contact person and telephone number so that claims of harmful interference into DoD earth stations and other operational issues can be reported and resolved expeditiously. This contact information must be made available to DoD or its designee. If the NTIA notifies the Commission that DoD is receiving harmful interference from a NVNG licensee, the Commission will require such NVNG licensee to terminate its interfering operations immediately unless it demonstrates to the Commission's reasonable satisfaction, and that of NTIA, that it is not responsible for causing harmful interference into the worldwide DoD system. A NVNG licensee assumes the risk of any liability or damage that it and its directors, officers, employees, affiliates, agents and subcontractors may incur or suffer in connection with an interruption of its MSS, in whole or in part, arising from or relating to its compliance or noncompliance with the requirements of this paragraph.

(c) Each satellite in a NVNG licensee's system time-sharing spectrum with DoD in the 400.15–401 MHz band shall automatically turn off and cease satellite transmissions if, after 72 consecutive hours, no reset signal is received from the NVNG licensee's gateway earth station and verified by the satellite. All satellites in such NVNG licensee's system shall be capable of instantaneous shutdown on any sub-band upon command from such NVNG licensee's gateway earth station.

(d) Initially, a NVNG licensee time-sharing spectrum with DoD in the 400.15–401 MHz band shall be able to change the frequency on which its system satellites are operating within 125 minutes of receiving notification from a DoD required frequency change in the 400.15–401 MHz band. Thereafter, when an NVNG licensee constructs additional gateway earth stations located outside of North and South America, it shall use its best efforts to decrease to 90 minutes the time required to implement a DoD required frequency change. An NVNG licensee promptly shall notify the Commission and NTIA of any decrease in the time it requires to implement a DoD required frequency change.

(e) Once an NVNG licensee time-sharing spectrum with DoD in the 400.15–401 MHz band demonstrates to DoD that it is capable of implementing a DoD required frequency change within the time required under paragraph (d) of this section; thereafter, such NVNG licensee shall demonstrate its capability to implement a DoD required frequency change only once per year at the instruction of DoD. Such demonstrations shall occur during off-peak hours, as determined by the NVNG licensee, unless otherwise agreed by the NVNG licensee and DoD. Such NVNG licensee will coordinate with DoD in establishing a plan for such a demonstration. In the event that an NVNG licensee fails to demonstrate to DoD that it is capable of implementing a DoD required frequency change in accordance with a demonstration plan established by DoD and the NVNG licensee, upon the Commission's receipt of a written notification from NTIA describing such failure, the Commission shall impose additional conditions or requirements on the NVNG licensee's authorization as may be necessary to protect DoD operations in the 400.15–401 MHz downlink band until the Commission is notified by NTIA that the NVNG licensee has successfully demonstrated its ability to implement a DoD required frequency change. Such additional conditions or requirements may include, but are not limited to, requiring such NVNG licensee immediately to terminate its operations interfering with the DoD system.

§ 100.244 Inter-service coordination requirements for the 1.6/2.4 GHz MSS.

(f) *Protection of the radio astronomy service in the 1610.6–1613.8 MHz band against interference from 1.6/2.4 GHz MSS systems.*

(1) All 1.6/2.4 GHz MSS systems shall be capable of determining the position of the user transceivers accessing the space segment through either internal radiodetermination calculations or external sources such as LORAN–C or the Global Positioning System.

In the 1610.6–1613.8 MHz band, within a 160 km radius of the following radio astronomy sites:

Observatory	Latitude (DMS)	Longitude (DMS)
Arecibo, PR	18 20 46	66 45 11
Green Bank Telescope, WV	38 25 59	79 50 24
	38 26 09	79 49 42
Very Large Array, NM	34 04 43	107 37 04
Owens Valley, CA	37 13 54	118 17 36
Ohio State, OH	40 15 06	83 02 54

(i) In the 1610.6–1613.8 MHz band, within a 50 km radius of the following radio astronomy sites:

Observatory	Latitude (DMS)	Longitude (DMS)
Pile Town, NM	34 18 04	108 07 07
Los Alamos, NM	35 46 30	106 14 42
Kitt Peak, AZ	31 57 22	111 36 42
Ft. Davis, TX	30 38 06	103 56 39
N. Liberty, IA	41 46 17	91 34 26
Brewster, WA	48 07 53	119 40 55
Owens Valley, CA	37 13 54	118 16 34
St. Croix, VI	17 45 31	64 35 03
Mauna Kea, HI	19 48 16	155 27 29
Hancock, NH	42 56 01	71 59 12

(ii) Out-of-band emissions of a mobile earth station licensed to operate within the 1610.0–1626.5 MHz band shall be attenuated so that the PFD it produces in the 1610.6–1613.8 MHz band at any radio astronomy site listed in paragraph (a)(1)(i) or (ii) of this section shall not exceed the emissions of a mobile earth station operating within the 1610.6–1613.8 MHz band at the edge of the protection zone applicable for that site. As an alternative, a mobile earth station shall not operate during radio astronomy observations within the 1613.8–1615.8 MHz band within 100 km of the radio astronomy sites listed in paragraph (a)(1)(i) of this section, and within 30 km of the sites listed in paragraph (a)(1)(ii) of this section, there being no restriction on a mobile earth station operating within the 1615.8–1626.5 MHz band.

(iii) For airborne mobile earth stations operating in the 1610.0–1626.5 MHz band, the separation distance shall be the larger of the distances specified in paragraph (a)(1)(i), (ii), or (iii) of this section, as applicable, or the distance, d, as given by the formula:

d (km) = 4.1 square root of (h)

where h is the altitude of the aircraft in meters above ground level.

(iv) Smaller geographic protection zones may be used in lieu of the areas specified in paragraphs (a)(1)(i), (ii), (iii), and (iv) of this section if agreed to by the MSS licensee and the Electromagnetic Spectrum Management Unit (ESMU), National Science Foundation, Washington, DC upon a showing by the MSS licensee that the operation of a mobile earth station will not cause harmful interference to a radio astronomy observatory during periods of observation.

(v) The ESMU shall notify MSS space station licensees authorized to operate mobile earth stations in the 1610.0–1626.5 MHz band of periods of radio astronomy observations. The MSS systems shall be capable of terminating operations within the frequency bands and protection zones specified in paragraphs (a)(1)(i) through (iv) of this section, as applicable, after the first position fix of the mobile earth station either prior to transmission or, based upon its location within the protection zone at the time of initial transmission of the mobile earth station. Once the Mobile-Satellite Service system

determines that a mobile earth station is located within an RAS protection zone, the Mobile-Satellite Service system shall immediately initiate procedures to relocate the mobile earth station operations to a non-RAS frequency.

(vi) A beacon-actuated protection zone may be used in lieu of fixed protection zones in the 1610.6–1613.8 MHz band if a coordination agreement is reached between a MSS system licensee and the ESMU on the specifics of beacon operations.

(2) Additional radio astronomy sites, not located within 100 miles of the 100 most populous urbanized areas as defined by the United States Census Bureau at the time, may be afforded similar protection one year after notice to the MSS system licensees by issuance of a public notice by the Commission.

(3) MSS space stations transmitting in the 1613.8–1626.5 MHz band shall take whatever steps necessary to avoid causing harmful interference to the radio astronomy facilities listed in paragraphs (a)(1)(i) and (ii) of this section during periods of observation.

(4) MSS space stations operating in the 2483.5–2500 MHz frequency band shall limit spurious emission levels in the 4990–5000 MHz band so as not to exceed -241 dB (W/m^2/Hz) at the surface of the Earth.

(5) The Radioastronomy Service shall avoid scheduling radio astronomy observations during peak MSS/RDSS traffic periods to the greatest extent practicable.

(g) If a MSS space station operator in the 2496–2500 MHz band intends to operate at powers levels that exceed the PFD limits in § 100.212, or if actual operations routinely exceed these PFD limits, the MSS operator must receive approval from each operational BRS system in the affected geographical region.

§ 100.245 Acceptance of interference in 2000–2020 MHz.

MSS receivers operating in the 2000–2020 MHz band must accept interference from lawful operations in the 1995–2000 MHz band, where such interference is due to:

(a) The in-band power of any operations in 1995–2000 MHz (*i.e.,* the portion of transmit power contained in the 1995–2000 MHz band); or

(b) The portion of out-of-band emissions contained in 2000–2005 MHz.

Satellite Digital Audio Radio Service

§ 100.250 Licensing provisions for the 2.3 GHz satellite digital audio radio service.

(a) *General requirements.* Each application for a system authorization in the satellite digital audio radio service in the 2310–2360 MHz band shall describe in detail the proposed satellite digital audio radio system, setting forth all pertinent technical and operational aspects of the system, and the technical, legal, and financial qualifications of the applicant.

(b) *Technical qualifications.* In addition to the information specified in paragraph (a)(1) of this section, each applicant shall:

(1) Demonstrate that its system will, at a minimum, service the 48 contiguous states of the United States (full CONUS); and

(2) Certify that its satellite DARS system includes a receiver that will permit end users to access all licensed satellite DARS systems that are operational or under construction.

(c) *Milestone requirements.* Each applicant for system authorization in the satellite digital audio radio service must demonstrate within 10 days after a required implementation milestone as specified in the system authorization, and on the basis of the documentation contained in its application, certify to the Commission by affidavit that the milestone has been met or notify the Commission by letter that it has not been met. At its discretion, the Commission may require the submission of additional information (supported by affidavit of a person or persons with knowledge thereof) to demonstrate that the milestone has been met. The satellite DARS milestones are as follows, based on the date of authorization:

(1) One year: complete contracting for construction of first satellite or begin satellite construction;

(2) Two years: if applied for, complete contracting for construction of second satellite or begin second satellite construction;

(3) Four years: in orbit operation of at least one satellite; and

(4) Six years: full operation of the satellite system.

§ 100.251 Information sharing requirements for SDARS terrestrial repeater operators.

This section requires SDARS licensees in the 2320–2345 MHz band to share information regarding the location and operation of terrestrial repeaters with WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands. § 27.72 of this chapter requires WCS licensees to share information regarding the location and operation of base stations in the 2305–2320 MHz and 2345–2360 MHz bands with SDARS licensees in the 2320–2345 MHz band.

(a) *Site and frequency selection.* SDARS licensees must select terrestrial repeater sites and frequencies, to the extent practicable, to minimize the possibility of harmful interference to WCS base station operations in the 2305–2320 MHz and 2345–2360 MHz bands.

(b) *Notice requirements.* SDARS licensees that intend to operate a new terrestrial repeater must, before commencing such operation, provide 10 business days prior notice to all potentially affected Wireless Communications Service (WCS) licensees. SDARS licensees that intend to modify an existing repeater must, before commencing such modified operation, provide five business days prior notice to all potentially affected WCS licensees.

(1) For purposes of this section, a ''potentially affected WCS licensee'' is a WCS licensee that:

(i) Is authorized to operate a base station in the 2305–2315 MHz or 2350–2360 MHz bands in the same Major Economic Area (MEA) as that in which the terrestrial repeater is to be located;

(ii) Is authorized to operate base station in the 2315–2320 MHz or 2345–2350 MHz bands in the same Regional Economic Area Grouping (REAG) as that in which the terrestrial repeater is to be located;

(iii) In addition to the WCS licensees identified in paragraphs (b)(1)(i) and (ii) of this section, in cases in which the SDARS licensee plans to deploy or modify a terrestrial repeater within 5 kilometers of the boundary of an MEA or REAG in which the terrestrial repeater is to be located, a potentially affected WCS licensee is one that is authorized to operate a WCS base station in that neighboring MEA or REAG within 5 kilometers of the location of the terrestrial repeater.

(2) For modifications other than changes in location, a licensee may provide notice within 24 hours after the modified operation if the modification does not result in a predicted increase of the PFD at ground level by more than 1 dB since the last advance notice was given. If a demonstration is made by the WCS licensee that such modifications may cause harmful interference to WCS receivers, SDARS licensees will be required to provide notice five business days in advance of additional repeater modifications.

(3) SDARS repeaters operating below 2 watts EIRP are exempt from the notice requirements set forth in this paragraph.

(4) SDARS licensees are encouraged to develop separate coordination agreements with WCS licensees to facilitate efficient deployment of and coexistence between each service. To the extent the provisions of any such

coordination agreement conflict with the requirements set forth herein, the procedures established under a coordination agreement will control. SDARS licensees must maintain a copy of any coordination agreement with a WCS license in their station files and disclose it to prospective assignees, transferees, or spectrum lessees and, upon request, to the Commission.

(5) SDARS and WCS licensees may enter into agreements regarding alternative notification procedures.

(c) *Contents of notice.*

(1) Notification must specify relevant technical details, including, at a minimum:

(i) The coordinates of the proposed repeater to an accuracy of no less than ±1 second latitude and longitude;

(ii) The proposed operating power(s), frequency band(s), and emission(s);

(iii) The antenna center height above ground and ground elevation above mean sea level, both to an accuracy of no less than ±1 meter;

(iv) The antenna gain pattern(s) in the azimuth and elevation planes that include the peak of the main beam; and

(v) The antenna downtilt angle(s).

(2) An SDARS licensee operating terrestrial repeaters must maintain an accurate and up-to-date inventory of its terrestrial repeaters operating above 2 watts average EIRP, including the information set forth in this section which shall be available upon request by the Commission.

(d) *Calculation of notice period.* Notice periods are calculated from the date of receipt by the licensee being notified. If notification is by mail, the date of receipt is evidenced by the return receipt on certified mail. If notification is by fax, the date of receipt is evidenced by the notifying party's fax transmission confirmation log. If notification is by email, the date of receipt is evidenced by a return email receipt. If the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means, that agreement must specify the method for determining the beginning of the notice period.

(e) *Duty to cooperate.* SDARS licensees must cooperate in good faith in the selection and use of new repeater sites to reduce interference and make the most effective use of the authorized facilities. SDARS licensees should provide WCS licensees as much lead time as practicable to provide ample time to conduct analyses and opportunity for prudent repeater site selection prior to SDARS licensees entering into real estate and tower leasing or purchasing agreements. Licensees of stations suffering or causing harmful interference must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the Space Bureau, in consultation with the Office of Engineering and Technology and the Wireless Telecommunications Bureau, will consider the actions taken by the parties to mitigate the risk of and remedy any alleged interference. In determining the appropriate action, the Space Bureau will take into account the nature and extent of the interference and act promptly to remedy the interference. The Space Bureau may impose restrictions on SDARS licensees, including specifying the transmitter power, antenna height, or other technical or operational measures to remedy the interference, and will take into account previous measures by the licensees to mitigate the risk of interference.

Orbital Debris

§ 100.260 Operations and end-of-life disposal.

(a) *Orbital debris mitigation plans.*

(1) Space station operators must operate in accordance with the orbital debris mitigation plans, statements, and disclosures provided to the Commission pursuant to §§ 100.110 through 100.114.

(2) Operators must notify the Commission of any significant changes to the orbital debris mitigation plans, statements, and disclosures within 30 days of the date the change is effective.

(b) *Geostationary orbit satellites.* Unless otherwise explicitly specified in an authorization, a satellite authorized to operate in the geostationary satellite orbit under this part shall be relocated, at the end of its useful life, barring catastrophic failure of satellite components, to an orbit with a perigee with an altitude of no less than:

$$36{,}021 \text{ km} + (1000 \cdot CR \cdot A/m)$$

where CR is the solar radiation pressure coefficient of the spacecraft, and A/m is the Area to mass ratio, in square meters per kilogram, of the spacecraft.

(c) *GSO end-of-life operations.* A space station authorized to operate in the geostationary satellite orbit under this part may operate using its authorized telemetry, tracking, and command frequencies, and outside of its assigned orbital location, for the purpose of removing the satellite from the geostationary satellite orbit at the end of its useful life, provided that the conditions of paragraph (b) of this section are met, and on the condition that the space station's telemetry, tracking, and command transmissions are planned so as to avoid radio frequency interference to other space stations, and coordinated with any potentially affected satellite networks.

(d) *All space stations.* Upon completion of any relocation authorized by paragraph (c) of this section, or any relocation at end-of-life specified in an authorization, or upon a spacecraft otherwise completing its authorized mission, a space station licensee shall ensure, unless prevented by technical failures beyond its control, that stored energy sources on board the spacecraft are discharged, by venting excess propellant, discharging batteries, relieving pressure vessels, or other appropriate measures.

(e) *Low-earth orbit space stations.* For spacecraft ending their mission in or passing through the low-Earth orbit region below 2000 km altitude and planning disposal through uncontrolled atmospheric re-entry, disposal must be completed as soon as practicable following end of mission, and no later than five years after the end of the mission. For purposes of this paragraph (e), end of mission is defined as the time at which the individual spacecraft is no longer capable of conducting collision avoidance maneuvers. For spacecraft without collision avoidance capabilities, end of mission is defined as the point in which the individual spacecraft has completed its primary mission.

(f) *Debris generation.* A space station operator shall limit, during and after completion of mission operations, unnecessary operational debris, debris resulting from accidental explosions, or liquids released that will persist in droplet form.

§ 100.261 NGSO space safety rules.

(a) *Trackability.* Each individual satellite in an NGSO satellite system must be trackable. Satellites operating in low-Earth orbit will be presumed trackable if each individual satellite is 10 cm or larger in its smallest dimension, excluding deployable components.

(b) *Conjunction warnings.* Upon receipt of a space situational awareness conjunction warning, the operator must review and take all possible steps to assess and mitigate the collision risk. These steps should include, but are not limited to: contacting the operator of any active spacecraft involved in such a warning, sharing ephemeris data and other appropriate operational information with any such operator, and modifying spacecraft attitude or operations.

General Earth Station Rules

§ 100.270 Radiofrequency exposure requirements.

(a) Earth station applicants must provide a radiofrequency exposure report that demonstrates compliance with the Commission's radio frequency exposure requirements in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. Applicants with terminals that will exceed the guidelines in § 1.1310 of this chapter for radio frequency radiation exposure shall provide a plan for mitigation of radiofrequency exposure to the extent required to meet those guidelines.

(b) Earth stations defined as mobile devices as defined in § 2.1091 of this chapter must comply with the requirements of part 2, subpart J of this chapter.

§ 100.271 Responsibility of blanket licensed earth station licensees.

(a) The holder of an FCC blanket earth station license is responsible for operation of any earth station or user terminal under that license.

(b) For purposes of this part, a blanket licensee for user terminals, ESIMs, or Mobile Earth Stations, does not need to maintain control over the specific device, but must be in control of the network and maintain the ability to cease transmissions from the device.

§ 100.272 Minimum elevation angle.

(a) Earth station antennas must not transmit at elevation angles less than five degrees, measured from the horizontal plane to the direction of maximum radiation, in a frequency band shared with terrestrial radio services or in a frequency band with an allocation to space services operating in both the Earth-to-space and space-to-Earth directions. In other bands, earth station antennas must not transmit at elevation angles less than three degrees. In some instances, it may be necessary to specify greater minimum elevation angles because of interference considerations.

(b) ESAAs in aircraft on the ground must not transmit at elevation angles less than three degrees. There is no minimum angle of antenna elevation for ESAAs while airborne.

§ 100.273 Receive-only earth stations.

(a) *17/24 GHz BSS.* Receive-only earth stations operating in the 17/24 GHz BSS can claim no greater protection from interference than they would receive if the equivalent antenna diameter were equal to or greater than 45 cm and the antenna meets the co-polar and cross-polar performance patterns represented by the following set of formulas (adopted in Recommendation ITU–R BO.1213–1, dated November 2005) that are valid for $D/\lambda \geq 11$:

(1) Co-polar pattern:

$$G_{co}(\varphi) = G_{max} - 2.5 \times 10^{-3}\left(\frac{D}{\lambda}\varphi\right)^2 \text{ for } 0 \leq \varphi < \varphi_m$$

where:

$$\varphi_m = \frac{\lambda}{D}\sqrt{\frac{G_{max} - G_1}{0.0025}}$$

$$G_{max} = 10\log\left(\eta\left(\frac{\pi D}{\lambda}\right)^2\right)$$

$$G_1 = 29 - 25\log\varphi_r, \text{ and } \varphi_r = 95\frac{\lambda}{D}$$

$$G_{CO}(\varphi) = G_1 \qquad \text{for } \varphi_m \leq \varphi < \varphi_r$$

$$G_{CO}(\varphi) = 29 - 25\log\varphi \qquad \text{for } \varphi_r \leq \varphi < \varphi_b \text{ where } \varphi_b = 10^{(34/25)}$$

$$G_{CO}(\varphi) = -5\text{dBi} \qquad \text{for } \varphi_b \leq \varphi < 70°$$

$$G_{CO}(\varphi) = 0\text{dBi} \qquad \text{for } 70° \leq \varphi < 180°$$

(2) Cross-polar pattern:

$$G_{cross}(\varphi) = G_{max} - 25 \qquad \text{for } 0 \leq \varphi < 0.25\varphi_0$$

where:

$$\varphi_0 = 2\frac{\lambda}{D}\sqrt{\frac{3}{0.0025}} = 3\text{dB beamwidth}$$

$$G_{cross}(\varphi) = G_{max} - 25 + 8\left(\frac{\varphi - 0.25\varphi_0}{0.19\varphi_0}\right) \text{for } 0.25\varphi_0 \leq \varphi < 0.44\varphi_0$$

$$G_{cross}(\varphi) = G_{max} - 17 \qquad \text{for } 0.44\varphi_0 \leq \varphi < \varphi_0$$

$$G_{cross}(\varphi) = G_{max} - 17 + C\left|\frac{\varphi - \varphi_0}{\varphi_1 - \varphi_0}\right| \text{for } \varphi_0 \leq \qquad \varphi < \varphi_1 \text{ where } \varphi\,0 = 10.1875$$

$$\text{and } C = 21 - 25\log\left(\varphi_1\right) - \left(G_{max} - 17\right)$$

$$G_{cross}(\varphi) = 21 - 25\log\varphi \qquad \text{for } \varphi_1 \leq \varphi < \varphi_2 \text{ where } \varphi_2 = 10^{(26/25)}$$

$$G_{cross}(\varphi) = -5\text{dBi} \qquad \text{for } \varphi_2 \leq \varphi < 70°$$

$$G_{cross}(\varphi) = 0\text{dBi} \qquad \text{for } 70° \leq \varphi < 180°$$

where:

D: equivalent antenna diameter

λ: wavelength expressed in the same unit as the diameter

φ: off-axis angle of the antenna relative to boresight (degrees)

η: antenna efficiency = 0.65

(b) *Applicability.* This paragraph does not apply to 17/24 GHz BSS telemetry earth stations.

(c) *Protection from interference.* Receive-only earth stations in the FSS that operate with U.S.-licensed space stations, or with non-U.S.-licensed space stations that have been duly approved for U.S. market access, may be

registered with the Commission in order to protect them from interference from terrestrial microwave stations in bands shared co-equally with the Fixed Service. The registration of a receive-only earth station results in the listing of an authorized frequency band at the location specified in the registration. Interference protection levels are those agreed to during coordination.

(d) *Use of programming.* Licensing or registration of receive-only earth stations with the Commission confers no authority to receive and use signals or programming received from satellites. *See* Section 705 of the Communications Act, 47 U.S.C. 605.

(e) *Applications.* Applications for registration must be accompanied by the exhibits and certifications of § 100.120.

(f) *International agreements.* Reception of signals or programming from non-U.S. satellites may be subject to restrictions as a result of international agreements or treaties.

(g) *Modifications.* Applications for modification of license or registration of receive-only earth stations must be made in conformance with § 100.143. In addition, registrants are required to notify the Commission when a receive-only earth station is no longer operational or when it has not been used to provide any service during any six-month period.

(h) *Reception from non-U.S. licensed space stations.*

(1) Except as set forth in this section, operators of receive-only earth stations seeking to operate with non-U.S. licensed space stations must file an FCC Form 312—Main Form requesting a license or license modification to operate such station.

(2) Operators of receive-only earth stations need not apply for a license to receive transmissions from non-U.S.-licensed space stations that have been duly approved for U.S. market access, provided the space station operator and earth station operator comply with all applicable rules in this chapter and with applicable conditions in the Permitted Space Station List or market-access grant.

§ 100.274 Temporary-fixed earth station operations.

(a) When an earth station in the FSS is to remain at a single location for fewer than six months, the location may be considered to be temporary fixed. Services provided at a single location which are initially known to be of longer than six months' duration shall not be provided under a temporary fixed authorization.

(b) When a station, other than an ESV, authorized as a temporary fixed earth station, is to remain at a single location for more than six months, application for a regular station authorization at that location shall be filed at least thirty days prior to the expiration of the six-month period.

(c) The licensee of an earth station, other than an ESV, which is authorized to conduct temporary fixed operations in bands shared co-equally with terrestrial fixed stations shall provide the following information to the licensees of all terrestrial facilities lying within the coordination contour of the proposed temporary fixed earth station site before beginning transmissions:

(1) The name of the person operating the station and the telephone number at which the operator can be reached directly;

(2) The exact frequency or frequencies used and the type of emissions and power levels to be transmitted; and

(3) The commencement and anticipated termination dates of operation from each location.

(d) Transmissions may not be commenced until all affected terrestrial licensees have been notified and the earth station operator has confirmed that harmful interference will not be caused to such terrestrial stations.

(e) Operations of temporary fixed earth stations shall cease immediately upon notice of harmful interference from the Commission or the affected licensee.

(f) Filing requirements concerning applications for new temporary fixed earth station facilities operating in frequency bands shared co-equally with terrestrial fixed stations.

(i) When the initial location of the temporary fixed earth station's operation is known, the applicant shall provide, as part of the FCC Form 312—Main Form application, a frequency coordination report in accordance with § 100.276 for the initial station location.

(ii) When the initial location of the temporary fixed earth station's operation is not known at the time the application is filed, the applicant shall provide, as part of FCC Form 312—Main Form application, a statement by the applicant acknowledging its coordination responsibilities under § 100.276.

§ 100.275 Period of construction.

(a) A licensee for site specific earth stations must certify to commencement of operations within 365 days from grant.

(b) A Nationwide, Non-Site Licensee that is required to register locations prior to operations must certify to the commencement of operations within 365 days from registration.

(c) A blanket licensee for user terminals, ESIMs, or Mobile Earth Stations, must certify to the commencement of operations within 365 days from license grant.

General Earth Station Coordination and Performance Requirements

§ 100.276 Earth station coordination requirements.

(a) *Terrestrial coordination report.* An applicant for an earth station authorization, other than an ESV, in a frequency band shared with equal rights with terrestrial microwave services shall provide, as part of their application, a coordination report that demonstrates coordination with potentially impacted services and includes all relevant transmitting and/or receiving parameters necessary in assessing the likelihood of interference.

(b) *Requirements for coordination with terrestrial stations.*

(1) The administrative aspects of the coordination process are set forth in § 101.103 of this chapter in the case of coordination of terrestrial stations with earth stations and in this subpart in the case of earth station coordination with terrestrial stations.

(2) An applicant for an earth station authorization or registrants pursuant to an immovable earth station licensed under a Nationwide, Non-Site License, shall coordinate the proposed frequency usage with existing terrestrial users and with applicants for terrestrial station authorizations with previously filed applications in accordance with the following procedure:

(i) An applicant for an earth station authorization shall perform an interference analysis in accordance with the procedures set forth below for each terrestrial station, for which a license or construction permit has been granted or for which an application has been accepted for filing, which is or is to be operated in a shared frequency band to be used by the proposed earth station and which is located within the great circle coordination distance contour(s) of the proposed earth station.

(ii) The earth station applicant shall provide each such terrestrial station licensee, permittee, and prior grantee with the technical details of the proposed earth station and the relevant interference analyses that were made. At a minimum, the earth station applicant shall provide the terrestrial user with the following technical information:

(A) The geographical coordinates of the proposed earth station antenna(s),

(B) Proposed operating frequency band(s) and emission(s),

(C) Antenna center height above ground and ground elevation above

mean sea level, Antenna gain pattern(s) in the plane of the main beam,

(D) Longitude range of GSO satellites at which antenna may be pointed, for proposed earth station antenna(s) accessing GSO satellites,

(E) Horizon elevation plot,

(F) Antenna horizon gain plot(s) for satellite longitude range specified in (a)(2)(vi) of this section, taking into account the provisions of requirements for earth stations operating with NGSO satellites,

(G) Minimum elevation angle,

(H) Maximum equivalent isotropically radiated power (e.i.r.p.) density in the main beam in any 4 kHz band, (dBW/4 kHz) for frequency bands below 15 GHz or in any 1 MHz band (dBW/MHz) for frequency band above 15 GHz,

(I) Maximum available RF transmit power density in any 1 MHz band and in any 4 kHz band at the input terminals of the antenna(s),

(J) Maximum permissible RF interference power level as determined in accordance with (a)(1) of this section for all applicable percentages of time, and

(K) A plot of great circle coordination distance contour(s) and rain scatter coordination distance contour(s).

(3) The coordination procedures specified in § 101.103 of this chapter shall be applicable except that the information to be provided shall be that set forth in paragraph (a)(2) of this section, and that the 30-day period allowed for response to a request for coordination may be increased to a maximum of 45 days by mutual consent of the parties.

(4) Where technical problems are resolved by an agreement or operating arrangement between the parties that would require special procedures be taken to reduce the likelihood of harmful interference (such as the use of artificial site shielding) or would result in lessened quality or capacity of either system, the details thereof shall be contained in the application.

(5) Multiple antennas in an NGSO FSS gateway earth station complex located within an area bounded by one second of latitude and one second of longitude may be regarded as a single earth station for purposes of coordination with terrestrial services.

(c) *Technical aspects of coordination.* The technical aspects of coordination are based on Appendix 7 of the International Telecommunication Union Radio Regulations (incorporated by reference, *see* § 100.4) and certain recommendations of the ITU Radiocommunication Sector (available at the address in § 0.445 of this chapter).

(d) *Coordination across international boundaries.* An applicant for operation of an earth station, other than an ESV, VMES or an ESAA, shall also ascertain whether the great circle coordination distance contours and rain scatter coordination distance contours, computed for those values of parameters indicated in Appendix 7 of the ITU RR (incorporated by reference, see § 100.4 for international coordination across the boundaries of another Administration). In this case, the applicant shall furnish the Commission copies of these contours on maps drawn to appropriate scale for use by the Commission in effecting coordination of the proposed earth station with the Administration(s) affected.

(e) *Protection for Table Mountain Radio Receiving Zone, Boulder County, Colorado.* Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this part are advised to give due consideration, prior to filing applications, to the need to protect the Table Mountain Radio Receiving Zone from harmful interference. These are the research laboratories of the Department of Commerce, Boulder County, Colorado. To prevent degradation of the present ambient radio signal level at the site, the Department of Commerce seeks to ensure that the field strengths of any radiated signals (excluding reflected signals) received on this 1800 acre site (in the vicinity of coordinates 40°07′50″ N Latitude, 105°14′40″ W Longitude) resulting from new assignments (other than mobile stations) or from the modification or relocation of existing facilities do not exceed the following values:

Frequency range	In authorized bandwidth of service	
	Field strength (mV/m)	Power flux density [1] (dBW/m^2)
Below 540 kHz	10	−65.8
540 to 1600 kHz	20	−59.8
1.6 to 470 MHz	10	[2] −65.8
470 to 890 MHz	30	[2] −56.2
Above 890 MHz	1	[2] −85.8

[1] Equivalent values of power flux density are calculated assuming free space characteristic impedance of 376.7 = 120π ohms.

[2] Space stations shall conform to the power flux density limits at the earth's surface specified in appropriate parts of the FCC rules, but in no case should exceed the above levels in any 4 kHz band for all angles of arrival.

(f) *Notification to the National Radio Astronomy Observatory in West Virginia.* In order to minimize possible harmful interference at the National Radio Astronomy Observatory site at Green Bank, Pocahontas County, W. Va., and at the Naval Radio Research Observatory site at Sugar Grove, Pendleton County, W. Va., any applicant for operating authority under this part for a new transmit or transmit-receive earth station, other than a mobile or temporary fixed station, within the area bounded by 39°15′ N on the north, 78°30′ W on the east, 37°30′ N on the south and 80°30′ W on the west or for modification of an existing license for such station to change the station's frequency, power, antenna height or directivity, or location must, when filing the application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box No. 2, Green Bank, W. Va. 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the observatory. After receipt of such applications, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(g) *Protection for Federal Communications Commission monitoring stations.*

(1) Applicants for authority to operate a new transmitting earth station in the vicinity of an FCC monitoring station or to modify the operation of a transmitting earth station in a way that would increase the field strength produced at such a monitoring station above that previously authorized should consider the possible need to protect the FCC stations from harmful interference. Geographic coordinates of the facilities that require protection are listed in § 0.121(c) of this chapter.

(2) Applications for fixed stations that will produce field strength greater than 10 mV/m or power flux density greater than -65.8 dBW/m^2 in the authorized emission bandwidth at any of the referenced coordinates may be examined to determine the extent of possible interference. Depending on the theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the referenced coordinates, a condition to protect the monitoring station may be included in the station authorization.

(3) In the event that the calculated value of the expected field strength exceeds 10 mV/m (-65.8 dBW/m^2) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. See § 0.401 of this chapter for contact information

(h) *Puerto Rico, Desecheo, Mona, Vieques, or Culebra Site Requirements.*

(1) Any applicant for a new permanent transmitting fixed earth station to be located on the island of Puerto Rico, Desecheo, Mona, Vieques, or Culebra, or for modification of an existing authorization to change the frequency, power, antenna height, directivity, or location of such a station on one of these islands in a way that would increase the likelihood of causing interference, must notify the Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, in writing or electronically, of the technical parameters of the proposal. Applicants may wish to consult interference guidelines, which will be provided by Cornell University. Applicants who choose to transmit information electronically should email to: *prcz@naic.edu.*

(2) The notification to the Interference Office, Arecibo Observatory shall be made prior to, or simultaneously with, the filing of the application with the Commission. The notification must specify the geographical coordinates of the antenna (NAD–83 datum), antenna height above ground, ground elevation at the antenna, antenna directivity and gain, proposed frequency, relevant FCC rule part, type of emission, effective radiated power, and whether the proposed use is itinerant. Generally, submission of the information in the technical portion of the FCC license application is adequate notification. In addition, the applicant shall indicate in its application to the Commission the date notification was made to the Arecibo Observatory.

(3) After receipt of such applications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections in response to the notification indicated. The applicant will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory and to file either an amendment to the application or a modification application, as appropriate. If the Commission determines that an applicant has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, its application may be granted.

(4) The provisions of this paragraph do not apply to operations that transmit on frequencies above 15 GHz.

(i) *Co-primary GSO and NGSO system earth station coordination.* Prior to filing an earth station application, in bands with co-primary allocations to GSO and NGSO system earth stations, the applicant shall coordinate the proposed site and frequency usage with existing earth station licensees and with current earth station authorization applicants.

(j) *Special operational requirements of the 3.65–3.7 GHz band.* Upon request from a terrestrial licensee authorized under part 90, subpart Z that seeks to place base and fixed stations in operation within 150 km of a primary earth station, licensees of earth stations operating on a primary basis in the FSS in the 3.65–3.7 GHz band must negotiate in good faith with that terrestrial licensee to arrive at mutually agreeable operating parameters to prevent harmful interference.

(k) *Earth stations in the 3.7–4.2 GHz band.*

(1) Applications for new, modified, or renewed earth station licenses and registrations in the 3.7–4.0 GHz portion of the band in CONUS are no longer accepted.

(2) Applications for new earth station licenses or registrations within CONUS in the 4.0–4.2 GHz portion of the band will not be accepted until the transition is completed and upon announcement by the Space Bureau via public notice that applications may be filed.

(3) Fixed and temporary fixed earth stations operating in the 3.7–4.0 GHz portion of the band within CONUS will be protected from interference by licensees in the 3.7 GHz Service subject to the deadlines set forth in § 27.1412 of this chapter and are eligible for transition into the 4.0–4.2 GHz band so long as they:

(i) Were operational as of April 19, 2018 and continue to be operational;

(ii) Were licensed or registered (or had a pending application for license or registration) in the ICFS database on November 7, 2018; and

(iii) Timely certified the accuracy of the information on file with the Commission by May 28, 2019.

(4) Fixed and temporary earth station licenses and registrations that meet the criteria in paragraph (c) of this section may be renewed or modified to maintain operations in the 4.0–4.2 GHz band.

(5) Applications for new, modified, or renewed licenses and registrations for earth stations outside CONUS operating in the 3.7–4.2 GHz band will continue to be accepted.

§ 100.277 Frequency tolerance.

The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001% of the reference frequency.

§ 100.278 Emissions limits generally; earth stations.

(a) *General.* Except for SDARS terrestrial repeaters, the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in this section.

(1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50% up to and including 100% of the authorized bandwidth: 25 dB.

(2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100% up to and including 250% of the authorized bandwidth: 35 dB.

(3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250% of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

(4) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(b) *Emission limits in shared bands between 1 and 15 GHz.* In bands shared coequally with terrestrial radio communication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station, other than an ESV, operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits:

(1) + 40 dBW in any 4 kHz band for $\theta \leq 0°$;

(2) + 40 + 3θ dBW in any 4 kHz band for $0° < \theta \leq 5°$; and

(3) where θ is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

(c) *Emission limits in shared bands above 15 GHz.* In bands shared coequally with terrestrial radiocommunication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station operating in frequency bands above 15 GHz shall not exceed the following limits:

(1) + 64 dBW in any 1 MHz band for $\theta \leq 0°$;

(2) + 64 + 3 θ dBW in any 1 MHz band for $0° < \theta \leq 5°$; and

(3) where θ is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

(d) *Emissions limits in the 50.2–50.4 GHz band.* For earth stations in the FSS (Earth-to-space) that transmit in the 49.7–50.2 GHz and 50.4–50.9 GHz bands, the unwanted emission power in the 50.2–50.4 GHz band shall not exceed −20 dBW/200 MHz (measured at the input of the antenna), except that the maximum unwanted emission power may be increased to −10 dBW/200 MHz for earth stations having an antenna gain greater than or equal to 57 dBi. These limits apply under clear-sky conditions. During fading conditions, the limits may be exceeded by earth stations when using uplink power control.

(e) *Angles of elevation greater than 5°.* For angles of elevation of the horizon greater than 5° there shall be no restriction as to the equivalent isotropically radiated power transmitted by an earth station towards the horizon.

(f) *Fade compensation limits.* Earth stations in the FSS may employ uplink adaptive power control or other methods of fade compensation to facilitate transmission of uplinks at power levels required for desired link performance while minimizing interference between networks.

(1) Transmissions from FSS earth stations in frequencies above 10 GHz may exceed the uplink EIRP and EIRP density limits specified in the station authorization under conditions of uplink fading due to precipitation by an amount not to exceed 1 dB above the actual amount of monitored excess attenuation over clear sky propagation conditions. EIRP levels must be returned to normal as soon as the attenuating weather pattern subsides.

(2) An FSS earth station transmitting to a geostationary space station in the 13.77–13.78 GHz band must not generate more than 71 dBW EIRP in any 6 MHz band.

(3) An FSS earth station transmitting to a non-geostationary space station in the 13.77–13.78 GHz band must not generate more than 51 dBW EIRP in any 6 MHz band.

(4) Automatic power control may be used to increase the EIRP density in a 6 MHz uplink band in this frequency range to compensate for rain fade, provided that the power flux-density at the space station does not exceed the value that would result when transmitting with an EIRP of 71 dBW or 51 dBW, as appropriate, in that 6 MHz band in clear-sky conditions.

(g) *Emission limits on SCS earth stations.* SCS earth stations providing SCS pursuant to § 100.120 shall comply with the power requirements and out-of-band emission limits corresponding to devices operating in part 22, 24, or 27 of this chapter, as required for their operating frequencies.

(h) *Limits on emissions from 1.6 GHz mobile earth stations for protection of aeronautical radionavigation-satellite service.*

(1) The e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559–1587.42 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth generated by such stations shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval, in that band.

(2) The e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1626.5 MHz shall not exceed −64 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1587.42–1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth generated by such stations shall not exceed −74 dBW, averaged over any 2 millisecond active transmission interval, in the 1587.42–1605 MHz band.

(3) The e.i.r.p. density of emissions from mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559–1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559–1605 MHz band.

(4) As of January 1, 2005, the e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the 1559–1605 MHz band. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559–1605 MHz band. Inmarsat-B terminals manufactured more than six months after **Federal Register** publication of the rule changes adopted in FCC 03–283 must meet these limits.

(5) The e.i.r.p density of emissions from mobile earth stations with assigned uplink frequencies between 1990 MHz and 2025 MHz shall not exceed −70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in frequencies between 1559 MHz and 1610 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1559 MHz and 1605 MHz shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1605 MHz and 1610 MHz manufactured more than six months after **Federal Register** publication of the rule changes adopted in FCC 03–283 shall not exceed −80 dBW, averaged over any 2 millisecond active transmission interval.

(6) Mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies in the 1610–1660.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band to an extent determined by linear interpolation from −70 dBW/

MHz at 1605 MHz to −10 dBW/MHz at 1610 MHz.

(7) Mobile earth stations manufactured more than six months after **Federal Register** publication of the rule changes adopted in FCC 03–283 with assigned uplink frequencies in the 1610–1626.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band-segment to an extent determined by linear interpolation from −70 dBW/MHz at 1605 MHz to −10 dBW/MHz at 1610 MHz averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from −80 dBW at 1605 MHz to −20 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

(8) Mobile earth stations manufactured more than six months after **Federal Register** publication of the rule changes adopted in FCC 03–283 with assigned uplink frequencies in the 1626.5–1660.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band-segment to an extent determined by linear interpolation from −70 dBW/MHz at 1605 MHz to −46 dBW/MHz at 1610 MHz, averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from −80 dBW at 1605 MHz to −56 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

(9) The e.i.r.p density of carrier-off state emissions from mobile earth stations manufactured more than six months after **Federal Register** publication of the rule changes adopted in FCC 03–283 with assigned uplink frequencies between 1 and 3 GHz shall not exceed −80 dBW/MHz in the 1559–1610 MHz band averaged over any two millisecond interval.

(10) A Root-Mean-Square detector shall be used for all power density measurements.

§ 100.279 Earth station antenna performance standards.

(a) The gain of any earth station antenna operating in the FSS, including feeder links for other satellite services, transmitting to a GSO satellite, may not exceed the following:

(i) In the plane tangent to the GSO arc as defined in § 100.3:

$29–25\log_{10}\theta$	dBi	for $1.5° \le \theta \le 7°$.
8	dBi	for $7° < \theta \le 9.2°$.
$32–25\log_{10}\theta$	dBi	for $9.2° < \theta \le 19.1°$.
0	dBi	for $19.1° < \theta \le 48°$.
$29–25\log_{10}\theta$	dBi	for $1.5° \le \theta \le 7°$.
−10	dBi	for $48° < \theta \le 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite, and dBi refers to dB relative to an isotropic radiator.

(ii) In the plane perpendicular to the GSO arc as defined in § 100.3:

$32–25\log_{10}\theta$	dBi	for $3° \le \theta \le 7°$.
10.9	dBi	for $7° < \theta \le 9.2°$.
$35–25\log_{10}\theta$	dBi	for $9.2° < \theta \le 19.1°$.
3	dBi	for $19.1° < \theta \le 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite, and dBi refers to dB relative to an isotropic radiator.

(b) The gain of any earth station antenna operating in the FSS, including feeder links for other satellite services, transmitting to a NGSO satellite, may not exceed the following:

$29–25\log_{10}\theta$	dBi	for $1.5° \le \theta \le 36.5°$.
−10	dBi	for $36.5° < \theta \le 180°$.

(c) An FSS receiving earth station, including feeder link earth station for other satellite services, not confirming to the gain patterns in (a) and (b) of this section is not entitled to any greater protection from interference from authorized operation of other stations that would not have cause interference to that earth station if it was using an antenna with gain patterns conforming to the levels specified (a) and (b) of this section.

§ 100.280 Off-axis EIRP density limits.

(a) The off-axis eirp density of any earth station operating in the FSS, including feeder links for other satellite services, transmitting to a GSO satellite, the co-polarized transmissions may not exceed the following:

(i) In the plane tangent to the GSO arc as defined in § 100.3:

$18–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \le \theta \le 7°$.
−3	dBW/4 kHz	for $7° < \theta \le 9.2°$.
$21–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \le 48°$.
−21	dBW/4 kHz	for $48° < \theta \le 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite.

(ii) In the plane perpendicular to the GSO arc as defined in § 100.3:

$21–25\log_{10}\theta$	dBW/4 kHz	for $3° \leq \theta \leq 7°$.
0	dBW/4 kHz	for $7° < \theta \leq 9.2°$.
$24–25\log_{10}\theta$	dBW/4 kHz	for $9.2° < \theta \leq 48°$.
−18	dBW/4 kHz	for $19.1° < \theta \leq 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite.

(b) The off-axis eirp density of any earth station operating in the FSS, including feeder links for other satellite services, transmitting to a GSO satellite, the cross-polarized transmission may not exceed the following:

(i) In the plane tangent to the GSO arc as defined in § 100.3:

$8–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \leq \theta \leq 7°$.
−13	dBW/4 kHz	for $7° < \theta \leq 9.2°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite.

(ii) In the plane perpendicular to the GSO arc as defined in § 100.3:

$11–25\log_{10}\theta$	dBW/4 kHz	for $3° \leq \theta \leq 7°$.
−10	dBW/4 kHz	for $7° < \theta \leq 9.2°$.

Where θ is the angle in degrees from a line from the earth station antenna to the assigned orbital location of the target satellite.

(c) The off-axis eirp density of any earth station operating in the FSS, including feeder links for other satellite services, transmitting to a NGSO satellite, may not exceed the following:

$18–25\log_{10}\theta$	dBW/4 kHz	for $1.5° \leq \theta \leq 36.5°$.
−21	dBW/4 kHz	for $36.5° < \theta \leq 180°$.

Where θ is the angle in degrees from a line from the earth station antenna to the target satellite.

Frequency-Specific Earth Station Rules

§ 100.281 Earth stations in the 24.75–25.25 GHz, 27.5–28.35 GHz, 37.5–40 GHz, 47.2–48.2 GHz, and 50.4–51.4 GHz bands.

(a) FSS is secondary to the UMFUS in the 27.5–28.35 GHz band. Notwithstanding that secondary status, an applicant for a license for a transmitting earth station in the 27.5–28.35 GHz band that meets one of the following criteria may be authorized to operate without providing interference protection to stations in the UMFUS:

(1) The FSS licensee also holds the relevant UMFUS license(s) for the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to -77.6 dBm/m²/MHz;

(2) The FSS earth station was authorized prior to July 14, 2016;

(3) The application for the FSS earth station was filed prior to July 14, 2016 and has been subsequently granted; or

(4) The applicant demonstrates compliance with all of the following criteria in its application:

(i) There are no more than two other authorized earth stations operating in the 27.5–28.35 GHz band within the county where the proposed earth station is located that meet the criteria contained in either paragraph (a)(1), (2), (3), or (4) of this section. For purposes of this requirement, multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(ii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to -77.6 dBm/m²/MHz, together with the similar area of any other earth station authorized pursuant to paragraph (a) of this section, does not cover, in the aggregate, more than the amount of population of the UMFUS license area within which the earth station is located as noted in table 1 to this paragraph (a)(4)(ii):

TABLE 1 TO PARAGRAPH (a)(4)(ii)

Population within UMFUS license area	Maximum permitted aggregate population within -77.6 dBm/m²/MHz PFD contour of earth stations
Greater than 450,000	0.1 percent of population in UMFUS license area.
Between 6,000 and 450,000	450 people.
Fewer than 6,000	7.5 percent of population in UMFUS license area.

(iii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to -77.6 dBm/m²/MHz does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, the area mentioned in paragraph (a)(4)(ii) of this section shall not cross any of the following types of roads, as defined in functional classification guidelines issued by the Federal Highway Administration pursuant to 23 CFR 470.105(b): Interstate, Other Freeways and Expressways, or Other Principal Arterial. The Federal Highway Administration Office of Planning, Environment, and Realty Executive

Geographic Information System (HEPGIS) map contains information on the classification of roads. For purposes of this rule, an urban area shall be an Adjusted Urban Area as defined in 21 U.S.C. 101(a)(37).

(iv) The applicant has successfully completed frequency coordination with the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in § 101.103(d) of this chapter.

(b) Applications for earth stations in the 37.5–40 GHz band shall provide an exhibit describing the zone within which the earth station will require protection from transmissions of UMFUS licensees. For purposes of this rule, the protection zone shall consist of the area where UMFUS licensees may not locate facilities without the consent of the earth station licensee. The earth station applicant shall demonstrate in its application, using reasonable engineering methods, that the requested protection zone is necessary in order to protect its proposed earth station.

(c) The protection zone (as defined in paragraph (b) of this section) shall comply with the following criteria. The applicant must demonstrate compliance with all of the following criteria in its application:

(1) There are no more than two other authorized earth stations operating in the 37.5–40 GHz band within the county within which the proposed earth station is located that meet the criteria contained in paragraph (c) of this section, and there are no more than 14 other authorized earth stations operating in the 37.5–40 GHz band within the PEA within which the proposed earth station is located that meet the criteria contained in paragraph (c) of this section. For purposes of this requirement, multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(2) The protection zone, together with the protection zone of other earth stations in the same PEA authorized pursuant to this, does not cover, in the aggregate, more than the amount of population of the PEA within which the earth station is located as noted in table 2 to this paragraph (c)(2):

TABLE 2 TO PARAGRAPH (c)(2)

Population within Partial Economic Area (PEA) where earth station is located	Maximum permitted aggregate population within protection zone of earth stations
Greater than 2,250,000	0.1 percent of population in PEA.
Between 60,000 and 2,250,000	2,250 people.
Fewer than 60,000	3.75 percent of population in PEA.

(3) The protection zone does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, the area mentioned in the preceding sentence shall not cross any of the following types of roads, as defined in functional classification guidelines issued by the Federal Highway Administration pursuant to 23 CFR 470.105(b): Interstate, Other Freeways and Expressways, or Other Principal Arterial. The Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System (HEPGIS) map contains information on the classification of roads. For purposes of this rule, an urban area shall be an Adjusted Urban Area as defined in 21 U.S.C. 101(a)(37).

(4) The applicant has successfully completed frequency coordination with the UMFUS licensees within the protection zone with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in § 101.103(d) of this chapter.

(d) Notwithstanding that FSS is co-primary with the UMFUS in the 47.2–48.2 GHz band, earth stations in the 47.2–48.2 GHz band shall be limited to individually licensed earth stations. An applicant for a license for a transmitting earth station in the 47.2–48.2 GHz band must meet one of the following criteria to be authorized to operate without providing any additional interference protection to stations in the UMFUS:

(1) The FSS licensee also holds the relevant UMFUS license(s) for the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz;

(2) The earth station in the 47.2–48.2 GHz band was authorized prior to February 1, 2018;

(3) The application for the earth station in the 47.2–48.2 GHz band was filed prior to February 1, 2018; or

(4) The applicant demonstrates compliance with all of the following criteria in its application:

(i) There are no more than two other authorized earth stations operating in the 47.2–48.2 GHz band within the county where the proposed earth station is located that meet the criteria contained in paragraphs (d)(1), (2), (3), or (4) of this section, and there are no more than 14 other authorized earth stations operating in the 47.2–48.2 GHz band within the PEA where the proposed earth station is located that meet the criteria contained in paragraphs (d)(1), (2), (3), or (4) of this section. For purposes of this requirement, multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(ii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz, together with the similar area of any other earth station authorized pursuant to paragraph (d) of this section, does not cover, in the aggregate, more than the amount of population of the PEA within which the earth station is located as noted in table 3 to this paragraph (d)(4)(ii):

TABLE 3 TO PARAGRAPH (d)(4)(ii)

Population within Partial Economic Area (PEA) where earth station is located	Maximum permitted aggregate population within −77.6 dBm/m²/MHz PFD contour of earth stations
Greater than 2,250,000	0.1 percent of population in PEA.

TABLE 3 TO PARAGRAPH (d)(4)(ii)—Continued

Population within Partial Economic Area (PEA) where earth station is located	Maximum permitted aggregate population within −77.6 dBm/m²/MHz PFD contour of earth stations
Between 60,000 and 2,250,000	2,250 people.
Fewer than 60,000	3.75 percent of population in PEA.

(iii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz does not contain any major event venue, any highway classified by the U.S. Department of Transportation under the categories Interstate, Other Freeways and Expressways, or Other Principal Arterial, or an urban mass transit route, passenger railroad, or cruise ship port; and

(iv) The applicant has successfully completed frequency coordination with the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in § 101.103(d) of this chapter.

(e) Notwithstanding that FSS is co-primary with the UMFUS in the 24.75–25.25 GHz and 50.4–51.4 GHz bands, earth stations in these bands shall be limited to individually licensed earth stations. An applicant for a license for a transmitting earth station in the 24.75–25.25 GHz or 50.4–51.4 GHz band must meet one of the following criteria to be authorized to operate without providing any additional interference protection to stations in the UMFUS:

(1) The FSS licensee also holds the relevant UMFUS license(s) for the area in which the earth station generates a power flux density (PFD), at 10 meters above ground level, of greater than or equal to −77.6dBm/m²/MHz;

(2) The earth station in the 24.75–25.25 GHz band was authorized prior to August 20, 2018; or the earth station in the 50.4–51.4 GHz band was authorized prior to June 12, 2019;

(3) The application for the earth station in the 24.75–25.25 GHz band was filed prior to August 20, 2018; or the application for the earth station in the 50.4–51.4 GHz band was filed prior to June 12, 2019; or

(4) The applicant demonstrates compliance with all of the following criteria in its application:

(i) There are no more than two other authorized earth stations operating in the same frequency band within the county where the proposed earth station is located that meet the criteria contained in either paragraph (e)(1), (2), (3), or (4) of this section, and there are no more than 14 other authorized earth stations operating in the same frequency band within the Partial Economic Area where the proposed earth station is located that meet the criteria contained in paragraph (e)(1), (2), (3), or (4) of this section. For purposes of the requirement in this paragraph (e)(4), multiple earth stations that are collocated with or at a location contiguous to each other shall be considered as one earth station;

(ii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz, together with the similar area of any other earth station operating in the same frequency band authorized pursuant to paragraph (e) of this section, does not cover, in the aggregate, more than the amount of population of the county within which the earth station is located as noted in table 4 to this paragraph (e)(4)(ii):

TABLE 4 TO PARAGRAPH (e)(4)(ii)

Population within the County where earth station is located	Maximum permitted aggregate population within −77.6 dBm/m²/MHz PFD contour of earth stations
Greater than 450,000	0.1 percent of population in county.
Between 6,000 and 450,000	450 people.
Fewer than 6,000	7.5 percent of population in county.

(iii) The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz does not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. In addition, the area mentioned in paragraph (e)(4)(ii) of this section shall not cross any of the following types of roads, as defined in functional classification guidelines issued by the Federal Highway Administration pursuant to 23 CFR 470.105(b): Interstate, Other Freeways and Expressways, or Other Principal Arterial. The Federal Highway Administration Office of Planning, Environment, and Realty Executive Geographic Information System (HEPGIS) map contains information on the classification of roads. For purposes of this paragraph (e)(4), an urban area shall be an Adjusted Urban Area as defined in 21 U.S.C. 101(a)(37); and

(iv) The applicant has successfully completed frequency coordination with the UMFUS licensees within the area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m²/MHz with respect to existing facilities constructed and in operation by the UMFUS licensee. In coordinating with UMFUS licensees, the applicant shall use the applicable processes contained in § 101.103(d) of this chapter.

(f) If an earth station applicant or licensee in the 24.75–25.25 GHz, 27.5–28.35 GHz, 37.5–40 GHz, 47.2–48.2 GHz and/or 50.4–51.4 GHz bands enters into an agreement with an UMFUS licensee, their operations shall be governed by that agreement, except to the extent that the agreement is inconsistent with the Commission's rules or the Communications Act.

(g) Any earth station authorizations issued pursuant to §§ 100.120–100.121 and 100.281 shall be conditioned upon operation being in compliance with the criteria contained in the applicable paragraph.

(h) *Re-coordination.* An earth station licensed under this section that is brought into operation later than one year after the date of the license grant must be re-coordinated with UMFUS

stations using the applicable processes in § 101.103(d) of this chapter. The earth station licensee must complete re-coordination within one year before its commencement of operation. The re-coordination should account for any demographic or geographic changes as well as changes to the earth station equipment or configuration. A re-coordination notice must be filed in ICFS before commencement of earth station operations.

§ 100.282 User terminals and earth stations in motion.

(a) *Self-monitoring.* Each FSS ESIM and user terminal must be self-monitoring and, should a condition occur that would cause the ESIMs to exceed its authorized off-axis EIRP density limits in the case of GSO FSS ESIMs or any emission limits included in the licensing conditions in the case of NGSO FSS ESIMs, the ESIM must automatically cease transmissions within 100 milliseconds, and not resume transmissions until the condition that caused the ESIM to exceed those limits is corrected.

(b) *NCMC.* Each FSS ESIM and user terminal must be monitored and controlled by a network control and monitoring center (NCMC) or equivalent facility. Each terminal must comply with a ''disable transmission'' command from the NCMC within 100 milliseconds of receiving the command. In addition, the NCMC must monitor the operation of each terminal in its network, and transmit a ''disable transmission'' command to any terminal that operates in such a way as to exceed the authorized off-axis EIRP density limit described in § 100.280 or any emission limits included in the licensing conditions. The NCMC must not allow the terminal(s) under its control to resume transmissions until the condition that caused the terminals(s) to exceed the authorized EIRP density limits is corrected.

(c) *Installation and radiofrequency exposure.* ESIM and user terminal licensees must ensure installation of terminals on vehicles by qualified installers who have an understanding of the antenna's radiation environment and the measures best suited to maximize protection of the general public and persons operating the vehicle and equipment. A terminal exhibiting radiofrequency exposure levels exceeding 1.0 mW/cm^2 in accessible areas (or the appropriate limit pursuant to § 1.1310 of this chapter), such as at the exterior surface of the radome, must have a label attached to the surface of the terminal warning about the radiofrequency exposure and must include thereon a diagram showing the regions around the terminal where the radiation levels could exceed the maximum radiofrequency exposure limit specified in Table 1 in § 1.1310 of this chapter.

(d) *ESVs on vessels of foreign registry.* ESV NCMC operators communicating with ESVs on vessels of foreign registry must maintain detailed information on each such vessel's country of registry and a point of contact for the relevant administration responsible for licensing those ESVs.

(e) *ESVs operating in 3700–4200 MHz and 5925–6425 MHz.* The following requirements govern all operations in the 3700–4200 MHz (space-to-Earth) and 5925–6425 MHz (Earth-to-space) frequency bands of ESVs receiving from or transmitting to GSO satellites in the FSS:

(1) ESVs must not operate in the 5925–6425 MHz (Earth-to-space) and 3700–4200 MHz (space-to-Earth) frequency bands on vessels smaller than 300 gross tons.

(2) ESV operators transmitting in the 5925–6425 MHz (Earth-to-space) frequency band to GSO satellites in the FSS must not seek to coordinate, in any geographic location, more than 36 megahertz of uplink bandwidth on each of no more than two GSO FSS satellites.

(3) ESVs, operating while docked, for which coordination with terrestrial stations in the 3700–4200 MHz band is completed in accordance with § 100.276, will receive protection from such terrestrial stations in accordance with the coordination agreements, for 180 days, renewable for 180 days.

(4) ESVs in motion must not claim protection from harmful interference from any authorized terrestrial stations to which frequencies are already assigned, or any authorized terrestrial station to which frequencies may be assigned in the future in the 3700–4200 MHz (space-to-Earth) frequency band.

(5) ESVs operating within 200 km from the baseline of the United States, or within 200 km from a U.S.-licensed fixed service offshore installation, must complete coordination with potentially affected U.S.-licensed fixed service operators prior to operation. The coordination method and the interference criteria objective will be determined by the frequency coordinator. The details of the coordination must be maintained and available at the frequency coordinator, and must be filed with the Commission electronically via ICFS or successor system to be placed on public notice. The coordination notifications must be filed in the form of a statement referencing the relevant call signs and file numbers. Operation of each individual ESV may commence immediately after the public notice that identifies the notification sent to the Commission is released. Continuance of operation of that ESV for the duration of the coordination term must be dependent upon successful completion of the normal public notice process. If, prior to the end of the 30-day comment period of the public notice, any objections are received from U.S.-licensed Fixed Service operators that have been excluded from coordination, the ESV licensee must immediately cease operation of that particular station on frequencies used by the affected U.S.-licensed Fixed Service station until the coordination dispute is resolved and the ESV licensee informs the Commission of the resolution. As used in this section, ''baseline'' means the line from which maritime zones are measured. The baseline is a combination of the low-water line and closing lines across the mouths of inland water bodies and is defined by a series of baseline points that include islands and ''low-water elevations,'' as determined by the U.S. Department of State's Baseline Committee.

(6) An ESV must automatically cease transmission if the ESV operates in violation of the terms of its coordination agreement, including, but not limited to, conditions related to speed of the vessel or if the ESV travels outside the coordinated area, if within 200 km from the baseline of the United States, or within 200 km from a U.S.-licensed fixed service offshore installation. Transmissions may be controlled by the ESV network control and monitoring center. The frequency coordinator may decide whether ESV operators should automatically cease transmissions if the vessel falls below a prescribed speed within a prescribed geographic area.

(7) ESV transmissions in the 5925–6425 MHz (Earth-to-space) band shall not exceed an EIRP spectral density towards the radio-horizon of 17 dBW/MHz, and shall not exceed an EIRP towards the radio-horizon of 20.8 dBW. The ESV network shall shut-off the ESV transmitter if either the EIRP spectral density towards the radio-horizon or the EIRP towards the radio-horizon is exceeded.

(f) *ESAAs.* The following requirements govern all ESAA operations:

(1) All ESAA terminals operated in U.S. airspace, whether on U.S.-registered civil aircraft or non-U.S.-registered civil aircraft, must be licensed by the Commission. All ESAA terminals on U.S.-registered civil aircraft operating outside of U.S. airspace must

be licensed by the Commission, except as provided by section 303(t) of the Communications Act.

(2) Prior to operations within a foreign nation's airspace, the ESAA operator must ascertain whether the relevant administration has operations that could be affected by ESAA terminals, and must determine whether that administration has adopted specific requirements concerning ESAA operations. When the aircraft enters foreign airspace, the ESAA terminal must operate under the Commission's rules, or those of the foreign administration, whichever is more constraining. To the extent that all relevant administrations have identified geographic areas from which ESAA operations would not affect their radio operations, ESAA operators may operate within those identified areas without further action. To the extent that the foreign administration has not adopted requirements regarding ESAA operations, ESAA operators must coordinate their operations with any potentially affected operations.

(3) For ESAA transmissions in the 14.0–14.5 GHz band from international airspace within line-of-sight of the territory of a foreign administration where fixed service networks have primary allocation in this band, the maximum PFD produced at the surface of the Earth by emissions from a single aircraft carrying an ESAA terminal must not exceed the following values unless the foreign Administration has imposed other conditions for protecting its fixed service stations:

$-132 + 0.5 \cdot \theta$	dB(W/(m^2 · MHz))	For	$\theta \leq 40°$.
-112	dB(W/(m^2 · MHz))	For	$40° < \theta \leq 90°$.

Where: θ is the angle of arrival of the radio-frequency wave (degrees above the horizontal) and the aforementioned limits relate to the PFD under free-space propagation conditions.

§ 100.283 MSS and ATC requirements.

(a) *Construction and pre-operational testing.*

(1) *No construction permit required.* Construction permits are not required for Ancillary Terrestrial Component (ATC) stations. A party with licenses issued under this part for launch and operation of 1.5/1.6 GHz or 1.6/2.4 GHz Mobile-Satellite Service space stations and operation of associated ATC facilities may commence construction of ATC base stations at its own risk after commencing physical construction of the space stations, subject to the requirements of § 1.1312 and part 17 of this chapter.

(2) *Equipment tests.* Such an MSS/ATC licensee may also conduct equipment tests for the purpose of making adjustments and measurements necessary to ensure compliance with the terms of its ATC license, applicable rules in this part, and technical design requirements.

(3) *Notification.* Prior to commencing such construction and pre-operational testing, an MSS/ATC licensee must notify the Commission of the commencement of physical satellite construction and the licensee's intention to construct and test ATC facilities. This notification must be filed electronically in the appropriate file in the ICFS database. The notification must specify the frequencies the licensee proposes to use for pre-operational testing and the name, address, and telephone number of a representative for the reporting and mitigation of any interference resulting from such testing.

(4) *Experimental requirements.* MSS/ATC licensees engaging in pre-operational testing must comply with §§ 5.83, 5.85(c), 5.111, and 5.117 of this chapter regarding experimental operations.

(5) *Compensation.* A n MSS/ATC licensee may not offer ATC service to the public for compensation during pre-operational testing.

(b) *Special Requirements for ATC operations in the 1626.5–1660.5 MHz/1525–1559 MHz bands.*

(1) An ancillary terrestrial component in these bands shall:

(i) In any band segment coordinated for the exclusive use of an MSS applicant within the land area of the U.S., where there is no other L-band MSS satellite making use of that band segment within the visible portion of the geostationary arc as seen from the ATC coverage area, the ATC system will be limited by the in-band and out-of-band emission limitations contained in this section and the requirement to maintain a substantial MSS service.

(ii) In any band segment that is coordinated for the shared use of the applicant's MSS system and another MSS operator, where the coordination agreement existed prior to February 10, 2005 and permits a level of interference to the other MSS system of less than 6% ΔT/T, the applicant's combined ATC and MSS operations shall increase the system noise level of the other MSS to no more then 6% ΔT/T. Any future coordination agreement between the parties governing ATC operation will supersede this paragraph.

(iii) In any band segment that is coordinated for the shared use of the applicant's MSS system and another MSS operator, where a coordination agreement existed prior to February 10, 2005 and permits a level of interference to the other MSS system of 6% ΔT/T or greater, the applicant's ATC operations may increase the system noise level of the other MSS system by no more than an additional 1% ΔT/T. Any future coordination agreement between the parties governing ATC operations will supersede this paragraph.

(iv) In a band segment in which the applicant has no rights under a coordination agreement, the applicant may not implement ATC in that band.

(2) ATC base stations shall not exceed an out-of-channel emissions measurement of −57.9 dBW/MHz at the edge of a MSS licensee's authorized and internationally coordinated MSS frequency assignment.

(3) An applicant for an ancillary terrestrial component in these bands shall:

(i) Demonstrate, at the time of application, how its ATC network will comply with the requirements of footnotes US308 and US315 to the Table of Frequency Allocations contained in § 2.106 of this chapter regarding priority and preemptive access to the L-band MSS spectrum by the aeronautical mobile-satellite en-route service (AMS(R)S) and the global maritime distress and safety system (GMDSS).

(ii) Coordinate with the terrestrial CMRS operators prior to initiating ATC transmissions when co-locating ATC base stations with terrestrial commercial mobile radio service (CMRS) base stations that make use of Global Positioning System (GPS) time-based receivers.

(iii) Provide, at the time of application, calculations that demonstrate the ATC system conforms to the ΔT/T requirements of this section, if a coordination agreement that incorporates the ATC operations does not exist with other MSS operators.

(4) Applicants for an ATC in these bands must demonstrate that ATC base stations shall not:

(i) Exceed a peak EIRP of 31.9–10*log (number of carriers) dBW/200kHz, per sector, for each carrier in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands;

(ii) Exceed an EIRP in any direction toward the physical horizon (not to include man-made structures) of 26.9–10*log (number of carriers) dBW/200 kHz, per sector, for each carrier in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands;

(iii) Exceed a peak EIRP of 23.9 −10*log(number of carriers) dBW/200 kHz, per sector, for each carrier in the 1541.5–1547.5 MHz frequency band;

(iv) Exceed an EIRP toward the physical horizon (not to include man-made structures) of 18.9 −10*log(number of carriers) dBW/200 kHz, per sector, for each carrier in the 1541.5–1547.5 MHz frequency band;

(v) Exceed a total PFD level of −56.8 dBW/m^2/200 kHz at the edge of all airport runways and aircraft stand areas, including takeoff and landing paths from all carriers operating in the 1525–1559 MHz frequency bands. The total PFD here is the sum of all power flux density values associated with all carriers in a sector in the 1525–1559 MHz frequency band, expressed in dB(Watts/m^2/200 kHz). Free-space loss must be assumed if this requirement is demonstrated via calculation;

(vi) Exceed a total PFD level of −56.6 dBW/m^2/200 kHz at the water's edge of any navigable waterway from all carriers operating in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands. The total PFD here is the sum of all power flux density values associated with all carriers in a sector in the 1525–1541.5 MHz and 1547.5–1559 MHz frequency bands, expressed in dB(Watts/m^2/200 kHz). Free-space loss must be assumed if this requirement is demonstrated via calculation;

(vii) Exceed a total PFD level of −64.6 dBW/m^2/200 kHz at the water's edge of any navigable waterway from all carriers operating in the 1541.5–1547.5 MHz frequency band. The total PFD here is the sum of all power flux density values associated with all carriers in a sector in the 1541.5–1547.5 MHz frequency band, expressed in dB(Watts/m^2/200 kHz). Free-space loss must be assumed if this requirement is demonstrated via calculation;

(viii) Exceed a peak antenna gain of 16 dBi;

(ix) Generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from −70 dBW/MHz at 1605 MHz to −46 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such base stations shall not exceed −80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from −80 dBW at 1605 MHz to −56 dBW at 1610 MHz. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(5) Applicants for an ancillary terrestrial component in these bands must demonstrate, at the time of the application, that ATC base stations shall use left-hand-circular polarization antennas with a maximum gain of 16 dBi and overhead gain suppression according to the following:

Angle from direction of maximum gain, in vertical plane, above antenna (degrees)	Antenna discrimination pattern (dB)
0	Gmax.
5	Not to Exceed Gmax −5.
10	Not to Exceed Gmax −19.
15 to 55	Not to Exceed Gmax −27.
55 to 145	Not to Exceed Gmax −30.
145 to 180	Not to Exceed Gmax −26.

Where: Gmax is the maximum gain of the base station antenna in dBi.

(6) Prior to operation, ancillary terrestrial component licensees shall:

(i) Provide the Commission with sufficient information to complete coordination of ATC base stations with Search-and-Rescue Satellite-Aided Tracking (SARSAT) earth stations operating in the 1544–1545 MHz band for any ATC base station located either within 27 km of a SARSAT station, or within radio horizon of the SARSAT station, whichever is less.

(ii) Take all practicable steps to avoid locating ATC base stations within radio line of sight of Mobile Aeronautical Telemetry (MAT) receive sites in order to protect U.S. MAT systems consistent with ITU–R Recommendation ITU–R M.1459. MSS ATC base stations located within radio line of sight of a MAT receiver must be coordinated with the Aerospace and Flight Test Radio Coordinating Council (AFTRCC) for non-Government MAT receivers on a case-by-case basis prior to operation. For government MAT receivers, the MSS licensee shall supply sufficient information to the Commission to allow coordination to take place. A listing of current and planned MAT receiver sites can be obtained from AFTRCC for non-Government sites and through the FCC's IRAC Liaison for Government MAT receiver sites.

(7) ATC mobile terminals shall:

(i) Be limited to a peak EIRP level of 0 dBW and an out-of-channel emissions of −67 dBW/4 kHz at the edge of an MSS licensee's authorized and internationally coordinated MSS frequency assignment.

(ii) Be operated in a fashion that takes all practicable steps to avoid causing interference to U.S. radio astronomy service (RAS) observations in the 1660–1660.5 MHz band.

(iii) Not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from −70 dBW/MHz at 1605 MHz to −46 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such mobile terminals shall not exceed −80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from −80 dBW at 1605 MHz to −56 dBW at 1610 MHz. The EIRP density of carrier-off-state emissions from such mobile terminals shall not exceed −80 dBW/MHz in the 1559–1610 MHz band, averaged over a two-millisecond interval. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband

EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(8) When implementing multiple base stations and/or base stations using multiple carriers, where any third-order intermodulation product of these base stations falls on an L-band MSS band coordinated for use by another MSS operator with rights to the coordinated band, the MSS ATC licensee must notify the MSS operator. The MSS operator may request coordination to modify the base station carrier frequencies, or to reduce the maximum base station EIRP on the frequencies contributing to the third-order intermodulation products. The threshold for this notification and coordination is when the sum of the calculated signal levels received by an MSS receiver exceeds −70 dBm. The MSS receiver used in these calculations can be assumed to have an antenna with 0 dBi gain. Free-space propagation between the base station antennas and the MSS terminals can be assumed and actual signal polarizations for the ATC signals and the MSS system may be used.

(c) *Special requirements for ATC operations in the 1610–1626.5 MHz/2483.5–2500 MHz bands.*

(1) An applicant for an ATC in these bands must demonstrate that ATC base stations shall:

(i) Not exceed a peak EIRP of 32 dBW in 1.25 MHz;

(ii) Not cause harmful interference to systems identified in paragraph (c) of this section and, in any case, shall not exceed out-of-channel emissions of −44.1 dBW/30 kHz at the edge of the MSS licensee's authorized frequency assignment;

(iii) At the time of application, that it has taken, or will take steps necessary to avoid causing interference to other services sharing the use of the 2450–2500 MHz band through frequency coordination; and

(iv) Base stations operating in frequencies above 2483.5 MHz shall not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70 dBW/MHz in the 1559–1610 MHz band. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such base stations shall not exceed −80 dBW in the 1559–1610 MHz band. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(2) An applicant for an ancillary terrestrial component in these bands must demonstrate that mobile terminals shall:

(i) Meet the requirements contained to protect radio astronomy service (RAS) observations in the 1610.6–1613.8 MHz band from harmful interference;

(ii) Observe a peak EIRP limit of 1.0 dBW in 1.25 MHz;

(iii) Observe an out-of-channel EIRP limit of −57.1 dBW/30 kHz at the edge of the licensed MSS frequency assignment; and

(iv) For ATC mobile terminals operating in assigned frequencies in the 1610–1626.5 MHz band, not generate EIRP density, averaged over any two-millisecond active transmission interval, greater than −70 dBW/MHz in the 1559–1605 MHz band or greater than a level determined by linear interpolation in the 1605–1610 MHz band, from −70 dBW/MHz at 1605 MHz to −10 dBW/MHz at 1610 MHz. The EIRP, averaged over any two-millisecond active transmission interval, of discrete out-of-band emissions of less than 700 Hz bandwidth from such mobile terminals shall not exceed −80 dBW in the 1559–1605 MHz band or exceed a level determined by linear interpolation in the 1605–1610 MHz band, from −80 dBW at 1605 MHz to −20 dBW at 1610 MHz. The EIRP density of carrier-off-state emissions from such mobile terminals shall not exceed −80 dBW/MHz in the 1559–1610 MHz band, averaged over a two-millisecond interval. A root-mean-square detector function with a resolution bandwidth of one megahertz or equivalent and no less video bandwidth shall be used to measure wideband EIRP density for purposes of this rule, and narrowband EIRP shall be measured with a root-mean-square detector function with a resolution bandwidth of one kilohertz or equivalent.

(3) Applicants for an ancillary terrestrial component to be used in conjunction with an MSS system using CDMA technology shall coordinate the use of the 1.6/2.4 GHz MSS spectrum designated for CDMA systems using the framework established by the ITU in Recommendation ITU–R M.1186.

(4) To avoid interference to an adjacent channel licensee in the Broadband Radio Service (BRS), the power of any ATC base station emission above 2495 MHz shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below.

(i) For base stations, the attenuation shall be not less than 43 + 10 log (P) dB at the upper edge of the authorized ATC band, unless a documented interference complaint is received from an adjacent channel licensee in the BRS. Provided that a documented interference complaint cannot be mutually resolved between the parties, the following additional attenuation requirements shall apply:

(ii) If a pre-existing BRS base station suffers harmful interference from emissions caused by a new or modified ATC base station located 1.5 km or more away, within 24 hours of the receipt of a documented interference complaint the ATC licensee must attenuate its emissions by at least 67 + 10 log (P) dB measured at 3 megahertz above the edge of the authorized ATC band, and shall immediately notify the complaining licensee upon implementation of the additional attenuation.

(iii) If a pre-existing BRS base station suffers harmful interference from emissions caused by a new or modified ATC base station located less than 1.5 km away, within 24 hours of the receipt of a documented interference complaint the ATC licensee must attenuate its emissions by at least 67 + 10 log (P) − 20 log(D_{km}/1.5) dB measured at 3 megahertz above the edge of the authorized ATC band, or if both base stations are co-located, limit its undesired signal level at the pre-existing BRS base station receiver(s) to no more than −107 dBm measured in a 5.5 megahertz bandwidth and shall immediately notify the complaining licensee upon such reduction in the undesired signal level.

(iv) If a new or modified BRS base station suffers harmful interference from emissions caused by a pre-existing ATC base station located 1.5 km or more away, within 60 days of receipt of a documented interference complaint the licensee of the ATC base station must attenuate its base station emissions by at least 67 + 10 log (P) dB measured at 3 megahertz above the edge of the authorized ATC band.

(v) If a new or modified BRS base station suffers harmful interference from emissions caused by a pre-existing ATC base station located less than 1.5 km away, within 60 days of receipt of a documented interference complaint:

(A) the ATC licensee must attenuate its base station emissions by at least 67 + 10 log (P) − 20 log(D_{km}/1.5) dB measured 3 megahertz above the edge of the authorized ATC band, or

(B) if both base stations are co-located, the ATC licensee must limit its undesired signal level at the new or modified BRS base station receiver(s) to

no more than −107 dBm measured in a 5.5 megahertz bandwidth.

(vi) Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately above and adjacent to the 2495 MHz a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided the measured power is integrated over the full required measurement bandwidth (*i.e.,* 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(5) Licensees of terrestrial low-power systems operating in the 2483.5–2495 MHz band shall operate consistent with the technical limits and other requirements.

Note to § 100.283: The requirements adopt in this section are based on cdma2000 and IS–95 system architecture. A licensee may use different system architecture upon demonstration that it will produce no greater potential interference than would be produced in a cdma2000 and IS–95 system architecture.

(d) *Requirements for MES operations in the NVNG, 1.5/1.6 GHz, 1.6/2.4 GHz and 2 GHz MSS bands.*

(1) Any mobile earth station (MES) operating in the 1530–1544 MHz and 1626.5–1645.5 MHz bands must have the following minimum set of capabilities to ensure compliance with Footnote 5.353A in § 2.106 of this chapter and the priority and real-time preemption requirements imposed by Footnote US315 in § 2.106 of this chapter.

(i) All MES transmissions must have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications sharing the band.

(ii) Each MES with a requirement to handle maritime distress and safety data communications must be capable of either:

(A) Recognizing message and call priority identification when transmitted from its associated Land Earth Station (LES), or

(B) Accepting message and call priority identification embedded in the message or call when transmitted from its associated LES and passing the identification to shipboard data message processing equipment.

(iii) Each MES must be assigned a unique terminal identification number that will be transmitted upon any attempt to gain access to a system.

(iv) After an MES has gained access to a system, the mobile terminal must be under control of an LES and must obtain all channel assignments from it.

(v) All MESs that do not continuously monitor a separate signaling channel or signaling within the communications channel must monitor the signaling channel at the end of each transmission.

(vi) Each MES must automatically inhibit its transmissions if it is not correctly receiving separate signaling channel or signaling within the communications channel from its associated LES.

(vii) Each MES must automatically inhibit its transmissions on any or all channels upon receiving a channel-shut-off command on a signaling or communications channel it is receiving from its associated LES.

(viii) Each MES with a requirement to handle maritime distress and safety communications must have the capability within the station to automatically preempt lower precedence traffic.

(2) Any LES for an MSS system operating in the 1530–1544 MHz and 1626.5–1645.5 MHz bands must have the following minimum set of capabilities to ensure compliance with Footnote 5.353A and the priority and real-time preemption requirements imposed by Footnote US315 in § 2.106 of this chapter. An LES fulfilling these requirements must not have any additional priority with respect to FSS stations operating with other systems.

(i) LES transmissions to MESs must have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications pursuant to paragraph (a) of this section.

(ii) The LES must recognize the priority of calls to and from MESs and make channel assignments taking into account the priority access that is given to maritime distress and safety communications.

(iii) The LES must be capable of receiving the MES identification number when transmitted and verifying that it is an authorized user of the system to prohibit unauthorized access.

(iv) The LES must be capable of transmitting channel assignment commands to the MESs.

(v) The communications channels used between the LES and the MES shall have provision for signaling within the voice/data channel, for an MES that does not continuously monitor the LES signaling channel during a call.

(vi) The LES must transmit periodic control signals to MESs that do not continuously monitor the LES signaling channel.

(vii) The LES must automatically inhibit transmissions to an MES to which it is not transmitting in a signaling channel or signaling within the communications channel.

(viii) The LES must be capable of transmitting channel-shut-off commands to MESs on signaling or communications channels.

(ix) Each LES must be capable of interrupting, and if necessary, preempting ongoing routine traffic from an MES in order to complete a maritime distress, urgency or safety call to that MES.

(x) Each LES must be capable of automatically turning off one or more of its associated channels in order to complete a maritime distress, urgency or safety call.

(3) No person without an FCC license for such operation may transmit to a space station in the NVNG, 1.5/1.6 GHz, 1.6/2.4 GHz, or 2 GHz MSS from anywhere in the United States except to receive service from the holder of a pertinent FCC blanket license or from another party with the permission of such a blanket licensee.

(e) *Operations of MES and ATC transmitters or transceivers on board civil aircraft.*

(1) Operation of any of the following devices aboard civil aircraft is prohibited, unless the device is installed in a manner approved by the Federal Aviation Administration or is used by the pilot or with the pilot's consent:

(i) Earth stations capable of transmitting in the 1.5/1.6 GHz, 1.6/2.4 GHz, or 2 GHz MSS frequency bands;

(ii) ATC terminals capable of transmitting in the 1.5/1.6 GHz or 1.6/2.4 GHz MSS bands;

(iii) Earth stations used for non-voice, non-geostationary MSS communication that can emit radiation in the 108–137 MHz band.

(2) No portable device of any type identified in paragraph (a) of this section (including transmitter or transceiver units installed in other devices that are themselves portable) may be sold or distributed to users unless it conspicuously bears the following warning: ''This device must

be turned off at all times while on board aircraft.'' For purposes of this section, a device is portable if it is a ''portable device'' as defined in § 2.1093(b) of this chapter or is designed to be carried by hand.

§ 100.284 Requirements for ancillary terrestrial components in Mobile-Satellite Service networks operating in the 1.5./1.6 GHz and 1.6/2.4 GHz Mobile-Satellite Service.

(a) *Technical certifications or showings.* Applicants for ancillary terrestrial component authority shall demonstrate that the applicant does or will comply with the following through certification or explanatory technical exhibit, as appropriate:

(1) ATC shall be deployed in the forward-band mode of operation whereby the ATC mobile terminals transmit in the MSS uplink bands and the ATC base stations transmit in the MSS downlink bands in portions of the 1626.5–1660.5 MHz/1525–1559 MHz bands (L-band) and the 1610–1626.5 MHz/2483.5–2500 MHz bands.

Note to paragraph (a)(1): An L-band MSS licensee is permitted to apply for ATC authorization based on a non-forward-band mode of operation provided it is able to demonstrate that the use of a non-forward-band mode of operation would produce no greater potential interference than that produced as a result of implementing the rules of this section. A 1.6/2.4 GHz band licensee is permitted to apply for ATC authorization on a non-forward-band mode of operation where the equipment deployed will meet the requirements of paragraph (c)(4) of this section.

(2) ATC operations shall be limited to certain frequencies:

(i) In the 1626.5–1660.5 MHz/1525–1559 MHz bands (L-band), ATC operations are limited to the frequency assignments authorized and internationally coordinated for the MSS system of the MSS licensee that seeks ATC authority.

(ii) In the 1610–1626.5 MHz/2483.5–2500 MHz bands, ATC operations are limited to the 1610–1617.775 MHz, 1621.35–1626.5 MHz, and 2483.5–2495 MHz bands and to the specific frequencies authorized for use by the MSS licensee that seeks ATC authority.

(3) ATC operations shall not exceed the geographical coverage area of the Mobile-Satellite Service network of the applicant for ATC authority.

(4) ATC base stations shall comply with all applicable antenna and structural clearance requirements established in part 17 of this chapter.

(5) ATC base stations and mobile terminals shall comply with part 1 of this chapter, Subpart I—Procedures Implementing the National Environmental Policy Act of 1969, including the guidelines for human exposure to radio frequency electromagnetic fields as defined in §§ 1.1307(b) and 1.1310 of this chapter for PCS networks.

(6) ATC base station operations shall use less than all available MSS frequencies when using all available frequencies for ATC base station operations would exclude otherwise available signals from MSS space-stations.

(b) *Additional certifications.* Applicants for an ATC shall demonstrate that the applicant does or will comply with the following criteria through certification:

(1) *Geographic and temporal coverage.*

(i) For the L-band, an applicant must demonstrate that it can provide space-segment service covering all 50 states, Puerto Rico, and the U.S. Virgin Islands one-hundred percent of the time, unless it is not technically possible for the MSS operator to meet the coverage criteria from its orbital position.

(ii) For the 1.6/2.4 GHz Mobile-Satellite Service bands, an applicant must demonstrate that it can provide space-segment service to all locations as far north as 70° North latitude and as far south as 55° South latitude for at least 75% of every 24-hour period, *i.e.,* that at least one satellite will be visible above the horizon at an elevation angle of at least 5° for at least 18 hours each day, and on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, *i.e.,* that at least one satellite will be visible above the horizon at an elevation angle of at least 5° at all times.

(2) *Replacement satellites.*

(i) Operational NGSO MSS ATC systems shall maintain an in-orbit spare satellite.

(ii) Operational GSO MSS ATC systems shall maintain a spare satellite on the ground within one year of commencing operations and launch it into orbit during the next commercially reasonable launch window following a satellite failure.

(iii) All MSS ATC licensees must report any satellite failures, malfunctions or outages that may require satellite replacement within ten days of their occurrence.

(3) *Commercial availability.* Mobile-satellite service must be commercially available (viz., offering services for a fee) in accordance with the coverage requirements that pertain to each band as a prerequisite to an MSS licensee's offering ATC service.

(4) *Integrated services.* MSS ATC licensees shall offer an integrated service of MSS and MSS ATC. Applicants for MSS ATC may establish an integrated service offering by affirmatively demonstrating that:

(i) The MSS ATC operator will use a dual-mode handset that can communicate with both the MSS network and the MSS ATC component to provide the proposed ATC service; or

(ii) Other evidence establishing that the MSS ATC operator will provide an integrated service offering to the public.

(5) *In-band operation.*

(i) In the 1.6/2.4 GHz Mobile-Satellite Service bands, MSS ATC is limited to no more than 7.775 MHz of spectrum in the L-band and 11.5 MHz of spectrum in the S-band. Licensees in these bands may implement ATC only on those channels on which MSS is authorized, consistent with the 1.6/2.4 GHz MSS band-sharing arrangement.

(ii) In the L-band, MSS ATC is limited to those frequency assignments available for MSS use in accordance with the Mexico City Memorandum of Understanding, its successor agreements or the result of other organized efforts of international coordination.

(c) *Equipment certification.*

(1) Each ATC mobile station utilized for operation under this part and each transmitter marketed, as set forth in § 2.803 of this chapter, must be of a type that has been authorized by the Commission under its certification procedure for use under this part.

(2) Any manufacturer of radio transmitting equipment to be used in these services may request equipment authorization following the procedures set forth in subpart J of part 2 of this chapter. Equipment authorization for an individual transmitter may be requested by an applicant for a station authorization by following the procedures set forth in part 2 of this chapter.

(3) Licensees and manufacturers shall ensure compliance with the Commission's radio frequency exposure requirements in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. An Environmental Assessment may be required if RF radiation from the proposed facilities would, in combination with radiation from other sources, cause RF power density or field strength in an accessible area to exceed the applicable limits specified in § 1.1310 of this chapter. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be

submitted to the Commission upon request.

(4) Applications for equipment authorization of terrestrial low-power system equipment that will operate in the 2483.5–2495 MHz band shall demonstrate the following:

(i) The transmitted signal is digitally modulated;

(ii) The 6 dB bandwidth is at least 500 kHz;

(iii) The maximum transmit power is no more than 1 W with a peak EIRP of no more than 6 dBW;

(iv) The maximum power spectral density conducted to the antenna is not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission;

(v) Emissions below 2483.5 MHz are attenuated below the transmitter power (P) measured in watts by a factor of at least 40 + 10 log (P) dB at the channel edge at 2483.5 MHz, 43 + 10 log (P) dB at 5 MHz from the channel edge, and 55 + 10 log (P) dB at X MHz from the channel edge where X is the greater of 6 MHz or the actual emission bandwidth;

(vi) Emissions above 2495 MHz are attenuated below the transmitter power (P) measured in watts by a factor of at least 43 + 10 log (P) dB on all frequencies between the channel edge at 2495 MHz and X MHz from this channel edge and 55 + 10 log (P) dB on all frequencies more than X MHz from this channel edge, where X is the greater of 6 MHz or the actual emission bandwidth; and

(vii) Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately above and adjacent to the 2495 MHz a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. If 1 percent of the emission bandwidth of the fundamental emission is less than 1 MHz, the power measured must be integrated over the required measurement bandwidth of 1 MHz. A resolution bandwidth narrower than 1 MHz is permitted to improve measurement accuracy, provided the measured power is integrated over the full required measurement bandwidth (*i.e.,* 1 MHz). The emission bandwidth of the fundamental emission of a transmitter is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(d) *Compliance with other rules.* Applicants for an ancillary terrestrial component authority shall demonstrate that the applicant does or will comply with the provisions of § 1.924 of this chapter and § 100.276 and with this section, as appropriate, through certification or explanatory technical exhibit.

(e) *Limitations on grant timing.* Except as provided for in paragraphs (f) and (g) of this section, no application for an ancillary terrestrial component shall be granted until the applicant has demonstrated actual compliance with the provisions of paragraph (b) of this section. Upon receipt of ATC authority, all ATC licensees shall ensure continued compliance with this section, as appropriate.

(f) *Special provision for operational MSS systems.* Applicants for MSS ATC authority with operational MSS systems that are in actual compliance with the requirements prescribed in paragraphs (b)(1), (b)(2), and (b)(3) of this section at the time of application may elect to satisfy the requirements of paragraphs (b)(4) and (b)(5) of this section prospectively by providing a substantial showing in its certification regarding how the applicant will comply with the requirements of paragraphs (b)(4) and (b)(5) of this section. Notwithstanding paragraph (e) of this section, the Commission may grant an application for ATC authority based on such a prospective substantial showing if the Commission finds that operations consistent with the substantial showing will result in actual compliance with the requirements prescribed in paragraphs (b)(4) and (b)(5) of this section. An MSS ATC applicant that receives a grant of ATC authority pursuant to this paragraph (f) shall notify the Commission within 30 days once it begins providing ATC service. This notification must take the form of a letter formally filed with the Commission in the appropriate MSS license docket and shall contain a certification that the MSS ATC service is consistent with its ATC authority.

(g) *Special provisions for terrestrial low-power systems in the 2483.5–2495 MHz band.*

(1) An operational MSS system that applies for authority to deploy ATC in the 2483.5–2495 MHz band for terrestrial low-power operations satisfying the equipment certification requirements of paragraph (c)(4) of this section is not required to demonstrate compliance with paragraph (b) of this section, except to demonstrate the commercial availability of MSS, without regard to coverage requirements.

(2) An ATC licensee seeking to modify its license to add authority to operate a terrestrial low-power network shall certify in its modification application that its operations will utilize a Network Operating System (NOS), consisting of a network management system located at an operations center or centers. The NOS shall have the technical capability to address and resolve interference issues related to the licensee's network operations by reducing operational power; adjusting operational frequencies; shutting off operations; or any other appropriate means. The NOS shall also have the ability to resolve interference from the terrestrial low-power network to the licensee's MSS operations and to authorize access points to the network, which in turn may authorize access to the network by end-user devices. The NOS operations center shall have a point of contact in the United States available twenty-four hours a day, seven days a week, with a phone number and address made publicly-available by the licensee.

(3) All access points operating in the 2483.5–2495 MHz band shall only operate when authorized by the ATC licensee's NOS, and all client devices operating in the 2483.5–2495 MHz band shall only operate when under the control of such access points.

(h) *Spectrum leasing.* Leasing of spectrum rights by MSS licensees or system operators to spectrum lessees for ATC use is subject to the rules for spectrum manager leasing arrangements (see § 1.9020) as set forth in part 1, subpart X of this chapter (see § 1.9001 *et seq.*). In addition, at the time of the filing of the requisite notification of a spectrum manager leasing arrangement using Form 608 (see §§ 1.9020(e) and 1.913(a)(5)), both parties to the proposed arrangement must have a complete and accurate Form 602 (see § 1.913(a)(2)) on file with the Commission.

§ 100.285 Procedures for resolving harmful interference related to ATC in the 1.5/1.6 GHz and 1.6/2.4 GHz bands.

If harmful interference is caused to other services by ancillary MSS ATC operations, either from ATC base stations or mobile terminals, the MSS ATC operator must resolve any such interference. If the MSS ATC operator claims to have resolved the interference and other operators claim that interference has not been resolved, then the parties to the dispute may petition

the Commission for a resolution of their claims.

§ 100.286 Transmitter identification requirements for video uplink transmissions.

(a) *Analog.* Earth-to-space transmissions carrying video information with analog modulation must be identified through use of an Automatic Transmitter Identification System (ATIS) with an analog identifier or a direct sequence spread spectrum signal. Use of an analog identifier must be in accordance with the following requirements:

(1) The ATIS signal must be a separate subcarrier that is automatically activated whenever any radio frequency signal is transmitted.

(2) The ATIS message must continuously repeat.

(3) The ATIS subcarrier signal must be generated at a frequency of 7.1 MHz ±25 kHz and modulate the uplink radio frequency carrier at a level no less than −26 dB (referenced to the unmodulated carrier).

(4) ATIS subcarrier deviation must not exceed 25 kHz.

(5) The ATIS message protocol must be International Morse Code keyed by a 1200 Hz ±800 Hz tone representing a mark and a message rate of 15 to 25 words per minute. The tone must frequency-modulate the subcarrier signal with the ATIS message.

(6) The ATIS message must include the FCC-assigned call sign of the transmitting earth station, a telephone number providing immediate access to personnel capable of resolving interference or coordination problems, and a unique serial number of ten or more digits programmed into the ATIS message in a permanent manner so that it cannot be readily changed by the operator on duty. Additional information may be included in the ATIS data stream provided the total ATIS message length does not exceed 30 seconds.

(7) Use of a direct sequence spread spectrum ATIS signal must be in accordance with the requirements of this section.

(b) *Digital.* Transmissions of fixed-frequency, digitally modulated video signals with a symbol rate of 128,000/s or more from a temporary-fixed earth station must be identified through use of an ATIS in accordance with the requirements that follow.

(1) The ATIS message must be modulated onto a direct sequence spread spectrum signal in accordance with the DVB–CID standard, ETSI TS 103 129 V1.1.2 (2014–03)

(2) The ATIS message must continuously repeat.

Note 1 to paragraph (b): Paragraph (b) of this section is waived for earth stations using modulators manufactured before August 1, 2017, that cannot be made compliant with the DVB–CID standard by a software upgrade.

(c) *Integration.* ATIS equipment must be integrated into the uplink transmitter chain with a method that cannot easily be defeated.

Miscellaneous Rules

§ 100.290 Satellite Emergency Notification Devices (SENDs).

No device described by the marketer or seller using the terms ''SEND'' or ''Satellite Emergency Notification Device'' may be marketed or sold in the United States unless it complies with the requirements of RTCM 12800.0.

Subpart D—Compliance

§ 100.300 Temporary Measures for Non-Compliance

(a) A space station or earth station operator may be required to temporarily cease radio emissions upon a Commission determination of:

(1) Failure to operate in conformance with the Commission's rules or conditions on a license authorization;

(2) Failure to timely pay any regulatory fee debts without prior Commission approval or request for waiver in advance of the payment deadline; or

(3) During the pendency of an investigation into any potential violation of the Commission's rules or conditions on a license as directed by the Commission.

§ 100.301 Administrative sanctions.

(a) Subject to section 503 of the Communications Act, a forfeiture may be imposed for failure to operate in conformance with the Communications Act, license terms, any conditions imposed on an authorization, or any of the Commission's rules and regulations; or for failure to comply with Commission requests for information needed to complete international coordination or for failure to cooperate in Commission investigations with respect to international coordination.

(b) Subject to section 503 of the Communications Act, a forfeiture will be imposed and the station license may be terminated for malicious transmission of any signal that causes harmful interference with any other radio communications or signals.

(c) Subject to section 312 of the Communications Act, a station license may be revoked for any reason stated in section 312(a) of the Communications Act, including repeated or willful violation of the kind set forth in paragraphs (a) and (b) of this section. The operator of a space station license that has been revoked under this rule part must maintain control of each authorized spacecraft until it has deorbited.

(d) The Commission may prevent a licensee from launching or operating additional satellites or space stations under a space station license for any violation of the kind set forth in paragraphs (a) and (b) of this section until such violation is cured.

(e) The Commission may place a licensee into an authorization freeze status preventing a licensee from receiving any new or additional licenses or authorizations for any violation of the kind set forth in paragraphs (a) and (b) of this section.

(f) Subject to sections 312(a)(1) and 316 of the Communications Act, the Commission may revoke or modify a station license if the grant of the operations requested in the station license was predicated on statements subsequently found to be intentionally false or misleading.

(g) The sanctions specified in paragraphs (a) through (f) of this section will be imposed pursuant to such notice and an opportunity to be heard as is required pursuant to Titles III and V of the Communications Act, the Administrative Procedure Act, and the requirements of due process.

(h) For purposes of this section, the term ''repeated'' and ''willful'' are defined as set out in section 312(f) of the Communications Act, 47 U.S.C. 312(f).

§ 100.302 Automatic termination of station authorization.

(a) All space and earth station licenses shall be automatically terminated in whole or in part without further notice to the licensee upon:

(1) The failure to meet an applicable milestone as specified in § 100.147.

(2) The failure to meet any registration and coordination requirements as specified in § 100.120(c)(2).

(3) The failure to meet any operational requirements for earth stations as specified in §§ 100.270 through 100.286.

(4) The expiration of the license term, unless an application for extension of the license term has been filed with the Commission pursuant to § 100.149.

(5) The removal or alteration of earth station equipment or antennas that renders the earth station not operational for more than 90 days, or upon the occurrence of a failure or anomaly that renders a space station permanently unable to conduct any radiocommunications.

(6) The failure to maintain 50% of the maximum number of NGSO satellites

authorized for service following the 12-year milestone period as functional space stations in authorized orbits, for NGSO satellite system licensees, which failure will result in the termination of authority for the space stations not in orbit as of the date of noncompliance, but allow for replacements pursuant to § 100.149(d).

(7) The failure to provide any SCS on all or some of the SCS authorized frequencies for more than 90 days, for an SCS space station licensee authorized pursuant to § 100.113. In this instance, the authorization will be terminated in whole or in part with respect to the relevant frequencies on which SCS has not be operational for more than 90 days in the United States, unless specific authority is requested.

§ 100.303 Reinstatement.

A station authorization terminated in whole or in part under the provisions of § 100.302 may be reinstated if the Commission, in its discretion, determines that reinstatement would best serve the public interest, convenience, and necessity. Petitions for reinstatement will be considered only if:

(a) The petition is filed within 30 days after the expiration date set forth in § 100.301, whichever is applicable;

(b) The petition explains the failure to file a timely notification or renewal application; and

(c) The petition sets forth with specificity the procedures that have been established to ensure timely filings in the future.

§ 100.304 Cause for termination of interference protection for registered receiving earth stations.

The protection from interference afforded by the registration of a receiving earth station shall be automatically terminated if:

(a) The request for registration is not submitted to the Commission within three months of the completion of the frequency coordination process, except for as provided in § 100.276;

(b) The receiving earth station is not constructed and placed into service within six months after completion of coordination;

(c) The Commission finds that the station has been used less than 50% of the time during any 12 month period;

(d) The Commission finds that the station has been used for an unlawful purpose or otherwise in violation of the Commission's rules, regulations or policies;

(e) The Commission finds that the actual use of the facility is inconsistent with what was set forth in the registrant's application; or

(f) The Commission finds that the frequency coordination exhibit, upon which the granted registration is based, is incomplete or does not conform with established coordination procedures.

[FR Doc. 2025–22019 Filed 12–4–25; 8:45 am]

BILLING CODE 6712–01–P



FEDERAL REGISTER

Vol. 90 Friday,
No. 232 December 5, 2025

Part IV

Department of Transportation

National Highway Traffic Safety Administration

49 CFR Parts 523, 531, 533, et al.
The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule III for Model Years 2022 to 2031 Passenger Cars and Light Trucks; Proposed Rule

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Parts 523, 531, 533, 536, and 537

[NHTSA–2025–0491]

RIN 2127–AM76

The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule III for Model Years 2022 to 2031 Passenger Cars and Light Trucks

AGENCY: National Highway Traffic Safety Administration (NHTSA).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: NHTSA, on behalf of the Department of Transportation (DOT), proposes to substantially recalibrate the Corporate Average Fuel Economy (CAFE) program to realign this program with Congressional intent. That recalibration includes proposing to amend DOT's fuel economy standards for light-duty vehicles for model years (MYs) 2022–2026 and MYs 2027–2031. Consistent with statutory requirements, the fuel economy standards proposed in this rule are founded on light-duty vehicles powered by gasoline and diesel fuels, a category that includes non-plug-in hybrid vehicles. In formulating the proposed standards, NHTSA has not considered, consistent with law, the imputed fuel-economy performance of battery-powered electric vehicles (EVs) or the electric operation of vehicles that use plug-in hybrid electric powertrains, nor compliance credits or adjustments to the two-cycle fuel economy test procedures to account for air conditioning and off-cycle technologies. NHTSA also is proposing to eliminate the inter-manufacturer credit trading system and to amend the light-duty vehicle fleet classification system to allocate vehicles into passenger and non-passenger automobile fleets appropriately, based on their attributes and capabilities, starting in MY 2028. Elimination of unlawful considerations, combined with several of the proposed changes, would significantly improve the capabilities of manufacturers to meet fuel economy standards, better align the program with Congressional intent, and reduce manufacturer incentives to design vehicles and add features that are not desired by American consumers and that have questionable real-world fuel economy benefits. NHTSA is therefore proposing to set fuel economy standards that increase from newly proposed MY 2022 standards at a rate of 0.5 percent per year through MY 2026, followed by 0.25 percent per year through MY 2031, with MY 2027 stringency established as a bridge between the two sets of standards. The reduced stringency increases in later years, coupled with a reevaluation of the coefficients that define the functions governing fuel economy standards, are intended to establish maximum feasible standards in a manner that gains real-world fuel-economy-benefits, while enabling the industry to adapt to the proposed substantial recalibration of the CAFE program. NHTSA projects that the amended standards would correspond to the industry fleetwide average for all light-duty vehicles of roughly 34.5 miles per gallon (mpg) in MY 2031.

DATES:

Comments: Comments are requested on or before January 20, 2026. See the **SUPPLEMENTARY INFORMATION** section on ''Public Participation,'' below, for more information about written comments. In compliance with the Paperwork Reduction Act, NHTSA is also seeking comments on a modification of an existing information collection. For additional information, see the Paperwork Reduction Act section under Section VIII below. All comments relating to the information collection requirements should be submitted to NHTSA and to the Office of Management and Budget (OMB) at the address listed in the **ADDRESSES** section on or before 45 days from date of publication.

Public Hearings: NHTSA will hold one virtual public hearing during the public comment period. The agency will announce the specific date and web address for the hearing in a supplemental **Federal Register** notice. The agency will accept oral and written comments on the rulemaking documents and will also accept comments on the Draft Supplemental Environmental Impact Statement (Draft SEIS) at this hearing. The hearing will start at 9 a.m. Eastern time and continue until everyone has had a chance to speak. See the **SUPPLEMENTARY INFORMATION** section on ''Public Participation,'' below, for more information about the public hearing.

ADDRESSES: For access to the dockets or to read background documents or comments received, please visit *https://www.regulations.gov,* or Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590. The Docket Management Facility is open between 9 a.m. and 4 p.m. Eastern time, Monday through Friday, except Federal holidays.

Comments on the proposed information collection requirements should be submitted to: Office of Management and Budget at *www.reginfo.gov/public/do/PRAMain.* To find this information collection, select ''Currently under Review—Open for Public Comment'' or use the search function. It is requested that comments sent to the OMB also be sent to the NHTSA rulemaking docket identified in the heading of this document.

FOR FURTHER INFORMATION CONTACT: For technical and policy issues, Joseph Bayer, CAFE Program Division Chief, Office of Rulemaking, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590; email: *CAFE_Mbox@dot.gov.* For legal issues, Hannah Fish, NHTSA Office of Chief Counsel, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE, Washington, DC 20590; email: *CAFE_Mbox@dot.gov.*

SUPPLEMENTARY INFORMATION:

TABLE OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Term
4WD	Four Wheel Drive.
AC	Air conditioning.
ACME	Adaptive Cylinder Management Engine.
ADEAC	Advanced Cylinder Deactivation.
ADEACD	Advanced cylinder deactivation on a dual-overhead camshaft engine.
ADEACS	Advanced cylinder deactivation on a single overhead camshaft engine.
ADSL	Advanced Diesel Engine.
AEB	Automatic Emergency Braking.
AEO	Annual Energy Outlook.

TABLE OF ACRONYMS AND ABBREVIATIONS—Continued

Abbreviation	Term
AER	All-Electric Range.
AERO	Aerodynamic Drag Technology.
AERO0	Base Level Aerodynamic Drag Technology.
AERO5	Aerodynamic Drag, 5% Drag Coefficient Reduction.
AERO10	Aerodynamic Drag, 10% Drag Coefficient Reduction.
AERO15	Aerodynamic Drag, 15% Drag Coefficient Reduction.
AERO20	Aerodynamic Drag, 20% Drag Coefficient Reduction.
AFV	Alternative Fuel Vehicle.
AHSS	Advanced High Strength Steel.
AIS	Abbreviated Injury Scale.
AMFA	Alternative Motor Fuels Act of 1988.
AMPC	Advanced Manufacturing Production Tax Credit.
AMTL	Advanced Mobility Technology Laboratory.
Argonne	Argonne National Laboratory.
ANSI	American National Standards Institute.
APA	Administrative Procedure Act.
AT	Automatic Transmission.
AWD	All-Wheel Drive.
BEV	Battery Electric Vehicle.
BGEPA	Bald and Golden Eagle Protection Act.
BISG	Belt Integrated Starter Generator.
BLS	Bureau of Labor Statistics.
BMEP	Brake Mean Effective Pressure.
BSD	Blind Spot Detection.
BSFC	Brake-Specific Fuel Consumption.
BTW	Brake and Tire Wear.
CAA	Clean Air Act.
CAFE	Corporate Average Fuel Economy.
CARB	California Air Resources Board.
CBI	Confidential Business Information.
CEGR	Cooled Exhaust Gas Recirculation.
CFR	Code of Federal Regulations.
CH_4	Methane.
CNG	Compressed Natural Gas.
CO_2	Carbon Dioxide.
COVID–19	Coronavirus disease of 2019.
CPM	Cost Per Mile.
CR	Compression Ratio.
CVC	Clean Vehicle Credits.
CVT	Continuously Variable Transmission.
CW	Curb Weight.
CY	Calendar Year.
CZMA	Coastal Zone Management Act.
DCT	Dual-Clutch Transmission.
DEAC	Dynamic Cylinder Deactivation.
DMC	Direct Manufacturing Costs.
DOE	U.S. Department of Energy.
DOI	U.S. Department of the Interior.
DOHC	Dual-Overhead Camshaft.
DOT	U.S. Department of Transportation.
DSLI	Advanced Diesel Engine With Improvements.
eCVT	Electronic Continuously Variable Transmissions.
EGR	Exhaust Gas Recirculation.
EIA	U.S. Energy Information Administration.
EISA	Energy Independence and Security Act of 2007
E.O.	Executive Order.
EPA	U.S. Environmental Protection Agency.
EPCA	Energy Policy and Conservation Act of 1975.
ESA	Endangered Species Act.
ETDS	Electric Traction Drive System.
EV	Electric Vehicle.
FCEV	Fuel Cell Electric Vehicle.
FCIV	Fuel Consumption Improvement Value.
FCW	Forward Collision Warning.
FEOC	Foreign entity of concern.
FHWA	Federal Highway Administration.
FIP	Federal Implementation Plan.
FRIA	Final Regulatory Impact Analysis.
FTP	Federal Test Procedure.
FWD	Front-wheel Drive.
FWS	U.S. Fish and Wildlife Service.
GCWR	Gross Combined Weight Rating.

TABLE OF ACRONYMS AND ABBREVIATIONS—Continued

Abbreviation	Term
GDP	Gross Domestic Product.
GES	General Estimates System.
GM	General Motors.
GREET	Greenhouse gases, Regulated Emissions, and Energy use in Transportation.
GVWR	Gross Vehicle Weight Rating.
HCR	High Compression Ratio.
HCRD	High Compression Ratio Engine with Cylinder Deactivation.
HCRE	High Compression Ratio Engine with Cooled Exhaust Gas Recirculation.
HEG	High Efficiency Gearbox.
HEV	Hybrid Electric Vehicle.
HFET	Highway Fuel Economy Test.
HP	Horsepower.
HVAC	Heating, Ventilation, and Air Conditioning.
IAV	Ingenieurgesellschaft Auto und Verkehr.
ICCT	International Council on Clean Transportation.
ICE	Internal Combustion Engine.
ICR	Information Collection Request.
IIHS	Insurance Institute for Highway Safety.
IRA	Inflation Reduction Act.
LCA	Lane Change Assist.
LD	Light-Duty.
LDW	Lane Departure Warning.
LDWF	Light-Duty Work Factor.
LFP	Lithium Iron Phosphate.
LIVC	Late Intake Valve Closing.
LKA	Lane Keep Assist.
MAD	Minimum Absolute Deviation.
MAGICC	Model for the Assessment of Greenhouse Gas Induced Climate Change.
MBTA	Migratory Bird Treaty Act.
MDPCS	Minimum Domestic Passenger Car Standard.
MDPV	Medium-Duty Passenger Vehicle.
MOVES	Motor Vehicle Emission Simulator.
mpg	Miles Per Gallon.
mph	Miles Per Hour.
MR	Mass Reduction.
MR0	Base Level Mass Reduction Technology.
MSRP	Manufacturer Suggested Retail Price.
MY	Model Year.
NAAQS	National Ambient Air Quality Standards.
NADA	National Automotive Dealers Association.
NAICS	North American Industry Classification System.
NAS	National Academy of Sciences.
NCE	Non-Criteria Emission.
NEMS	National Energy Modeling System.
NEPA	National Environmental Policy Act.
NHPA	National Historic Preservation Act.
NHTSA	National Highway Traffic Safety Administration.
NMC	Nickel Manganese Cobalt.
NO_X	Nitrogen Oxide.
NPRM	Notice of Proposed Rulemaking.
NRC	National Research Council.
NTTAA	National Technology Transfer and Advancement Act.
NVO	Negative Valve Overlaps.
gpm	gallons per mile.
OC	Off-Cycle.
OCR	Optical Character Recognition.
OEM	Original Equipment Manufacturer.
OHV	Overhead Valve.
OLS	Ordinary Least Square.
OMB	Office of Management and Budget.
OPEC	Organization of the Petroleum Exporting Countries.
ORNL	Oak Ridge National Laboratory.
PAEB	Pedestrian Automatic Emergency Braking.
PC	Passenger Car.
PEF	Petroleum Equivalency Factor.
PHEV	Plug-in Hybrid Electric Vehicle.
$PM_{2.5}$	Particulate matter 2.5 microns or less in diameter.
PPC	Passive Prechamber Combustion.
ppm	parts per million.
PRA	Paperwork Reduction Act of 1995.
PRIA	Preliminary Regulatory Impact Analysis.
ROLL	Tire Rolling Resistance.

TABLE OF ACRONYMS AND ABBREVIATIONS—Continued

Abbreviation	Term
ROLL0	Base Level Tire Rolling Resistance.
ROLL10	Tire Rolling Resistance, 10% Improvement.
ROLL20	Tire Rolling Resistance, 20% Improvement.
ROLL30	Tire Rolling Resistance, 30% Improvement.
RPE	Retail Price Equivalent.
RPM	Revolutions Per Minute.
RRC	Rolling Resistance Coefficient.
RWD	Rear-Wheel Drive.
SAE	Society of Automotive Engineers.
SEC	Securities and Exchange Commission.
SEIS	Supplemental Environmental Impact Statement.
SGDI	Stoichiometric Gasoline Direct Injection.
SHEV	Strong Hybrid Electric Vehicle.
SHEVPS	Power-Split Strong Hybrid Electric Vehicle.
SI	Spark Ignition.
SIP	State Implementation Plan.
SKIP	Refers to skip input in Market Data Input File.
SOC	State of Charge.
SOHC	Single Overhead Camshaft.
SO_X	Sulfur Oxide.
SS12V	12V Micro Hybrid Start-Stop System.
SUV	Sport Utility Vehicle.
SwRI	Southwest Research Institute.
TAR	Technical Assessment Report.
TS&D	Fuel Transportation, Storage, and Distribution.
TSD	Technical Support Document.
TURBO0	Reference baseline turbocharged downsized technology.
TURBO1	Turbocharged downsized technology.
TURBO2	Advanced turbocharged downsized technology.
TURBOAD	Turbocharged engine with advanced cylinder deactivation.
TURBOD	Turbocharged engine with cylinder deactivation.
TURBOE	Turbocharged engine with cooled exhausted recirculation.
UMRA	Unfunded Mandates Reform Act.
U.S.	United States.
U.S.C	Unites States Code.
VCR	Variable Compression Ratio.
Volpe or Volpe Center	Volpe National Transportation Systems Center.
VMT	Vehicle Miles Traveled.
VSL	Value of a Statistical Life.
VTG	Variable Turbo Geometry.
VTGE	Variable Turbo Geometry (Electric).
VVL	Variable Valve Lift.
VVT	Variable Valve Timing.
VWA	Volkswagen Group of America.
ZEV	Zero Emission Vehicle.

Does this action apply to me?

This proposal affects companies that manufacture or sell new passenger automobiles (passenger cars) and non-passenger automobiles (light trucks), as defined under NHTSA's CAFE regulations.[1] Regulated categories and entities include:

[1] *See* 49 CFR part 523.

Category	NAICS Codes[A]	Examples of Potentially Regulated Entities
Industry	336110 336310 336350	Motor Vehicle & Parts Manufacturers.
Industry	811111 811112 811198 423110	Commercial Importers of Vehicles and Vehicle Components.
Industry	335312 336312 336399 811198	Alternative Fuel Vehicle (AFV) Converters.

[A] **North American Industry Classification System (NAICS).**

This list is not intended to be exhaustive but rather provides a guide regarding entities likely to be regulated by this action. To determine whether particular activities may be regulated by this action, you should carefully examine the regulations. You may direct questions regarding the applicability of this action to the persons listed in **FOR FURTHER INFORMATION CONTACT**.

Table of Contents

I. Executive Summary
II. Technical Foundation for the NPRM Analysis
A. Why is NHTSA conducting this analysis?
1. What are the key components of NHTSA's analysis?
2. How do statutory requirements shape NHTSA's analysis?
3. What updated capabilities and assumptions does the current model reflect as compared to the version used in the analysis of the 2024 final rule?
B. What is NHTSA analyzing?
C. What inputs does the compliance analysis require?
1. What inputs does the analysis require for 2022–2026?
2. What inputs does the compliance analysis require for 2027–2031?
a. Technology Options and Pathways
b. Defining Manufacturers' Current Technology Positions in the Analysis Fleet
c. Technology Effectiveness Values
d. Technology Costs
e. Simulating Tax Credits
f. Technology Applicability Equations and Rules
D. Technology Pathways, Effectiveness, and Cost
1. Engine Paths
2. Transmission Paths
3. Hybridization Paths
4. Road Load Reduction Paths
5. Mass Reduction
6. Aerodynamic Improvements
7. Low Rolling Resistance Tires
8. Simulating Air-Conditioning Efficiency and Off-Cycle Technologies
E. Consumer Responses to Manufacturer Compliance Strategies
1. Consumer Responses to Manufacturer Compliance Strategies for 2027–2031
a. Macroeconomic and Consumer Behavior Assumptions
b. Fleet Composition
(1) Sales
(2) Scrappage
c. Changes in Vehicle-Miles Traveled
d. Changes to Fuel Consumption
F. Simulating Emissions Impacts of Regulatory Alternatives
G. Simulating Economic Impacts of Regulatory Alternatives
1. Private Costs and Benefits
2. External Costs and Benefits
H. Simulating Safety Effects of Regulatory Alternatives
1. Mass Reduction Impacts
2. Sales/Scrappage Impacts
3. Rebound Effect Impacts
4. Value of Safety Impacts
III. Regulatory Alternatives Considered in This NPRM
A. General Basis for Alternatives Considered
1. MYs 2022–2026
2. MYs 2027–2031
3. Minimum Domestic Passenger Car Standard Analysis Update
B. Regulatory Alternatives Considered
1. No-Action Alternatives for Passenger Cars and Light Trucks
a. No-Action Alternative for MYs 2022–2026 Amendment
b. No-Action Alternative for MYs 2027–2031 Amendment
2. Action Alternatives for Passenger Cars and Light Trucks
a. Action Alternatives for MYs 2022–2026 Amendment
(1) Alternative 1
(2) Alternative 2—Preferred Alternative
(3) Alternative 3
b. Action Alternatives for MYs 2027–2031 Amendment
(1) Alternative 1
(2) Alternative 2—Preferred Alternative
(3) Alternative 3
IV. Effects of the Regulatory Alternatives
A. Effects of the Regulatory Alternatives for MYs 2022–2026
B. Effects of the Regulatory Alternatives for 2027–2031
1. Effects on Vehicle Manufacturers
2. Effects on Society
3. Physical and Environmental Effects
4. Sensitivity Analysis
V. Basis for NHTSA's Tentative Conclusion That the Proposed Standards Are Maximum Feasible
A. EPCA, as Amended by EISA
1. Administrative Provisions Governing CAFE Standard Setting
a. Lead Time, Amendatory Authority, and Number of Model Years for Which Standards May Be Set at a Time
b. Separate Standards for Passenger Automobiles and Non-Passenger Automobiles
c. Minimum Standards for Domestic Passenger Automobiles
d. Attribute-Based Standards Defined by a Mathematical Function
2. Maximum Feasible Standards
a. Technological Feasibility
b. Economic Practicability
c. The Effect of Other Motor Vehicle Standards of the Government on Fuel Economy
d. The Need of the United States to Conserve Energy
(1) Consumer Costs and Fuel Prices
(2) National Balance of Payments
(3) Environmental Effects
(4) Foreign Policy Implications
e. Factors That NHTSA Is Prohibited From Considering
f. Additional Considerations Relevant to NHTSA's Statutory Determination of Maximum Feasibility
B. Other Statutory Requirements
1. Administrative Procedure Act
2. National Environmental Policy Act
C. Evaluating the Statutory Factors and Other Considerations to Arrive at the Proposed Standards
1. Why is NHTSA's tentative conclusion different from the 2020, 2022, and 2024 final rules?
2. Considerations Justifying the Proposed Standards
a. Technological Feasibility and the Effect of Other Motor Vehicle Standards of the Government on Fuel Economy

b. Economic Practicability and Safety (Both Independently and as a Subset of Economic Practicability)
c. The Need of the United States To Conserve Energy
3. Draft Supplemental Environmental Impact Statement Analysis Results
D. Severability
VI. Compliance and Enforcement
A. Background and Overview of Compliance and Enforcement
B. Proposed Changes to the CAFE Program
1. Modification of Vehicle Classification in the CAFE Program
a. Non-Passenger Automobile Definition
b. Proposed Changes to Criteria for Off-Highway Capability
c. Proposed Changes to Criteria for Functional Performance
(1) Automobiles With Three or More Rows of Seating
(2) Light-Duty Work Factor
2. Removal of Credit Trading in the CAFE Program
3. Technical Amendments To Remove References to EPA's Regulations for AC Efficiency and Off-Cycle Fuel Consumption Improvement Values
4. Modification of Manufacturer Reporting Requirements
C. Technical Amendments
1. Technical Amendments To Remove Residual Mention of Fuel Efficiency Standards for Trailers in NHTSA's Vehicle Classification Regulations
2. Technical Amendment To Remove Heavy-Duty Trailers From the List of Heavy-Duty Vehicle Regulatory Categories
3. Technical Amendments To Remove Civil Penalties for Non-Compliance With Fuel Economy Standards From the CAFE Program
4. Additional Technical Amendments
a. Technical Amendments to Part 523
b. Technical Amendments to Part 531
c. Technical Amendments to Part 533
d. Technical Amendments to Part 536
e. Technical Amendments to Part 537
VII. Public Participation
VIII. Regulatory Notices and Analyses
A. Executive Order 12866, ''Regulatory Planning and Review''; Executive Order 13563, ''Improving Regulation and Regulatory Review''; Executive Order 14192, ''Unleashing Prosperity Through Deregulation''; and Executive Order 14219, ''Ensuring Lawful Governance and Implementing the President's 'Department of Government Efficiency' Deregulatory Initiative''
B. Environmental Considerations
1. National Environmental Policy Act
2. Clean Air Act as Applied to NHTSA's Proposed Rule
3. Endangered Species Act (ESA)
4. Other Regulatory Analyses Discussed in the Draft SEIS
5. Executive Order 13045: ''Protection of Children From Environmental Health Risks and Safety Risks''
6. Executive Order 14154: ''Unleashing American Energy''
7. Executive Order 14173: ''Ending Illegal Discrimination and Restoring Merit-Based Opportunity''
C. Regulatory Flexibility Act
D. Executive Order 13132 (''Federalism'')
E. Executive Order 12988 (''Civil Justice Reform'')
F. Executive Order 13175 (''Consultation and Coordination With Indian Tribal Governments'')
G. Unfunded Mandates Reform Act
H. Regulation Identifier Number
I. National Technology Transfer and Advancement Act
J. Department of Energy Review
K. Paperwork Reduction Act
L. Rulemaking Summary, 5 U.S.C. 553(b)(4)
IX. Regulatory Text

I. Executive Summary

The relationship between the light-duty vehicle market and the CAFE program has gone through several cycles over its almost 50-year history. First created to require conservation of petroleum in response to price shocks caused by the Arab oil embargoes of the 1970s, the CAFE program has led not only to the desired improvements in fuel economy but also created unintended responses from vehicle manufacturers—often to the detriment of consumers.

Over the CAFE program's history, separate standards for the passenger car and light truck fleets (referred to by law as passenger automobiles and non-passenger automobiles) have led manufacturers to reshape the market in unanticipated ways—such as by almost eliminating the production of station wagons (passenger cars that generally have more robust cargo capacity, adding mass and reducing fuel economy) in favor of vehicles like minivans and crossover utility vehicles (considered light trucks, and subject to less stringent standards).

Strict mile-per-gallon-based standards in the program's early years also led manufacturers to seek significant reductions in vehicle size and mass, leading to increased injury or fatality risk for occupants of smaller vehicles involved in a crash.[2] NHTSA sought to mitigate these responses by creating attribute-based standards that relate the ''footprint'' size of vehicles to fuel economy, to some positive effect.

Meanwhile, the U.S. Environmental Protection Agency (EPA) started providing special fuel economy adjustments for technologies that had potential for fuel economy improvements but were not measurable using the laboratory test procedures (*i.e.,* the ''two-cycle'' tests) for vehicle fuel economy. This included accommodating adjustments to efficiency values if manufacturers implemented preferred air conditioning (AC) technologies, and if manufacturers installed special technologies with purported fuel-saving benefits that could not be captured on the aforementioned two-cycle tests, accordingly known as ''off-cycle'' (OC) technologies (*e.g.,* vehicle stop/start functions that shut off the engine when the vehicle has stopped). These regulatory adjustments have led to widespread adoption of technologies with uncertain real-world benefits, added costs, and, in many cases, consumer backlash.

The creation of a system for inter-manufacturer credit trading—intended to improve the cost-effectiveness of the CAFE program by allowing manufacturers that could improve the fuel economy of their fleets more cost-effectively to earn credits for exceeding fuel economy standards and sell those credits to manufacturers that would need to incur higher costs to meet fuel economy standards—has also resulted in a windfall for EV-exclusive manufacturers that sell credits to other non-EV manufacturers, which in turn pay for those credits with capital that could be invested toward improving the fuel economy performance or other desirable attributes of their traditional fleets. The enormous fuel economy values assigned to EVs have, heretofore, been included in the baseline fleet fuel economy for subsequent CAFE rulemakings upon which stringency increases are applied—thereby significantly increasing the fuel economy requirements for traditional gasoline- or diesel-fueled fleets.[3]

At the same time, the classification system that has long divided the fleet between passenger cars (intended to

[2] Transportation Research Board and National Research Council, Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards, National Academies Press: Washington, DC (2002), available at: *https://nap.nationalacademies.org/catalog/10172/effectiveness-and-impact-of-corporate-average-fuel-economy-cafe-standards* (accessed: Feb. 7, 2024). This report describes at length and quantifies the potential safety problem with average fuel economy standards that specify a single numerical requirement for the entire industry, noting that smaller and lighter vehicles incentivized by those standards could be less safe for their occupants.

[3] In a hypothetical and simplified example, if the baseline passenger car fleet of vehicles with an identical footprint consisted of nine gasoline-powered vehicles achieving 30 mpg and one EV achieving 150 mpg, the baseline fleet to which stringency increases would apply would be measured at 42 mpg. When CAFE standards are set unlawfully considering EV fuel economy, manufacturers of gasoline-powered vehicles would face a challenge in catching up to the overall fleet fuel economy, requiring disproportionate investment in fuel-saving technologies, and incentivizing the purchase of regulatory credits from the EV manufacturer.

move passengers) and light trucks (intended to move cargo or operate off road) no longer lives up to its anticipated use. Indeed, while 68 percent of the light-duty fleet meets the current light truck regulatory definition, the majority of these vehicles (*e.g.,* all-wheel drive (AWD) crossover utility vehicles, vehicles with three or more rows of seating, and vehicles that do not have an approach angle high enough to handle an off-highway obstacle) cannot realistically operate off road and have little value moving cargo. Instead, most of these vehicles are designed and intended primarily to move passengers but have additional features solely to meet regulatory definitions [4]—resulting in little added functionality, reduced fuel economy performance, added cost, and a fairly homogenous design language lacking in creativity.

While the CAFE program was intended to push manufacturers to improve fuel economy while preserving their ability to design and produce vehicles that meet market demands, the system has spun off its axis and requires recalibration. Instead of allowing manufacturers to design and produce vehicles they believe their customers will want and need, while spreading real-world fuel economy improvements across their fleets, the system has increasingly led manufacturers to try to fit square vehicle pegs in round classification holes to force the adoption of technologies that do not meet the demands of American families simply to obtain on-paper fuel economy improvements that may have little basis in reality. All of this adds inefficiency and cost—pushing even more consumers out of an already unaffordable new car market.

By delegation of authority from the Secretary of Transportation (the Secretary), NHTSA is proposing to amend the previously promulgated CAFE standards applicable to passenger and non-passenger automobiles (colloquially referred to as passenger cars and light trucks, and together known as light-duty vehicles) produced for MYs 2022–2026 and MYs 2027–2031. Proposing amended standards beginning with MY 2022 is consistent with the Secretary's direction in the January 28, 2025, memorandum titled ''Fixing the CAFE Program'' and is also the earliest model year for which NHTSA has not concluded CAFE compliance proceedings; additional discussion regarding NHTSA's proposal to amend standards beginning in MY 2022 can be found in Section V.

Consistent with the terms of the CAFE program mandated in the Energy Policy and Conservation Act (EPCA), as amended by the Energy Independence and Security Act (EISA) and other laws (codified in chapter 329 of title 49, United States Code), the fuel economy standards proposed herein are founded on light-duty vehicles powered by gasoline and diesel fuels, a category that includes non-plug-in hybrid vehicles.[5] In formulating the proposed standards, NHTSA has not considered the imputed fuel-economy performance of EVs or the electric operation of plug-in hybrid electric vehicles (PHEVs). This approach marks a change from previous rulemakings, as described above, but brings the CAFE program into compliance with statutory restrictions.

This proposed rule fulfills NHTSA's statutory obligation to set CAFE standards at the maximum feasible level that the agency determines vehicle manufacturers can achieve in each model year, balancing four key factors: technological feasibility, economic practicability, the need of the Nation to conserve energy, and the effect of other Federal regulations on fuel economy.[6] This balancing must take into account current and projected circumstances and cannot consider the availability of alternative fuel technologies (*e.g.,* EVs or PHEV electric operation), or compliance credits.[7] This action is also consistent with Executive Order (E.O.) 14148, ''Initial Rescissions of Harmful Executive Orders and Actions,'' [8] and E.O. 14154, ''Unleashing American Energy,'' [9] as well as the Secretarial memorandum titled ''Fixing the CAFE Program.'' [10]

The standards presented in this proposal significantly differ from those finalized in the 2020, 2022, and 2024 rules because, in formulating those prior standards, NHTSA considered both the fuel economy of EVs and PHEVs and compliance credits that could be earned when a manufacturer over-complied with an applicable fuel economy standard impermissibly. As a result, the fuel economy standards previously established by NHTSA for passenger cars and light trucks for MYs 2022–2031 failed to satisfy substantive statutory requirements. NHTSA is proposing in this NPRM the ''maximum feasible'' amended fuel economy requirements for the model years in question that best reflect and balance the various practical considerations and limitations mandated for the CAFE program.

This rulemaking is intended to establish maximum feasible fuel economy standards while restoring the functionality intended by Congress. It marks a significant reset. As an initial matter, NHTSA proposes to remove consideration of prohibited technologies and credits from every aspect of the standards development process to bring the program back within its statutory constraints. NHTSA discussed extensively its prior unlawful consideration of prohibited technologies and credits in the standards development process in the final rule, *Resetting the Corporate Average Fuel Economy Program,*[11] and includes a more detailed discussion in Section V, below.

NHTSA is proposing to remove consideration of AC efficiency and OC fuel consumption improvement values (FCIVs) from its standard-setting analysis starting with MY 2028, which is the first year in which a removal of FCIVs could go into effect.[12] This change will ensure that NHTSA's CAFE standards are achievable without the implementation of technologies not demanded by consumers and with questionable fuel economy benefits.

The agency also proposes to eliminate the inter-manufacturer credit trading program (which is authorized, but not required, by 49 U.S.C. 32903(f)) beginning with MY 2028. This change in the program is long overdue. While NHTSA does not consider the availability of credits or credit trading in

[4] Section VI discusses NHTSA's proposal to amend regulatory definitions for passenger and non-passenger automobiles in detail and includes examples of manufacturers excluding or including specific features solely to meet regulatory definitions. Two examples discussed in more detail in Section VI include manufacturers discontinuing FWD versions of vehicles after NHTSA properly reclassified over 1 million FWD automobiles as passenger automobiles in line with EPCA and opting to instead manufacture only AWD or 4WD versions to keep more of their products in the non-passenger automobile fleets (74 FR 14196, Mar. 30, 2009), and manufacturers including aerodynamic technologies to increase on-highway functionality instead of opting to meet approach angle requirements, which would make the vehicle more capable of approaching off-highway obstacles and, thus, more off-highway capable.

[5] Non-plug-in hybrid vehicles are not dual-fueled vehicles under Chapter 329 because any electricity generated by the electric motors or other electric components are generated solely by the petroleum-fueled engine and the batteries are incapable of charging from an external source: ''a vehicle which is entirely dependent on a petroleum fuel for its motive power, regardless of whether electricity is used in the powertrain, is powered by petroleum.'' 63 FR 66066 (Dec. 1, 1998).

[6] 49 U.S.C. 32902(a) and (f).

[7] 49 U.S.C. 32902(h).

[8] 90 FR 8237 (Jan. 28, 2025).

[9] 90 FR 8353 (Jan. 29, 2025).

[10] See DOT, Memorandum: Fixing the CAFE Program (2025), available at: *https://www.transportation.gov/briefing-room/memorandum-fixing-cafe-program* (accessed: Sept. 10, 2025).

[11] 90 FR 24518 (June 11, 2025).

[12] 49 U.S.C. 32904(d).

establishing standards, the agency believes that eliminating inter-manufacturer credit trading will encourage manufacturers to provide for steady improvement in fuel economy across their fleets over time, as opposed to relying upon credits acquired from third-party EV manufacturers. NHTSA recognizes that manufacturers have made investments in particular compliance pathways—pathways that may include purchasing credits from other manufacturers even though the availability of those credits is uncertain—and is proposing this change beginning with MY 2028 to provide manufacturers with adequate transition time, in recognition of any particular reliance interests in the trading program to achieve compliance, before the program ends. However, NHTSA is proposing standards in this notice at levels that do not consider the use of compliance credits, thus minimizing any impacts that this change may have on manufacturers' decisions about compliance pathways. Moreover, this change will not impact automakers' ability to *transfer* earned credits between different categories of vehicles in their own fleets or carry their own credits forwards and backwards across model years, as prescribed by statute.

The agency also proposes a substantial reclassification of the light-duty fleet in a manner intended by Congress in creating the CAFE program—with the passenger car fleet consisting of vehicles primarily designed to move people, and the light truck fleet consisting of vehicles primarily designed to operate off road or move cargo. NHTSA believes these proposed changes are necessary to restore the CAFE program to its intended orbit but recognizes the changes will introduce significant design consideration for manufacturers. Moving a large fraction of vehicles previously classified as light trucks into a manufacturer's passenger vehicle fleet will have a significant effect on the overall fuel economy performance of the manufacturer's passenger fleet—after all, even if based upon the same platform as a passenger car, the additional vehicle height adds significant mass and decreases fuel economy. Meanwhile, removal of vehicles from a manufacturer's light truck fleet will leave that fleet consisting of even heavier and less aerodynamic vehicles, such as large sports utility vehicles and pickup trucks, thereby decreasing the overall average fuel economy of the light truck fleet. Accordingly, while a manufacturer's combined overall fleet fuel economy may remain the same, both its passenger car and light truck fleets will necessarily achieve lower measured fuel economy. NHTSA is also proposing to update the classification criteria from technology-based to performance-based standards where applicable, consistent with best practices for regulation. This proposal intends to take these changes into account through amendments to both the footprint curves and standards applicable to various points within the curves. NHTSA intends that, as a result of this proposed update, automobiles classified as non-passenger will exhibit true non-passenger capabilities that display relevant off-highway vehicle attributes such as approach angle and running clearance or include design features that provide higher payload and towing abilities for transporting property.

By surveying the measured fuel economy performance of gasoline- and diesel-powered passenger cars and light trucks produced for the U.S. market in MY 2022, NHTSA has created a maximum feasible foundation from which to establish standards for subsequent model years. NHTSA is proposing to set fuel economy standards that increase from the newly proposed MY 2022 standards at a rate of 0.5 percent per year through MY 2026 followed by 0.25 percent per year through MY 2031, with MY 2027 stringency as a bridge between the two sets of standards.

In addition to the proposed standards (also referred to as the ''Preferred Alternative'') NHTSA considers a range of regulatory alternatives for each fleet, consistent with the agency's obligations under the Administrative Procedure Act (APA), National Environmental Policy Act (NEPA), and E.O. 12866. The regulatory alternatives are as follows:

Table I-1: Regulatory Alternatives Under Consideration for MYs 2022-2031 Passenger Car and Light Truck CAFE Standards[13]

Name of Alternative	Passenger Car Stringency Changes	Light Truck Stringency Changes
No-Action Alternative	1.5% for MY 2023 8% per year for MYs 2024-2025 10% for MY 2026 2% per year for MYs 2027-2031	1.5% for MY 2023 8% per year for MYs 2024-2025 10% for MY 2026 0% per year for MYs 2027-2028 2% per year for MYs 2029-2031
Alternative 1	80% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.1% for MY 2027 0.3% for MY 2028** 0.25% per year for MYs 2029-2031	80% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.8% for MY 2027 0.6% for MY 2028** 0.25% per year for MYs 2029-2031
Alternative 2 (Preferred)	75% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.35% for MY 2027 0.25% for MY 2028** 0.25% per year for MYs 2029-2031	70% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.7% for MY 2027 0.25% for MY 2028** 0.25% per year for MYs 2029-2031
Alternative 3	70% compliance share* MY 2022 0.50% per year for MYs 2023-2026 1.4% for MY 2027 1.5% for MY 2028** 1% per year for MYs 2029-2031	50% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.4% for MY 2027 0.2% for MY 2028** 1% per year for MYs 2029-2031
* Compliance shares were determined based on the production-weighted share of vehicles that met or exceeded their target function value for each regulatory alternative in MY 2022. ** Stringency change reflects the growth rate in class average standard value from MYs 2027-2028.		

NHTSA[13] has concluded tentatively that the levels of standards represented by Alternative 2 are the maximum feasible level for these model years, as discussed in more detail in Section V of this preamble. NHTSA has determined that the proposed standards satisfy the statutory requirements of maximum feasibility across the full range of gasoline- and diesel-powered vehicles currently on the market. These standards will be appropriately stringent in promoting fuel efficiency in the Nation's light-duty vehicle fleet while remaining technologically feasible and economically practicable to achieve without regard to EV dedicated fuel economy or PHEV electric operation. The proposed standards also consider the effect of other Federal regulatory mandates on the fuel economy performance of new motor vehicles, as well as the need of the Nation to conserve energy. NHTSA has tentatively determined that it is both reasonable and congruent with EPCA's energy conservation goals to weigh the need of the United States to conserve energy such that vehicle fuel economy standards require continuous improvements over time, but at sustainable levels for manufacturers, consumers, and society at large. In particular, the diminishing effects attributable to fuel economy improvements from higher standards moderates against weighing the need of the United States to conserve energy too heavily compared to the other statutory factors.[14] Manufacturers have limited supplies of capital for technological advancement and are constrained in recovering those investments by what consumers can afford to pay for technological innovations in new vehicles. Maximum feasible fuel economy standards, when set appropriately weighing economic practicability, should never incentivize manufacturers to add technology that consumers reject at the cost of investments in, or application of, for instance, vehicle safety technologies. Instead, when truly maximum feasible standards apply, manufacturers should be able continually to develop, and apply, both proven fuel-saving and safety-enhancing technologies in such a manner that allows consumers both to desire and to afford the new vehicle.

NHTSA's preliminary conclusion is that this decision best comports with statutory requirements and is justified to reset standards set in final rules issued in 2020, 2022, and 2024, respectively, which were established improperly above the maximum feasible level because NHTSA considered statutorily prohibited factors in establishing those

[13] Percentages in the table represent the year over year reduction in gal/mile applied to the mpg values on the target curves. The reduction in gal/mile results in an increased mpg.

[14] As an example, a vehicle owner who drives a light vehicle 15,000 miles per year and trades in a vehicle with fuel economy of 15 mpg for one with fuel economy of 20 mpg, will reduce their annual fuel consumption from 1,000 gallons to 750 gallons—saving 250 gallons annually. If, however, that owner trades in a vehicle with fuel economy of 30 mpg for one with fuel economy of 40 mpg, then the owner's annual gasoline consumption would drop from 500 gallons/year to 375 gallons/year—a fuel savings of only 125 gallons even though the mpg improvement is twice as large. Going from 40 to 50 mpg would save only 75 gallons/year. Yet each additional fuel economy improvement becomes much more expensive as the easiest to achieve low-cost technological improvement options are exhausted.

standards.[15] Those rules resulted in distortions in the marketplace, which this proposed rule would minimize. These distortions include major non-market-based changes in automobile designs and the introduction of fundamental alterations in their production processes not primarily driven by market demand.

Increasing the stringency of standards at modest annual rates, following a reset to eliminate the consideration of impermissible factors that were applied in setting the current standards, and coupled with a re-examination of the shape of the fuel economy target functions and the vehicle classification definitions, best comports with statutory requirements. Moreover, the level, shape, and applicability of the standards to the proposed passenger and non-passenger automobile fleets are justified by the inappropriate distortions the existing regulations have caused in the marketplace. Those regulations resulted in unnecessary regulatory burdens that did not further statutory purposes because the standards were not attainable for the gasoline- and diesel-powered vehicle fleet.

The proposed CAFE standards remain vehicle-footprint-based, like the current CAFE standards in effect since MY 2011. The footprint of a vehicle is the area calculated by multiplying the wheelbase times the track width, essentially the rectangular area of a vehicle measured from tire to tire where the tires hit the ground. This means that the standards are defined by mathematical equations that represent constrained linear functions relating vehicle footprint to fuel economy targets for passenger cars and light trucks.[16] For this proposal, NHTSA has updated the mathematical functions (*i.e.,* the target curves relating footprint to fuel economy) for passenger cars and light trucks based on the latest available data. NHTSA has concluded preliminarily, based on this data, that the relationship between footprint and fuel economy has shifted from MY 2008 (the model year on which the current curves are based) and it is thus appropriate to modify the mathematical functions accordingly. NHTSA has also updated the functions that would be applied beginning in MY 2028 to reflect changes based on the proposed reclassified fleet.

NHTSA estimates that the proposed standards would correspond to a combined industry fleetwide average of roughly 34.5 mpg in MY 2031 for passenger cars and light trucks.[17] NHTSA notes that this is a projection, since the actual CAFE standards are the footprint target curves for passenger cars and light trucks. This is important because it means that the ultimate fleetwide levels will vary depending on the mix of vehicles that manufacturers produce for sale in those model years. NHTSA also calculates and presents ''estimated achieved'' fuel economy levels, which differ somewhat from the estimated required levels for each fleet, for each year.[18] Note that the industry-average required and achieved values presented below reflect the end of manufacturers' ability to claim AC and FCIV adjustments, beginning in MY 2028, and updated vehicle classification regulatory definitions, which are also applicable beginning in MY 2028.

For simplification, NHTSA provides industry-wide mpg estimates corresponding to the proposed standards in the table below but reiterates that the coefficients that define the mathematical functions comprise the actual standards.

[15] 85 FR 24174 (Apr. 30, 2020); 87 FR 25710 (May 2, 2022); 89 FR 52540 (June 24, 2024).

[16] Generally, passenger cars have more stringent targets than light trucks regardless of footprint, and smaller vehicles will have more stringent targets than larger vehicles because smaller vehicles are generally more fuel efficient. No individual vehicle or vehicle model need meet its target exactly, but a manufacturer's compliance is determined by how its average fleet fuel economy compares to the average fuel economy of the targets of the vehicles it manufactures.

[17] NHTSA notes both that real-world fuel economy is generally 20–30 percent lower than the estimated required CAFE level stated above, since CAFE compliance is evaluated per 49 U.S.C. 32904(c) Testing and Calculation Procedures, which states that the EPA Administrator (responsible under EPCA/EISA for measuring vehicle fuel economy) must use the same procedures used for MY 1975 (weighted 55 percent urban cycle and 45 percent highway cycle) or comparable procedures. Colloquially, this is known as the 2-cycle test. The ''real-world'' or 5-cycle evaluation includes the 2-cycle tests and three additional tests that are used to adjust the city, and highway estimates to account for higher speeds, AC use, and colder temperatures. In addition to calculating vehicle fuel economy, EPA is responsible for providing the fuel economy data that is used on the fuel economy label on all new cars and light trucks, which uses the ''real-world'' values. In 2006, EPA revised the test methods used to determine fuel economy estimates (city and highway) appearing on the fuel economy label of all new cars and light trucks sold in the United States, effective with MY 2008 vehicles.

[18] NHTSA's analysis reflects that almost all manufacturers make the technological improvements prompted by CAFE standards at times that coincide with existing product ''refresh'' and ''redesign'' cycles, rather than unrealistically applying new technology every year regardless of those cycles. It is significantly more cost effective to make fuel economy-improving technology updates when a vehicle is being updated. See the Draft TSD and preamble Section II for additional discussion about manufacturer refresh and redesign cycles.

Table I-2: Estimated Required Average and Estimated Achieved Average of CAFE Levels (mpg) for Passenger Cars and Light Trucks, Preferred Alternative[19]

Model Year	2022[a]	2023[a]	2024	2025[b]	2026[b]	2027	2028[c]	2029	2030	2031
Passenger Car										
Required[d]	36.0	36.0	36.5	36.6	36.8	36.9	37.1	37.2	37.3	37.4
Achieved	39.5	39.2	43.2	-	-	54.3	45.5	45.9	46.1	46.3
Light Truck										
Required[d]	27.7	27.7	27.9	28.0	28.1	28.3	28.4	28.5	28.5	28.6
Achieved	29.8	29.7	32.7	-	-	38.6	31.1	31.5	31.8	32.1
Total LD Fleet										
Required[d]	31.2	29.8	30.1	30.4	30.4	30.4	34.2	34.4	34.4	34.5
Achieved	32.7	32.1	35.4	-	-	42.2	40.4	40.8	41.1	41.3

a: Achieved values do not include the effects of AC and FCIV adjustments.

b: Production for model years not complete. Achieved values neither included nor estimated.

c: Achieved values decline due to removal of AC and FCIV adjustments. Regulatory class achieved values decline due to effects of reclassification.

d: Based on compliance data for MYs 2022-2024. Projected forward for later years using the CAFE Model. MYs 2025-2026 determined using the baseline projection of the fleet in these years and the proposed standards. MYs 2027-2031 determined using the Preferred Alternative's fleet projection and the proposed standards.

To the extent that manufacturers appear to be over-complying with required fuel economy levels in MY 2027, NHTSA notes that this is due to factors including previous application of fuel economy technologies required by standards set improperly for prior model years that unlawfully considered prohibited alternative fuel (*e.g.,* EV) technology applications. Once the program is restored to its intended strictures and standards are established that consider all statutory factors and limitations appropriately, manufacturers that previously applied technologies to meet exaggerated requirements will have relief, while manufacturers that faced certain penalties can continue to improve efficiency to meet maximum feasible standards. NHTSA's review of achieved compliance at the manufacturer level also shows that, while some manufacturers manage to achieve greater over-compliance, other manufacturers are expected to achieve compliance values that will track the levels of the new standards more closely. In addition, NHTSA believes that the proposed standards established for model years prior to the significant MY 2028 fleet reclassification will allow manufacturers to plan strategically with sufficient lead time to manage that transition within their projected model year sales cycles. For all fleets, average requirements and average achieved CAFE levels will depend ultimately on manufacturer and consumer response to standards, technology developments, economic conditions, fuel prices, and other factors.

NHTSA is also proposing new minimum domestic passenger car CAFE standards (MDPCS) for MYs 2022–2026 and MYs 2027–2031 as required by EISA, which are applied to passenger cars that are deemed to be manufactured in the United States. Section 32902(b)(4) of 49 U.S.C. requires NHTSA to project the minimum domestic standard when it promulgates passenger car standards for a model year; these standards are shown in Table I–3 below. NHTSA continues to apply an offset (albeit a far smaller one than was first used in the 2020 final rule and applied to the 2022 and 2024 final rules) when calculating the MDPCSs for MYs 2027–2031, reflecting prior differences between passenger car footprints forecast originally by the agency and passenger car footprints as they occurred in the real world. The proposed minimum domestic passenger car standards (MDPCS) for each model year are as shown in the table below.

Table I-3: Minimum Domestic Passenger Car Standard (mpg)

2022	2023	2024	2025	2026	2027*	2028*	2029*	2030*	2031*
33.1	33.1	33.5	33.7	33.9	33.8	33.9	34.0	34.0	34.1

*Includes 0.7 percent offset

[19] There is no legal requirement for combined passenger car and light truck fleets, but NHTSA presents information this way in recognition of the fact that many readers will be accustomed to seeing such a value.

NHTSA uses the CAFE Compliance and Effects Modeling System (the CAFE Model) developed and maintained by the Volpe National Transportation Systems Center (Volpe Center or Volpe) as a tool for assessing the likely regulatory effects of the proposal and various regulatory alternatives. The Model does not determine which standards satisfy the requirements of EPCA, and no model can predict precisely the engineering configurations automakers are likely to introduce in response to evolving trends in market demand. However, the analysis developed using the CAFE Model provides further support for NHTSA's preliminary judgment that the standards proposed in this rule are the maximum standards that are technologically feasible and economically practicable for the gasoline- and diesel-powered vehicles covered by the proposed rule, considering the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy.

One significant modification from previous standard-setting proceedings and previous applications of the CAFE Model is that NHTSA did not include EVs in the base fleet for analysis purposes and did not consider or model the potential production of EVs as a CAFE compliance strategy for automakers. Section 32902 of chapter 49 directs NHTSA to establish fuel economy standards that are feasible and practicable for gasoline- and diesel-powered vehicles without regard to any reliance on non-gasoline- or diesel-powered alternatives. Automakers, of course, are free to produce EVs in response to market demand, and their production and sale of EVs will earn credit toward compliance with the CAFE standards in accordance with the ''petroleum equivalency factor,'' or ''PEF,'' prescribed by the Department of Energy (DOE).[20]

Additional updates to the CAFE Model and its inputs since the 2024 final rule include updating the Market Data Input File to reflect the change in analysis fleet from MYs 2022–2024, updating the modeling capability to allow for vehicle reclassification, updating the Scenarios Input File to set the value of civil penalties at zero,[21] updating the Parameters Input File to set the monetary value of changes in non-criteria emissions at zero, updating other economic values, such as rebound elasticity and the payback periods, and updating fuel price projections using the 2025 Annual Energy Outlook's (AEO) Alternative Transportation Case. These and other updates are described in more detail in Section II and the Draft TSD.

NHTSA estimates that this proposed rule would reduce the average up-front vehicle costs due to CAFE standards by approximately $900, cutting in half what consumers might expect to pay as a result of increased requirements under the No-Action Alternative. NHTSA also estimates that this rule will be net beneficial economically for society. The tables below summarize estimates of selected impacts viewed from both the MY and calendar year (CY) perspectives,[22] for each of the regulatory alternatives, relative to the No-Action Alternative.

Table I-4: Estimated Monetized Costs and Benefits – Passenger Cars and Light Trucks – MY and CY Perspectives by Alternative and Discount Rate[23]

	Alt. 1		Alt. 2 (Preferred Alternative)		Alt. 3	
Monetized Benefits ($billion)						
	3% DR	7% DR	3% DR	7% DR	3% DR	7% DR
MYs 1985-2031	-85.2	-53.9	-85.1	-53.8	-73.5	-46.5
CYs 2024-2050	-291.2	-157.4	-291.1	-157.4	-256.5	-138.4
Monetized Costs ($billion)						
	3% DR	7% DR	3% DR	7% DR	3% DR	7% DR
MYs 1985-2031	-109.2	-76.1	-109.1	-76.0	-97.1	-67.7
CYs 2024-2050	-393.9	-219.6	-393.8	-219.5	-353.8	-197.2
Monetized Net-Benefits ($billion)						
	3% DR	7% DR	3% DR	7% DR	3% DR	7% DR
MYs 1985-2031	24.0	22.2	24.0	22.2	23.7	21.2
CYs 2024-2050	102.8	62.1	102.8	62.1	97.3	58.8

[20] 49 U.S.C. 32904(a)(2)(B); Public Law 96–185, 93 Stat. 1324 (1980). *https://www.congress.gov/96/statute/STATUTE-93/STATUTE-93-Pg1324.pdf*; 10 CFR part 474.

[21] *See* Public Law 119–21, 139 Stat. 72 (July 4, 2025). *https://www.congress.gov/119/plaws/publ21/PLAW-119publ21.pdf.*

[22] The bulk of the analysis for passenger cars and light trucks presents a ''model year'' perspective rather than a ''calendar year'' perspective. The model year perspective considers the lifetime impacts attributable to all passenger cars and light trucks produced through MY 2031, accounting for the operation of these vehicles over their entire lives (with some MY 2031 vehicles estimated to be in service as late as 2050). This approach emphasizes the role of the model years for which new standards are being proposed. The calendar year perspective, on the other hand, includes the annual impacts attributable to all vehicles estimated to be in service in each calendar year for which the analysis includes a representation of the entire registered light-duty fleet. For this proposed rule, this calendar year perspective covers each of CYs 2024–2050. Compared to the model year perspective, the calendar year perspective includes model years of vehicles produced in the longer term, beyond those model years for which standards are being proposed.

[23] For this and similar tables in this section, net benefits may differ from benefits minus costs due to rounding.

The current estimates of costs and benefits are important considerations, performed as directed by E.O. 12866, and also serve as an informative data point in NHTSA's consideration of the factors that NHTSA is required to balance by statute when determining maximum feasible standards. NHTSA concludes, for the purposes of this proposal, that Alternative 2 is maximum feasible on the basis of these respective factors. NHTSA also considered several sensitivity cases by varying different inputs and concluded that, even when varying inputs resulted in changes to net benefits, those changes were not significant enough to alter the tentative conclusion that Alternative 2 is maximum feasible.

Finally, NHTSA has computed ''annualized'' benefits and costs relative to the No-Action Alternative, as follows:

Table I-5: Estimated Annualized Monetized Costs and Benefits – Passenger Cars and Light Trucks – MY and CY Perspectives by Alternative and Discount Rate[24]

	Alt. 1		Alt. 2 (Preferred Alternative)		Alt. 3	
Monetized Benefits ($billion)						
	3% DR	7% DR	3% DR	7% DR	3% DR	7% DR
MYs 1985-2031	-3.4	-3.9	-3.4	-3.9	-2.9	-3.4
CYs 2024-2050	-15.9	-13.1	-15.9	-13.1	-14.0	-11.5
Monetized Costs ($billion)						
	3% DR	7% DR	3% DR	7% DR	3% DR	7% DR
MYs 1985-2031	-4.4	-5.6	-4.4	-5.6	-3.9	-4.9
CYs 2024-2050	-21.5	-18.3	-21.5	-18.3	-19.3	-16.4
Monetized Net Benefits ($billion)						
	3% DR	7% DR	3% DR	7% DR	3% DR	7% DR
MYs 1985-2031	1.0	1.6	1.0	1.6	0.9	1.6
CYs 2024-2050	5.6	5.2	5.6	5.2	5.3	4.9

Though NHTSA is prohibited from considering the availability of certain flexibilities in making its determination about the levels of CAFE standards that would be maximum feasible, manufacturers have a variety of flexibilities available to aid their compliance. NHTSA is proposing certain changes to these flexibilities and other features of the CAFE program as shown in Table I–6, and as described further in Section VI of this preamble.

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[24] For this and similar tables in this section, net benefits may differ from benefits minus costs due to rounding.

Table I-6: Overview of Changes to CAFE Program

Fleet Performance Requirements			
Component	**Applicable Regulation (Statutory Authority)**	**General Description**	**Proposed Changes in NPRM**
Fuel Economy Standards	49 CFR 531.5 and 49 CFR 533.5 (49 U.S.C. 32902)	Fuel economy standards are footprint-based fleet average standards for each of a manufacturer's compliance category (i.e., domestic passenger automobile, import passenger automobile, and non-passenger automobile), which are expressed in miles per gallon (mpg). NHTSA sets average fuel economy standards that are the maximum feasible for each compliance category and model year (i.e., passenger automobiles and non-passenger automobiles). In setting these standards, NHTSA considers technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the U.S. to conserve energy. NHTSA is precluded from considering the fuel economy of vehicles that operate only on alternative fuels, the portion of operation of a dual-fueled vehicle powered by alternative fuel, and the trading, transferring, or availability of credits.	Amendments to 49 CFR 531.5(a) and 49 CFR 533.5(a) to set standards for MYs 2022-2026 and MYs 2027-2031.
Vehicle Classification	49 CFR part 523	Standards are set for two regulatory categories (i.e., passenger automobiles and non-passenger automobiles). Vehicles are assigned to either the passenger automobile or non-passenger automobile categories based on definitions in EPCA, as implemented through definitions and specific criteria in NHTSA's regulations.	Amendments to 49 CFR part 523 to amend the criteria for non-passenger automobiles.
Minimum Domestic Passenger Car Standards	49 CFR 531.5 (49 U.S.C. 32902(b)(4))	Domestic passenger automobile fleets are required to meet a MDPCS. This standard applies in addition to the footprint-based standard.	Amendments to 49 CFR 531.5(b) to set MDPCS for MYs 2022-2026 and MYs 2027-2031.
Determining Average Fleet Performance			
Component	**Applicable Regulation (Statutory Authority)**	**General Description**	**Proposed Changes in NPRM**
2-Cycle Testing	49 CFR 531.6(a) citing 40 CFR part 600 and 49 CFR 533.6 citing 40 CFR part 600	Vehicle testing is conducted by EPA using the Federal Test Procedure (light-duty FTP or "city" test) and Highway Fuel Economy Test (HFET or "highway" test).	None

	(49 U.S.C. 32904)		
AC Efficiency FCIVs	49 CFR 531.6(b)(1) citing 40 CFR 86.1868-12 and 49 CFR 533.6(c)(1) citing 40 CFR 86.1868-12 (49 U.S.C. 32904)	This adjustment to the results of the 2-cycle testing for fuel consumption improvement from technologies that improve AC efficiency that are not accounted for in the 2-cycle testing. The AC efficiency FCIV program began in MY 2017 for NHTSA. Starting in MY 2027, AC efficiency FCIVs may only be generated by internal combustion engine (ICE) vehicles.	NHTSA is removing consideration of FCIVs from its standard-setting analysis beginning in MY 2028. NHTSA is also proposing technical amendments to 49 CFR 531.6 and 533.6 to remove references to EPA's regulations for AC efficiency FCIVs.
OC FCIVs	49 CFR 531.6(b)(2) and (3) citing 40 CFR 86.1869-12 and 49 CFR 533.6(c)(3) and (4) citing 40 CFR 86.1869-12 (49 U.S.C. 32904)	This adjustment to the results of the 2-cycle testing for fuel consumption improvement from technologies that are not accounted for or not fully accounted for in the 2-cycle testing. The OC FCIV program began in MY 2017 for NHTSA. Starting in MY 2027, OC FCIVs may only be generated by ICE vehicles, with the program phasing out and in ending with MY 2032 under EPA's current regulations.	NHTSA is removing consideration of FCIVs from its standard-setting analysis beginning in MY 2028. NHTSA is also proposing technical amendments to 49 CFR 531.6 and 533.6 to remove references to EPA's regulations for OC FCIVs.
Advanced Full-Size Pickup Truck FCIVs	49 CFR 533.6(c)(2) citing 40 CFR 86.1870-12 (49 U.S.C. 32904)	This adjustment increases a manufacturer's average fuel economy for full-size pickup trucks equipped with hybridized or other performance-based technologies. Manufacturers were eligible to earn these adjustments in MYs 2017-2021 and MYs 2023-2024.	None
Dedicated Alternative-Fueled Vehicles	49 CFR 536.10 citing 40 CFR 600.510-12(c) (49 U.S.C. 32905(a) and (c))	EPA calculates the fuel economy of dedicated alternative fueled vehicles assuming that a gallon of liquid/gaseous alternative fuel is equivalent to 0.15 gallons of gasoline per 49 U.S.C. 32905(a). For BEVs, EPA uses the petroleum equivalency factor as defined by the DOE (*see* 10 CFR 474.3) (per 49 U.S.C. 32904(a)(2)).	None
Dual-Fueled Vehicles	49 CFR 536.10 citing 40 CFR 600.510-12(c) (49 U.S.C. 32905(b), (d), and (e)) and (49 U.S.C. 32906(a))	EPA calculates the fuel economy of dual-fueled vehicles using a utility factor to account for the portion of power energy consumption from the different energy sources. For EVs, EPA uses DOE's petroleum equivalency factor for the electric portion of the vehicle's expected energy use (per 49 U.S.C. 32904(a)(2). Starting in MY 2020 and subject to statutory limit, the average fuel economy of certain dual-fueled vehicles cannot increase a manufacturer's average fuel economy.	None
Earning and Using Credits for Over-compliance and Addressing Shortfalls			
Earning Credits	49 CFR 536.4 (49 U.S.C. 32903(a))	Manufacturers earn credits for each one tenth of mile by which the average fuel economy vehicles in a particular compliance category in a model year	None

		exceeds the applicable fuel economy standard, multiplied by the number of vehicles sold in that compliance category (i.e., fleet).	
Carry-Forward Credits	49 CFR part 536 (49 U.S.C. 32903(a)(2))	Manufacturers may carry forward credits up to five model years into the future.	None
Carry-Back Credits	49 CFR Part 536 (49 U.S.C. 32903(a)(1))	Manufacturers may carry back credits up to three model years into the past.	None
Credit Transfers	49 CFR Part 536 (49 U.S.C. 32903(g))	Manufacturers may transfer credits between their fleets to increase a fleet's average fuel economy by up to 2 mpg. Manufacturers may not use transferred credits to meet the MDPCS (*see* 49 U.S.C. 32903(g)(4) and 49 CFR 536.9).	None
Credit Trading	49 CFR 536.8 (49 U.S.C. 32903(f))	Manufacturers may trade over-compliance credits into fleets of the same compliance category. A manufacturer may then transfer those credits to a different compliance category, but only up to the 2-mpg limit for transfers. Manufacturers may not use traded credits to meet the MDPCS (*see* 49 U.S.C. 32903(f)(2) and 49 CFR 536.9).	Amendments to 49 CFR 536.6 and 536.8 to reflect that beginning in MY 2028 credit trading will no longer be allowed.
Civil Penalties	49 CFR 578.6(h) (49 U.S.C. 32912)	Civil penalties may be assessed for CAFE credit shortfalls that are not resolved through credit flexibilities. Pub. L. 119-21 set civil penalties for the CAFE program to $0 starting in MY 2022.	None[25]

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The following sections of this preamble discuss the technical foundation for NHTSA's analysis, the regulatory alternatives considered in this proposed rule, the estimated effects of the regulatory alternatives, the basis for NHTSA's tentative conclusion that the proposed standards are maximum feasible, and NHTSA's approach to compliance and enforcement. The extensive record for this action consists of this proposed rule, a Draft Technical Support Document (Draft TSD), a Preliminary Regulatory Impact Analysis (PRIA), and a Draft SEIS, along with extensive analytical documentation, supporting references, and many other resources. Most of these resources are available on NHTSA's website,[26] and other references not available on NHTSA's website can be found in the rulemaking docket, the docket number of which is listed at the beginning of this preamble. NHTSA seeks comment on all aspects of this proposal and seeks comment on particular topics where indicated in each Section.

II. Technical Foundation for the NPRM Analysis

A. Why is NHTSA conducting this analysis?

When NHTSA promulgates new regulations or amends its existing regulations, it generally presents an analysis that estimates the impacts of those regulations, including the impacts of other regulatory alternatives it considered during the rulemaking. These analyses derive from statutes such as the APA [27] and the National Environmental Policy Act (NEPA),[28] from Executive orders (such as E.O. 12866),[29] and from other administrative guidance (*e.g.,* Office of Management and Budget (OMB) Circular A–4).[30] For this analysis in particular, EPCA contains several requirements governing the scope and nature of fuel economy standard setting.[31] Among these, some have been in place since EPCA was first signed into law in 1975, some were added in the Alternative Motor Fuels Act of 1988 (AMFA) [32] and in the Energy Policy Act of 1992,[33] and others were added in 2007 when Congress

[25] DOT will update the CAFE civil penalties regulations in 49 CFR 578.6(h) to reflect the statutory amendment in section 40006 of Public Law 119–21 in the next DOT-wide annual civil penalties update rulemaking.

[26] See NHTSA, Corporate Average Fuel Economy, Last revised: 2023, *https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy* (accessed: Sept. 10, 2025).

[27] Codified in 5 U.S.C. 551–559.

[28] Codified in 42 U.S.C. 4321–4347.

[29] Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993).

[30] Office of Management and Budget, Circular A–4 (Sept. 17, 2003), available at: *https://www.whitehouse.gov/wp-content/uploads/2025/08/CircularA-4.pdf* (accessed Sept. 10, 2025).

[31] Public Law 94–163, 89 Stat. 871 (Dec. 22, 1975). *https://www.govinfo.gov/content/pkg/STATUTE-89/pdf/STATUTE-89-Pg871.pdf.*

[32] Public Law 100–494, 102 Stat. 2441 (Oct. 14, 1988). *https://www.govinfo.gov/content/pkg/STATUTE-102/pdf/STATUTE-102-Pg2441.pdf.*

[33] Public Law 102–486, 106 Stat. 2776 (Oct. 24, 1992). *https://www.govinfo.gov/content/pkg/STATUTE-106/pdf/STATUTE-106-Pg2776.pdf.*

passed the EISA.[34] Most recently, One Big Beautiful Bill Act (OB3) amended EPCA's civil penalty provisions.[35]

These statutes contain a variety of requirements for which NHTSA seeks to account in its analysis. NHTSA captures all of these requirements by presenting an analysis that spans a meaningful range of regulatory alternatives; that quantifies a range of technological, economic, and environmental impacts; and that does so in a manner that accounts for various express statutory requirements for the CAFE program (*e.g.,* passenger cars and light trucks must be regulated separately; and the standard for each fleet must be set at the maximum feasible level in each model year). NHTSA's standards are thus supported by, though not dictated by, extensive analysis of potential impacts of the regulatory alternatives under consideration. Together with this preamble, a Draft TSD, a PRIA, and a Draft SEIS provide a detailed enumeration of related analysis methods, estimates, assumptions, and results. These additional analyses can be found in the rulemaking docket for this proposed rule and on NHTSA's website.[36] [37]

This section provides further detail on the key features and components of NHTSA's standard-setting (also known as ''constrained'') analysis. NHTSA's standard-setting analysis reflects statutory limitations on what NHTSA can consider when determining maximum feasible CAFE standards. In determining maximum feasible fuel economy levels, ''the Secretary of Transportation—(1) may not consider the fuel economy of dedicated automobiles; (2) shall consider dual fueled automobiles to be operated only on gasoline or diesel fuel; and (3) may not consider, when prescribing a fuel economy standard, the trading, transferring, or availability of credits.'' [38] NHTSA also conducts an ''unconstrained'' CAFE Model analysis to evaluate, as required by NEPA, the reasonably foreseeable environmental effects of its proposed action and a reasonable range of alternatives that meet the purpose and need for the proposed action.[39] The technical assumptions for EIS simulations are discussed in the Draft EIS Appendix C.

This section also describes how NHTSA's analysis has been constructed specifically to reflect other governing law applicable to CAFE standards, reviews how NHTSA's analysis has been updated to represent relevant statutory provisions more closely, and describes additional technical work recently conducted by the agency. The analysis for this proposed rule aids NHTSA in implementing its statutory obligations, including the weighing of various considerations, by informing decision-makers about the estimated effects of different regulatory alternatives.

1. What are the key components of NHTSA's analysis?

NHTSA's analysis makes use of a range of data (*i.e.,* observations of things that have occurred), estimates (*i.e.,* things that are unknown or may occur in the future), and models (*i.e.,* methods for making estimates). Two examples of *data* include (1) records of actual odometer readings used to estimate annual mileage accumulation at different vehicle ages and (2) CAFE compliance data used as the foundation for the ''reference fleet'' containing, among other things, production volumes and fuel economy levels of specific configurations of specific vehicle models produced for sale in the United States. Two examples of *estimates* include (1) forecasts of future gross domestic product (GDP) growth used, with other estimates, to forecast future vehicle sales volumes and (2) technology cost estimates, which include estimates of the technologies' ''direct cost,'' marked up by a ''retail price equivalent'' factor, to estimate the ultimate cost to consumers of a given fuel-saving technology, and an estimate of ''cost learning effects'' (*i.e.,* the tendency that it will cost a manufacturer less to apply a technology as the manufacturer gains more experience doing so).

In coordination with the DOT Volpe National Transportation Systems Center (Volpe or the Volpe Center), NHTSA uses the CAFE Compliance and Effects Modeling System (CAFE Model or the Model) to simulate and analyze manufacturers' potential responses to new CAFE standards and to estimate various impacts of those responses. NHTSA has used the CAFE Model to perform analyses supporting every CAFE rulemaking since 2001. Working together, NHTSA and Volpe ensure that the CAFE Model's operation reflects the statutory directives discussed in more detail in Section II below.

The CAFE Model first estimates how vehicle manufacturers might respond to a given regulatory scenario; from that potential compliance solution, the system estimates what impact that response will have on fuel consumption, emissions, safety impacts, and economic externalities. The following section summarizes information necessary to understand the analysis, while Draft TSD Chapter 2 and the CAFE Model Documentation present additional details on the Model's operation.

The CAFE Model may be characterized as an integrated system of models that estimate the impact of various policy options. For example, one model estimates manufacturers' responses, another estimates resultant changes in total vehicle sales, and still another estimates resultant changes in fleet turnover (*i.e.,* scrappage). Importantly, the modeling system does not determine the form or stringency of the standards, which must be developed in consideration of statutory factors that must be balanced by policy-makers. Instead, the CAFE Model applies inputs specifying the form and stringency of standards to be analyzed and produces outputs showing the impacts of manufacturers working to meet those standards, which become part of the basis for comparing different potential stringencies. A regulatory scenario, meanwhile, involves specification of the form, or shape, of the standards (*e.g.,* flat standards, or linear or logistic attribute-based standards), scope of passenger car and light truck regulatory classes, and stringency of the standards for each model year to be analyzed. For example, a regulatory scenario may define standards for a particular class of vehicles that increase in stringency by a given percent per year for a given number of consecutive years.

Manufacturer compliance simulation and the ensuing effects estimation, collectively referred to as compliance modeling, encompass numerous subsidiary elements. Compliance simulation begins with a detailed user-provided initial forecast of the vehicle models offered for sale during the simulation period.[40] The compliance simulation then attempts to bring each

[34] Public Law 110–140, 121 Stat. 1492 (Dec. 19, 2007). *https://www.govinfo.gov/content/pkg/STATUTE-121/pdf/STATUTE-121-Pg1492.pdf.*

[35] Public Law 119–21, 139 Stat. 72 (July 4, 2025). *https://www.congress.gov/119/plaws/publ21/PLAW-119publ21.pdf.*

[36] Docket Nos. NHTSA–2025–0491; NHTSA–2025–0490.

[37] See NHTSA, Corporate Average Fuel Economy, Last revised: 2023, available at: *https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy* (accessed: Sept. 10, 2025).

[38] 49 U.S.C. 32902(h).

[39] 42 U.S.C. 4332.

[40] Because the CAFE Model is publicly available, anyone can develop their own initial forecast (or other inputs) for the Model to use. The DOT-developed Market Data Input File that contains the forecast for this proposed rule is available on NHTSA's website at *https://www.nhtsa.gov/corporate-average-fuel-economy/cafe-compliance-and-effects-modeling-system.*

manufacturer into compliance with the standards defined by the regulatory scenario contained within an input file developed by the user.

Estimating impacts involves calculating resulting changes in new vehicle costs, estimating a variety of costs (*e.g.,* for fuel expenditures or reduced or increased technology costs) and effects (*e.g.,* gallons of fuel used by the fleet) occurring as vehicles are driven over their lifetimes before eventually being scrapped, and estimating the monetary value of these effects. Estimating impacts also involves consideration of consumer responses (*e.g.,* the impact of vehicle fuel economy, operating costs, and vehicle price on consumer demand for light-duty vehicles). Both basic analytical elements involve the application of many inputs. Many of these inputs are developed outside of the Model and not by the Model. For example, the Model applies fuel price projections from DOE; it does not estimate fuel prices.

NHTSA also uses EPA's Motor Vehicle Emission Simulator (MOVES) model to estimate ''vehicle'' or ''downstream'' emission factors for criteria pollutants [41] and uses four DOE and DOE-sponsored models to develop inputs to the CAFE Model, including three developed and maintained by DOE's Argonne National Laboratory (Argonne). The agency uses the National Energy Modeling System (NEMS) of DOE's Energy Information Administration (EIA) to estimate fuel prices [42] and uses Argonne's Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model to estimate emissions rates from fuel production and distribution processes.[43] DOT also sponsors Argonne to run its Autonomie full-vehicle modeling and simulation system to estimate the fuel economy impacts for over a million combinations of technologies and vehicle types.[44] The Draft TSD and PRIA describe details of the agency's use of these models. In addition, as discussed in the Draft SEIS accompanying this proposed rule, NHTSA relied on a range of models to estimate various environmental impacts.

To prepare for the analysis that supports this proposed rule, DOT has continued to refine and expand the capabilities of the CAFE Model. As examples, and as discussed in more detail below, the reference fleet uses mid-MY 2024 compliance data (the most recent available data at the time of the analysis) and includes the capability (in addition to capabilities integrated into the modeling system) to account for proposed changes to the regulatory vehicle classification definitions. The analysis also employs separate input files for the modeling runs that NHTSA uses for its standard-setting analysis, which excludes the 49 U.S.C. 32902(h) factors that NHTSA cannot consider (constrained analysis), and the modeling runs that NHTSA uses for its analysis of impacts under the National Environmental Policy Act, which does not exclude the 49 U.S.C. 32902(h) factors (unconstrained analysis), and those input files have been updated accordingly. Common to both analyses are routine updates to dollar year values (*e.g.,* 2021$ to 2024$) or routine updates to gas price projections. Some other updates, like updates to manufacturer credit banks, are confined to the unconstrained analysis only and are discussed further in the Draft SEIS Appendix C. The values of many inputs remain uncertain, and NHTSA has conducted sensitivity analyses around selected inputs to attempt to capture some of that uncertainty. These changes reflect DOT's long-standing commitment to ongoing refinement of its approach to estimating the potential impacts of new CAFE standards. These and other updated analytical inputs are outlined in Section II below and discussed in detail in the Draft TSD and PRIA.

2. How do statutory requirements shape NHTSA's analysis?

Multiple requirements govern the scope and nature of CAFE standard setting; the specific requirements regarding the technical characteristics of CAFE standards and the analysis thereof include, but are not limited to, the following:

Corporate Average Standards: 49 U.S.C. 32902 requires that standards apply to the average fuel economy levels achieved by each manufacturer's fleet of vehicles produced for sale in the United States. The CAFE Model calculates the average fuel economy of each manufacturer's fleet based on estimated production volumes and characteristics, including fuel economy levels of distinct vehicle models that could be produced for sale in the United States.

Separate Standards for Passenger and Non-Passenger Automobiles: 49 U.S.C. 32902 requires DOT to set CAFE standards separately for passenger and non-passenger automobiles. The CAFE Model accounts separately for passenger and non-passenger automobiles, including differentiated standards and compliance.

Attribute-Based Standards: 49 U.S.C. 32902 requires DOT to define CAFE standards for passenger and non-passenger automobiles as mathematical functions expressed in terms of one or more attributes related to fuel economy. This means that, for a given manufacturer's fleet of vehicles produced for sale in the United States in a given regulatory class and model year, the applicable minimum CAFE requirement (*i.e.,* the numerical value of the requirement) is computed based on the applicable mathematical function as well as the mix and attributes of vehicles in the manufacturer's fleet. The CAFE Model accounts for such functions and vehicle attributes explicitly.

Separately Defined Standards for Each Model Year: 49 U.S.C. 32902 requires DOT to set CAFE standards (separately for passenger and non-passenger automobiles) at the maximum feasible levels in each model year. The CAFE Model represents each model year explicitly and accounts for the production relationships between model years. For example, a new engine first applied to a given vehicle model/configuration in MY 2030 most likely will be retained in MY 2031 for that same vehicle model to reflect the fact that manufacturers do not apply brand-new engines to a given vehicle model every single year. The CAFE Model is designed to account for this reality, while still respecting applicable statutory constraints.

Separate Compliance for Domestic and Imported Passenger Car Fleets: 49 U.S.C. 32904 requires EPA to determine average fuel economy separately for each manufacturer's fleet of domestic passenger cars and imported passenger

[41] See *https://www.epa.gov/moves.* This proposed rule uses version MOVES5 (the latest version at the time of analysis), available at *https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves.*

[42] See *https://www.eia.gov/outlooks/aeo/.* This proposed rule uses fuel prices estimated using the Annual Energy Outlook (AEO) 2025 version of NEMS. See *https://www.eia.gov/outlooks/aeo/tables_ref.php.*

[43] Information regarding GREET is available at *https://greet.anl.gov/.* This proposed rule uses the R&D GREET 2023 version.

[44] As part of the Argonne simulation effort, individual technology combinations simulated in Autonomie were paired with Argonne's BatPaC model to estimate the battery cost associated with each technology combination based on characteristics of the simulated vehicle and its level of electrification. Information regarding Argonne's BatPaC model is available at *https://www.anl.gov/cse/electrochemical-chemical-TEA.* In addition, the impact of engine technologies on fuel consumption, torque, and other metrics was characterized using GT–POWER simulation modeling in combination with other engine modeling that was conducted by IAV Automotive Engineering, Inc. (IAV). The engine characterization ''maps'' resulting from this analysis were used as inputs for the Autonomie full-vehicle simulation modeling. Information regarding GT–POWER is available at *https://www.gtisoft.com/gt-power/.*

cars. A passenger car is considered to be domestic or imported based on the definitions provided in 49 U.S.C. 32904. The CAFE Model accounts explicitly for this requirement when simulating manufacturers' potential responses to CAFE standards.

Minimum CAFE Standards for Domestic Passenger Car Fleets: 49 U.S.C. 32902 requires that domestic passenger car fleets also meet a minimum CAFE standard, which is calculated as 92 percent of the average fuel economy projected by the Secretary for the combined passenger car fleet manufactured for sale in the United States by all manufacturers in the model year. This projection is published at the time the standard is promulgated. The CAFE Model accounts explicitly for this requirement.

Statutory Basis for Stringency: 49 U.S.C. 32902 requires DOT to set CAFE standards for passenger and non-passenger automobiles at the maximum feasible levels, considering technological feasibility, economic practicability, the need of the U.S. to conserve energy, and the impact of other motor vehicle standards of the Government on fuel economy. The analysis and balancing of these factors necessarily changes in light of current and projected economic and market conditions. Accordingly, NHTSA has continued to expand and refine its qualitative and quantitative analysis to account for these statutory factors in light of such conditions. For example, the simulations of technology effectiveness reflect the agency's judgment that it would not be economically practicable, appropriate, or cost effective for a manufacturer to ''split'' an engine shared among many vehicle models/configurations into myriad versions each optimized to a single vehicle model/configuration.

Civil Penalties for Noncompliance: 49 U.S.C. 32912 (and implementing regulations) prescribe a rate (in dollars per tenth of a mile per gallon (mpg)) at which the Secretary is to levy civil penalties if a manufacturer fails to comply with a CAFE standard for a given fleet in a given model year. When civil penalties are applicable (*i.e.,* when they are not set by statute to a value of $0, as they have been at the time of this analysis of the proposed rule), the CAFE Model will calculate civil penalties for CAFE shortfalls (if directed to do so by the user). However, as stated, civil penalty values are currently set by statute to a value of $0; therefore, the CAFE Model's calculations will always result in zero civil penalties.

Dual-Fueled and Dedicated Alternative Fuel Vehicles: For purposes of calculating CAFE standards used to determine passenger and non-passenger automobile fleet compliance, 49 U.S.C. 32905 and 32906 specify methods for calculating the fuel economy levels of vehicles operating on alternatives to gasoline or diesel fuels. The CAFE Model can account for these requirements explicitly for each relevant vehicle model. However, 49 U.S.C. 32902 also prohibits consideration of the fuel economy of dedicated alternative fuel vehicle (AFV) models (or the non-gasoline or non-diesel calculated fuel economy of dual-fueled AFVs) when NHTSA determines what levels of passenger and non-passenger automobile CAFE standards are maximum feasible. Therefore, the CAFE Model is run in a manner that excludes dedicated AFV technologies and limits the consideration of a dual-fueled AFV's fuel economy to only its gasoline or diesel operation. NHTSA operates the Model with this limitation when performing the analysis that is used to inform the setting of standards. The CAFE Model can also be run without this analytical constraint, and the agency does so in the NEPA analysis described below.

Creation and Use of Compliance Credits: 49 U.S.C. 32903 provides that manufacturers may earn CAFE ''credits'' by achieving an average fuel economy level beyond that required of a given fleet in a given model year and specifies how these credits may be used to offset the amount by which a different fleet falls short of its corresponding requirement. These provisions allow credits to be ''carried forward'' a maximum of five model years, ''carried back'' a minimum of three model years, transferred between regulated classes, and traded between manufacturers. However, credit use is also subject to specific limits: the statute caps the amount of credit that can be transferred between a manufacturer's fleets and prohibits manufacturers from applying traded or transferred credits to offset a failure to achieve the minimum standard for domestic passenger automobiles. The CAFE Model has the capability to simulate manufacturers' potential use of credits carried forward from prior model years or transferred from other fleets;[45] however, this capability is not used in the standard-setting analysis because 49 U.S.C. 32902 prohibits consideration of manufacturers' potential application of CAFE compliance credits when setting maximum feasible CAFE standards for passenger and non-passenger automobiles.

National Environmental Policy Act (NEPA): The Draft SEIS accompanying this proposed rule documents changes in fuel use and emissions as estimated using the CAFE Model and also documents corresponding estimates—based on the application of other models documented in the Draft SEIS—of environmental impacts of the regulatory alternatives under consideration.

3. What updated capabilities and assumptions does the current Model reflect as compared to the version used in the analysis of the 2024 final rule?

DOT has continued its ongoing effort to refine and expand the capabilities of the CAFE Model for use in analyzing regulatory alternatives as considered in this proposal. Any analysis of regulatory actions that will be implemented several years in the future, and whose benefits and costs accrue over decades, requires many assumptions. Over such time horizons, many, perhaps even most, of the relevant assumptions in such an analysis are inevitably uncertain. To help address this, NHTSA updates the assumptions used in each successive CAFE analysis to reflect the current state of the world more accurately and to apply the best current estimates of future conditions. Accordingly, since the 2024 final rule, DOT has made the following changes to the CAFE Model and its inputs:

- Updating the Market Data Input File to reflect the change in analysis fleet from MYs 2022–2024;
- Updating algorithms and settings to remove statutorily prohibited inputs from the standard-setting analysis and to select between different types of analyses (*i.e.,* constrained and unconstrained);
- Updating the base dollar year from 2021$ to 2024$;
- Updating the capability to exclude plug-in hybrid electric vehicle (PHEV) electricity usage when PHEV fuel economy operation is in gasoline-only mode for standard setting;

[45] Note that the CAFE Model does not simulate the potential for manufacturers to carry CAFE credits back (*i.e.,* borrow) from future model years or acquire and use CAFE compliance credits from other manufacturers. NHTSA believes that there is significant uncertainty in how manufacturers may choose to use these particular flexibilities in the future: for example, while it is reasonably foreseeable that a manufacturer who over-complies in 1 year may ''coast'' through several subsequent years relying on that prior improvement rather than continuing to make technology improvements year after year, it is harder to assume with confidence that manufacturers will rely on future technology investments to offset prior-year shortfalls, or whether and how manufacturers will trade credits with market competitors rather than make their own technology investments.

- Updating the modeling capability to allow for vehicle reclassification;
- Updating the Market Data Input File to include vehicle reclassification;
- Updating the Model to use a bracketed costing approach to determine prices for the five levels of mass reduction (MR);
- Updating the Scenarios Input File to remove AC and OC FCIVs;
- Updating the Market Data Input File to include advanced truck credits for MY 2024 vehicles, noting that those credits sunset after MY 2024 and are therefore only applicable to that one year;
- Updating the Parameters Input File to set the social cost of carbon at zero;
- Updating the Parameters Input File for changes in other economic variables;
- Updating the Scenarios Input File with an adjusted tax credit phase-out timeframe;
- Updating the Scenarios Input File to set civil penalties to zero;
- Updating selected economic assumptions:
  - Rebound elasticity;
  - Payback period;
  - Value of travel time per vehicle; and
  - Numerous other updates based on the 2025 AEO; and
- Updating emission rates based on EPA's ''MOVES5'' model.

These and other updated analytical inputs are discussed in the remainder of this section and in detail in the Draft TSD.

B. What is NHTSA analyzing?

NHTSA is analyzing the effects of different potential CAFE standards on industry, consumers, and society at large. These different potential standards are described as ''regulatory alternatives,'' and, amongst the regulatory alternatives, NHTSA identifies which ones the agency is proposing to select. EPCA, as amended by EISA, expressly requires that CAFE standards for passenger cars and light trucks be based on one or more vehicle attributes related to fuel economy and be expressed in the form of a mathematical function.[46] Thus, the standards (and the regulatory alternatives) for passenger cars and light trucks take the form of fuel economy targets expressed as functions of vehicle footprint (the product of vehicle wheelbase and average track width) that are separate for passenger cars and light trucks.

Under the footprint-based standards, the function defines a fuel economy performance target for each unique footprint combination within a car or truck model type. Using the functions, each manufacturer thus will have an average fuel economy standard for each year that is unique to each of its regulatory fleets (*i.e.,* passenger automobiles and non-passenger automobiles, consistent with 49 U.S.C. 32902(b)), based on the footprint and production volumes of the vehicle models produced by that manufacturer. The functions are negatively sloped, so that larger vehicles (*i.e.,* vehicles with larger footprints) will generally be subject to lower mpg targets than smaller vehicles. This is because smaller vehicles are typically more capable of achieving higher levels of fuel economy, because they tend not to require as much energy to propel the mass necessary to perform their driving task. Although a manufacturer's fleet average standard could be estimated throughout the model year based on the projected production volume of its vehicle fleet (and is estimated as part of EPA's certification process), the standards with which the manufacturer must comply are determined by its final model year production figures. A manufacturer's calculation of its fleet average standards, as well as its fleets' average performance at the end of the model year, will thus be based on the production-weighted average target and performance of each model in its fleet.[47]

For passenger cars, consistent with prior rulemakings, NHTSA is defining fuel economy targets as shown in Equation II–1.

Equation II–1: Passenger Car Fuel Economy Footprint Target Curve

$$\boldsymbol{TARGET_{FE} = \frac{1}{MIN\left[MAX\left(c \times FOOTPRINT + d, \frac{1}{a}\right), \frac{1}{b}\right]}}$$

Where:

$TARGET_{FE}$ is the fuel economy target (in mpg) applicable to a specific vehicle model type with a unique footprint combination,

a is a minimum fuel economy target (in mpg),

b is a maximum fuel economy target (in mpg),

c is the slope (in gallons per mile (or gpm) per square foot) of a line relating fuel consumption (the inverse of fuel economy) to footprint, and

d is an intercept (in gpm) of the same line.

Here, *MIN* and *MAX* are functions that take the minimum and maximum values, respectively, of the set of included values. For example, *MIN*[40, 35] = 35 and *MAX*(40, 25) = 40, such that *MIN*[*MAX*(40, 25), 35] = 35.

For light trucks, also consistent with prior rulemakings, NHTSA is defining fuel economy targets as shown in Equation II–2.

Equation II–2: Light Truck Fuel Economy Footprint Target Curve

$$TARGET_{FE} = \frac{1}{MIN\left[MAX\left(c \times FOOTPRINT + d, \frac{1}{a}\right), \frac{1}{b}\right]}$$

Where:

$TARGET_{FE}$ is the fuel economy target (in mpg) applicable to a specific vehicle model type with a unique footprint combination, and

a, b, c, and d are as for passenger cars, but take values specific to light trucks.

Though the general model of the target function equation is the same for passenger cars and light trucks, and the

[46] 49 U.S.C. 32902(a)(3)(A).

[47] As discussed in prior rulemakings, a manufacturer may have some vehicle models that exceed their target and some that are below their target. Compliance with a fleet average standard is determined by comparing the fleet average standard (based on the production-weighted average of the target levels for each model) with fleet average performance (based on the production-weighted average of the performance of each model). This is inherent in the statutory structure of CAFE, which requires NHTSA to set *corporate average* standards.

same for each model year, the parameters of the function equation differ for cars and trucks.

The parameters defining the general curve shapes have remained the same since the 2012 final rule. NHTSA periodically reconsiders whether to update the mathematical functions but in each prior instance concluded that the existing curves continued to represent the relationship between footprint and fuel economy reasonably. Consistent with the agency's past practice of reviewing the mathematical functions prior to each rulemaking, NHTSA re-examined the curve shapes for this proposal.

More specifically, NHTSA performed descriptive statistical analyses using manufacturer-reported data for the MY 2022 and MY 2024 fleets. NHTSA used the MY 2022 fleet for analysis of curve shapes relevant to the MYs 2022–2027 standards and used the MY 2024 ''reclassified'' fleet for analysis of curve shapes relevant to the MYs 2028–2031 standards. As discussed in more detail in Draft TSD Chapter 1, the proposed updates to NHTSA's vehicle classification regulations beginning in MY 2028 have material impacts on the relationship between fuel economy and footprint for each regulatory class, as expressed by the standards-defining functions.

To estimate the relationship between fuel economy and footprint and to maintain general consistency with analyses of past rules (and the conformance to statutory prohibitions), the agency excluded all diesel engine vehicles and all plug-in electric vehicles, which include plug-in hybrid electric vehicles, battery electric vehicles (BEV), and fuel cell electric vehicles (FCEV), and applied weighting and other adjustments to the fuel consumption and footprint data. Table II–1 summarizes the methodological approaches that NHTSA considered for reassessing the footprint curves.

Table II-1: Summary of Methodological Approaches Considered for Assessing Footprint Curves

Category	Type	Description	Key Considerations
Regression types	Ordinary Least-Squares (OLS)	Regression solution that minimizes squared errors	Describes the average relationship between footprint and fuel economy; outliers receive additional weight.
	Minimum Absolute Deviation (MAD)	Regression solution that minimizes absolute errors	Describes the median relationship between footprint and fuel economy; does not give outliers as much weight as OLS.
Datapoint weighting	Production weights	Data weighted by production volumes of each vehicle model	High production, mass-market vehicles have a greater influence on the footprint curve form than vehicles with lower production levels.
	Model weights	Each vehicle model receives equal weighting	Estimates treat all vehicle model lines equally and therefore measures footprint curves based on vehicle model offerings (i.e., ignores the effect of sales volume).
Vehicle technology levels	Existing technology	Analysis dataset contains information on current observed technology in the baseline fleet	Represents the existing market, including demand factors; retains existing heterogeneity in technology application across the fleet.
	Simulated maximum technology[48]	Analysis dataset derived from simulation modeling that assumes maximum allowable technology, with multiple candidates for technology limits.	Represents the "engineering" relationship between fuel consumption and footprint by limiting heterogeneity in current technology application across the fleet (i.e., this represents the technology frontier for the current fleet).
Controls	Curb weight (CW) to footprint	Removes variation in fuel consumption caused by above/below average CW-to-footprint.	Limits noise in the observed relationship between fuel consumption and footprint that is introduced by manufacturers optimizing other attributes (e.g., increased acceleration); accounts for some of the variation by body style.
	Horsepower (HP) to CW	Removes variation in fuel consumption caused by above/below average HP-to-CW.	
	Both	Removes variation in fuel consumption caused by above/below average CW-to-footprint and HP-to-CW.	

[48] The maximum technology fleet was simulated with the CAFE Model, assuming a MY 2024 fleet and maximum allowable technology application.

NHTSA believes that the ordinary least-squares (OLS) regression framework continues to be an appropriate method for estimating the relationship of footprint to fuel economy. While the agency relied on the minimum absolute deviation (MAD) regression framework in the 2010 final rule to address the effects of ''outlier'' vehicles in the fleet, the agency addresses outlier vehicles in this reconsideration through technology-based exclusions (*i.e.,* by excluding diesels, PHEVs, BEVs, and FCEVs, as mentioned above) and data normalization through the application of controls, including curb weight (CW) to footprint, horsepower (HP) to CW, and both together, depending on the regulatory fleet under consideration, as it has in each of its CAFE rulemaking actions since 2012. The curves also reflect updated fleet data to reset the ''cutpoints,'' or the places at the lowermost and uppermost bounds of vehicle footprint distributions where the standards remain flat (*i.e.,* the mpg target does not continue to increase as footprint decreases, and vice versa). The resulting footprint curves are shown in Section III's discussion of the regulatory alternatives.

As discussed in Draft TSD Chapter 1, NHTSA considers a variety of technical and policy issues when determining the footprint curve shape in any CAFE rulemaking action. For example, standards that decrease sharply with increasing footprint could create incentives for manufacturers to upsize vehicles, since small changes in vehicle footprint would result in a significant change in the vehicle's fuel economy target; conversely, flatter standards could create a significant amount of additional technology burden for larger vehicles to meet fuel economy targets like those of smaller vehicles. That said, NHTSA performed an analysis for the 2024 final rule showing that vehicle footprints, within vehicle types, have been stable on a sales-weighted basis since MY 2012.[49] The biggest increase to within-type footprints was for the sedan/wagon category, which increased by 3.4 percent (or about 2 square feet) from 2012 (for reference, a 1.5-square foot increase would equate to about a 2-inch increase in the track width of a MY 2022 Toyota Corolla). NHTSA concluded that the disconnect between vehicle class-level characteristics and what was being perceived at the fleet level (*i.e.,* vehicles seemingly getting larger) was traceable to the increase in the share of fleet vehicles classified as light trucks relative to the share of passenger cars. Available data indicate that the use of footprint as an attribute did not appear to lead to manufacturers significantly altering the size of their vehicles within vehicle classes and that the major shift in fleet share was not a result of the shape of the footprint curves.

The footprint curve updates for this proposal are intended to ensure that the agency appropriately captures the footprint-to-fuel economy relationship using the most current data. As discussed in Draft TSD Chapter 1, the observed relationship between footprint and fuel economy for both the passenger car and light truck fleets is on average ''flatter'' (*i.e.,* on average, the fuel economy did not vary as much across footprint levels) than the MY 2008 fleet used to create the footprint curves for the past several rules. While the technical concerns and policy trade-offs associated with the curve shapes still hold to some extent, NHTSA believes it is more likely, as shown from the agency's 2024 analysis and the updated analysis presented in Section VI, that any shift in vehicle attributes present in the market over time has not been due to the shapes of curves or the use of footprint as the relevant attribute. NHTSA seeks comments on this belief, as well as the updated footprint curve shape analysis, discussed in more detail in Draft TSD Chapter 1.

Finally, the required CAFE level applicable to a passenger car (either domestic or import) or light truck fleet in a given model year is determined by calculating the production-weighted harmonic average of fuel economy targets applicable to specific vehicle model configurations in the fleet, as shown in Equation II–3.

Equation II–3: Calculation for Required CAFE Level

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_{FE,i}}}$$

Where:

$CAFE_{required}$ is the CAFE level the fleet is required to achieve,

i refers to specific vehicle model configurations in the fleet,

$PRODUCTION_i$ is the number of model configuration i produced for sale in the United States, and

$TARGET_{FE,\ i}$ is the fuel economy target (as defined above) for model configuration i.

Additional details about the specific values defining the mathematical functions and visual representations of the fuel economy target curves are presented in Section III, below.

C. What inputs does the compliance analysis require?

The first step in the agency's analysis of the effects of different levels of fuel economy standards is the compliance simulation. As used throughout this rulemaking, ''compliance simulation'' means the simulation of how manufacturers could comply with different levels of CAFE standards by adding fuel economy-improving technology to an existing fleet of vehicles, using the CAFE Model. The CAFE Model uses a variety of data, including data provided by manufacturers, to simulate final fleet sales and performance.[50]

At the most basic level, a model is a set of equations, algorithms,[51] or other calculations used to make predictions about a complex system. A model may consider various inputs, such as technology costs or other relevant factors, and use those inputs to generate output predictions. NHTSA used two separate approaches for which it is proposing to amend the existing CAFE standards, one for MYs 2022–2026 and one for MYs 2027–2031. The sections

[49] NHTSA, Technical Support Document: Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027 and Beyond and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030 and Beyond, NHTSA: Washington, DC, pp. 1–20 (2024).

[50] When NHTSA uses the phase ''the Model'' throughout this section, NHTSA is referring to the CAFE Model. Any other model is specifically named.

[51] See Merriam-Webster ''algorithm.'' Broadly, an algorithm is a step-by-step procedure for solving a problem or accomplishing some end. More specifically, an algorithm is a procedure for solving a mathematical problem (as of finding the greatest common divisor) in a finite number of steps that frequently involves repetition of an operation.

below discuss the inputs each of those analyses used.

1. What inputs does the analysis require for 2022–2026?

For the MYs 2022–2026 analysis, NHTSA has performed two exercises: first, it has re-evaluated the statistical model used to determine the shape (*i.e.,* slope, intercept, and cutpoints) of the target functions for passenger cars and light trucks. Based on its preferred choice of shape, NHTSA has evaluated the compliance position of manufacturers in MYs 2022–2024 under alternative stringencies and compared results to the manufacturers' achieved average fuel economy in these years. For both exercises, NHTSA relies on compliance data from manufacturer mid-year compliance reports. For its curve fitting analysis, NHTSA uses vehicle model level data on vehicle attributes, including footprint, HP, CW, and 2-cycle fuel economy. NHTSA also uses mid-year estimates of model sales from manufacturer compliance data for this exercise. NHTSA's curve fitting analysis is described in greater detail in Draft TSD Chapter 1. For NHTSA's comparison of achieved fuel economy and proposed standards levels, the agency uses compliance data at the model level for vehicle footprint, 2-cycle fuel economy, and mid-year estimates of vehicle sales.

For MYs 2022–2024, NHTSA uses each proposed standard to calculate vehicle model target function values for each vehicle model in the standard-setting fleet.[52] Consistent with past rulemakings, the agency uses piecewise linear functions of vehicle footprint, which map to a target value of fuel consumption rate in gallons-per-mile.[53] NHTSA determines a vehicle's target fuel economy level in miles per gallon for a given set of standards, and then takes the reciprocal of this value. NHTSA determines the CAFE standards for each manufacturer at the regulatory class level under each alternative by taking the sales-weighted harmonic mean of the relevant models produced by the manufacturer in each regulatory class in each model year. The agency repeats these calculations for each model year under consideration to determine a single value for each regulatory class in which the manufacturer produced vehicles.

NHTSA also computes the MDPCS for each model year by taking the sales-weighted harmonic mean of the model-level target function values for all vehicles in the passenger car fleet in that model year and multiplying the value by 92 percent.[54]

NHTSA determines each manufacturer's achieved fuel economy in miles per gallon separately for each regulatory class using the sales-weighted average of the 2-cycle fuel economy values of all models produced by the manufacturer in the relevant regulatory class. NHTSA then compares this achieved value to the corresponding manufacturer regulatory class standard in each model year to determine whether the fleet of vehicles to which it corresponds would comply with each proposed standard in that model year. To determine the total number of vehicles out of compliance, NHTSA determines compliance for each manufacturer's regulatory fleet in each model year under each proposed alternative, and if a fleet is determined to be out of compliance, the agency sums the total number of vehicles sold in the non-compliant fleet.

As discussed in more detail in Section IV, NHTSA analyzes the difference between each manufacturer's fleet CAFE compliance value and the proposed standard. NHTSA has considered using the CAFE Model to simulate behavior for the MYs 2022–2026 compliance period to estimate how manufacturers and consumers could have responded to different CAFE standards. However, for MYs 2022–2025, production is already closed or is in process, and MY 2026 production plans likely are solidified and underway by the time of this NPRM's publishing. This type of analysis overestimates the ability of manufacturers to optimize in response to the proposed standards for these years and likely leads to different results from the actual outcomes. Thus, simulating a response and any monetized costs or benefits deriving from that do not represent real economic effects from the proposed change in policy.

2. What inputs does the compliance analysis require for 2027–2031?

For the MYs 2027–2031 amendment analysis, NHTSA used the CAFE Model to simulate manufacturers' potential responses to new CAFE standards and to estimate the various impacts of those responses on manufacturers and society. The Model considers various inputs, such as technology effectiveness data, technology costs, and other relevant factors, and uses those inputs to generate output predictions.

NHTSA attempts to ensure that the technology inputs and assumptions that go into the CAFE Model are based on sound science and reliable data and that NHTSA's reasons for using those inputs and assumptions are transparent and understandable to stakeholders. This section and the following section discuss at a high level how the agency generates the technology inputs and assumptions that the CAFE Model uses for the compliance simulation.[55] The Draft TSD, CAFE Model Documentation, CAFE Analysis Autonomie Documentation,[56] and other technical reports supporting this proposed rule discuss the agency's technology inputs and assumptions in more detail.

NHTSA incorporates technology inputs and assumptions either directly in the CAFE Model or in the CAFE Model's various input files. The compliance simulation algorithm is at the heart of the CAFE Model's decisions about how to apply technologies to a manufacturer's vehicles to project how the manufacturer could meet CAFE standards. The compliance simulation algorithm consists of several equations that direct the Model to apply fuel economy-improving technologies to vehicles in a way that simulates how manufacturers might apply those technologies to their vehicles in the real world. The compliance simulation algorithm projects a cost-effective pathway for manufacturers to comply with different levels of CAFE standards, considering the technology present on manufacturers' vehicles now and what technology could be applied to their vehicles in the future. Embedded in the CAFE Model is the universe of technology options that the Model can consider and rules about the order in which it can consider those options, as well as estimates of how effective fuel economy-improving technology is on different types of vehicles (*e.g.,* sedan or pickup truck).

[52] Per 49 U.S.C. 32902(h), dedicated alternative fueled vehicles, such as EVs, are excluded from this analysis. For duel-fueled vehicles, the analysis uses a fuel economy value for the vehicles operating only on gasoline or diesel fuel. *Id.*

[53] See Chapter 1.2 of the Draft TSD discussing footprint functions.

[54] 49 U.S.C. 32902(b)(4).

[55] As explained throughout this section, a NHTSA input is a specific number or datapoint used by the Model, and NHTSA's assumptions are based on judgment after careful consideration of available evidence. An assumption can be an underlying reason for the *use* of a specific datapoint, function, or modeling process. For example, an input might be the fuel economy value of the Ford Mustang, whereas the assumption is that the Ford Mustang's fuel economy value reported in Ford's CAFE compliance data should be used in NHTSA's modeling.

[56] The Argonne report is titled ''Vehicle Simulation Process to Support the Analysis for MY 2027 and Beyond CAFE and MY 2030 and Beyond HDPUV FE Standards.'' However, for ease of use and consistency with the Draft TSD it is referred to as ''CAFE Analysis Autonomie Documentation.''

Technology inputs and assumptions are also located in all four of the CAFE Model Input Files. The Market Data Input File is a spreadsheet file that characterizes the fleet of vehicles used as the starting point for the CAFE Model. There is one row describing each vehicle model and model configuration manufactured for the United States market in a model year (or years) and input and assumption data that links those vehicles to technology and economic, environmental, and safety inputs and assumptions. The Technologies Input File identifies 71 technologies the agency uses in the analysis, along with information used to inform the compliance simulation and effects estimates, including phase-in caps to identify when and how widely each technology can be applied to specific types of vehicles, most of the technology costs (hybrid vehicle battery costs are provided in a separate file), and the fuel share percentage for PHEV to capture the charge sustaining operation. The Scenarios Input File provides the coefficient values defining the standards for each regulatory alternative [57] and other relevant information applicable to modeling each regulatory scenario.[58] Finally, the Parameters Input File contains mainly economic and environmental data.[59]

NHTSA generates these technology inputs and assumptions in several ways, including using data submitted by vehicle manufacturers pursuant to their CAFE reporting obligations; public data on vehicle models from manufacturer websites, press materials, marketing brochures, and other publicly available information; collaborative research, testing, and modeling with other Federal agencies, like Argonne; and research, testing, and modeling with independent organizations, like IAV GmbH Ingenieurgesellschaft Auto und Verkehr (IAV), Southwest Research Institute (SwRI), National Academy of Sciences (NAS), and FEV North America. NHTSA also considers the work done to develop inputs and assumptions for prior rules to the extent it is still relevant and applicable; feedback from stakeholders on prior rules and from meetings conducted before the commencement of this proposed rule; and NHTSA's own engineering judgment. NHTSA uses the term ''engineering judgment'' throughout this rulemaking to refer to decisions made by a team of NHTSA engineers and analysts. This judgment is based on their experience working in the automotive industry and other relevant fields and assessment of all the data sources described above. Most importantly, the agency uses engineering judgment to assess how best to represent vehicle manufacturers' potential responses to different levels of CAFE standards within the boundaries of the agency's modeling tools, as ''a model is meant to simplify reality in order to make it tractable.'' [60] In other words, NHTSA uses engineering judgment to concentrate potential technology inputs and assumptions from millions of discrete data points from hundreds of sources into four external input files and three datasets integrated into the CAFE Model. How the CAFE Model decides to apply technology (*i.e.,* the compliance simulation algorithm), has been developed using engineering judgment, considering factors that manufacturers consider when they add technology to vehicles in the real world. The specific technology inputs and assumptions are discussed in more detail in the following sections and in the associated technical documentation.

a. Technology Options and Pathways

NHTSA begins the compliance analysis by defining the range of fuel economy-improving technologies that the CAFE Model could add to a manufacturer's vehicles in the U.S. market.[61] These are technologies that the agency believes are representative of what vehicle manufacturers currently use on their vehicles, and that vehicle manufacturers could use on their vehicles in the timeframe for the proposed standards (MYs 2027–2031). The technology options include engines, transmissions, hybridization, and road load technologies, which include MR, aerodynamic improvement (aerodynamic drag technology (AERO)), and tire rolling resistance (ROLL) reduction technologies.[62]

Adding a technology to the range of options that the CAFE Model can consider requires several data elements, including a broadly applicable technology definition, estimates of how effective that technology is at improving fuel economy on different vehicle types (*e.g.,* sedan or pickup truck), and the cost to apply that technology to each. Each technology the agency selects is designed to be representative of a wide range of specific technology applications used in the automotive industry. Some manufacturers' systems may perform better or worse than NHTSA's modeled systems, and some may cost more or less than NHTSA's modeled systems. However, selecting representative technology definitions for the agency's analysis ensures the agency captures a reasonable level of costs and benefits that would result from any manufacturer applying the technology.

NHTSA has been refining the technology options it considers since first developing the CAFE Model in 2002. In this context, ''refining'' means both adding and removing technology options depending on current technology availability and projected future availability in the U.S. market, while balancing a reasonable amount of modeling and analytical complexity. In recent years, the agency has refined the internal combustion engine (ICE) technology options, particularly the TURBO and HCR pathways, to reflect better the diversity of engines in the current fleet. Consistent with NHTSA's interpretation of EPCA/EISA, discussed further in Section II.0 and V, the agency includes several hybrid technologies to represent appropriately the diversity of current and anticipated future technology options while ensuring NHTSA's analysis remains consistent with statutory limitations prohibiting the consideration of EVs in establishing standards and considering only the gas or diesel operation of dual fueled automobiles.

The technology options do not include technologies NHTSA has determined will not be available in the rulemaking timeframe. As with past analyses, the agency does not include technologies unlikely to be feasible in the rulemaking timeframe, engine technologies designed for markets other than the United States market required to use unique gasoline,[63] or technologies

[57] The coefficient values are defined in PRIA Chapter 3 for the CAFE standard.

[58] This file also includes information about the amount of fuel consumption improvement values a manufacturer may generate for compliance purposes for model years in which a manufacturer may generate them.

[59] See CAFE Model Documentation for a detailed discussion of what inputs are held in each of the input data files.

[60] Chem. Mfrs. Ass'n v. EPA, 28 F.3d 1259, 1264–65 (D.C. Cir. 1994) (citing Milton Friedman, in Friedman, M., The Methodology of Positive Economics, in Essays in Positive Economics 3, University of Chicago Press: Chicago, IL, pp. 14–15 (1953), available at: *https://www.wiwiss.fu-berlin.de/fachbereich/bwl/pruefungs-steuerlehre/loeffler/Lehre/bachelor/investition/Friedman_the_methology_of_positive_economics.pdf* (accessed: Sept. 10, 2025)).

[61] 40 CFR 86.1806–17, Onboard diagnostics; 40 CFR 86.1818–12, Greenhouse gas emission standards for light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles; Commission Directive 2001/116/EC—European Union emission regulations for new LDVs—including passenger cars and light commercial vehicles (LCV).

[62] Draft TSD Chapter 3 contains discussion on the technology tree and technologies available.

[63] In general, most vehicles produced for sale in the United States have been designed to use ''regular'' gasoline, or 87 octane. See EIA, Gasoline

for which appropriate data are not available for the range of vehicles that the agency models in the analysis (*i.e.,* technologies that are still in the research and development phase and not ready for mass-market production). Each technology section below and Chapter 3 of the Draft TSD discuss these modeling decisions in detail.

In this analysis, the CAFE Model does not dictate or predict the technologies manufacturers must use to comply; rather, the CAFE Model outlines a technology pathway that manufacturers could use to meet the standards cost effectively. While NHTSA estimates the costs and benefits for different levels of CAFE standards based on a simulation of the technology manufacturers could apply in the rulemaking timeframe, it is entirely possible and reasonable that manufacturers may use different technology options to meet the agency's standards in the real world and may even use technologies that NHTSA does not include in the analysis. This is because NHTSA's standards do not mandate the application of any particular technology. Rather, NHTSA's standards are performance-based: manufacturers in the real world can and do use a range of compliance solutions that include technology application and encouraging sales shifts from one vehicle model or trim level to another.[64] The agency has determined that the 71 technology options included in the analysis strike a reasonable balance between representing the diversity of technology used by the entire industry and simplifying reality to make modeling workable.[65]

Chapter 3 of the Draft TSD and Section II.0 below describe the technologies that NHTSA uses for the analysis. Each technology has a name that loosely corresponds to its real-world technology equivalent. NHTSA abbreviates the name to a short signifier for the CAFE Model to read. The agency organizes those technologies into groups based on technology type: basic and advanced engines, transmissions, hybridization, and road load technologies, which include MR, aerodynamic improvement, and low rolling resistance tire technologies.

NHTSA then organizes the groups into pathways. The pathways instruct the CAFE Model how and in what order to apply technology. In other words, the pathways define mutually exclusive technologies (*i.e.,* those that cannot be applied at the same time) and define the direction in which vehicles can advance as the Model evaluates which technologies to apply. The respective technology chapters in the Draft TSD and Section 4 of the CAFE Model Documentation include a visual of each technology pathway. In general, the paths are tied to ease of implementation of additional technology and how closely related the technologies are.

As an example, NHTSA's ''Turbo Engine Path'' consists of five different engine technologies that employ different levels of turbocharging technology. A turbocharger is essentially a small turbine driven by exhaust gases produced by the engine. As these gases flow through the turbocharger, they spin the turbine, which in turn spins a compressor that pushes more air into an engine's cylinders. Having more air in the engine's cylinders allows the engine to burn more fuel, which then creates more power, without needing a physically larger engine. In the agency's analysis, an engine that is turbocharged ''downsizes,'' or becomes smaller. Choosing to turbocharge an engine allows a manufacturer to maintain similar levels of performance to a larger, non-turbocharged engine with a smaller engine that uses less fuel to do the same amount of work. Allowing basic engines to be downsized and turbocharged instead of just turbocharged keeps the vehicle's utility and performance constant so that NHTSA can measure the costs and benefits of different levels of fuel economy improvements, rather than the change in different vehicle attributes. This concept of performance neutrality is discussed further, below.

The Model only allows forward movement along the technology pathways, adding more advanced technology as the Model moves through the technology tree. This ensures that a vehicle that uses a more advanced technology cannot downgrade to a less advanced version of the technology or ensures that a vehicle does not switch to technology that is significantly technically different. This progressive order also realistically represents how manufacturers often start with the lowest and most cost-effective technologies and generally advance along particular technology pathways. As an example, if a vehicle in the compliance simulation begins with a TURBOD engine—a turbocharged engine with cylinder deactivation—it cannot adopt a TURBO0 engine.[66] Similarly, this vehicle with a TURBOD engine cannot adopt an advanced cylinder deactivation on a dual-overhead camshaft engine (ADEACD) engine.[67] As an example of NHTSA's rationale for ordering technologies on the technology tree, an engine could potentially be changed from TURBO0 to TURBO2 without redesigning the engine block or requiring significantly different expertise to design and implement. A change to ADEACD likely would require a different engine block that might not fit in the engine bay of the vehicle without a complete redesign and different technical expertise requiring years of research and development. This change, which would strand capital and impact parts sharing, is why the advanced engine paths restrict most movement between them. The concept of stranded capital is discussed further in Section II.C.2.f.

NHTSA also considers two categories of technology, for model years in which the technology categories are applicable, that the agency could not simulate as part of the CAFE Model's technology pathways. ''Off-cycle'' and AC efficiency are two types of technologies that improve vehicle fuel economy but are not accounted for using 2-cycle testing. To account for the benefits of these technologies, EPA has allowed manufacturers to generate FCIVs when they add these technologies, which are used to improve a manufacturers' certified fuel economy. As an example, manufacturers can generate FCIVs for technology like active seat ventilation and solar reflective surface coatings that make the cabin of a vehicle more comfortable for the occupants without using less efficient accessories like heat or AC. Instead of including OC and AC efficiency technologies in the technology pathways, NHTSA includes the improvement as a defined benefit that gets applied to a manufacturer's entire fleet in applicable model years instead of to individual vehicles. The defined benefit that each manufacturer receives in the analysis for using OC and AC efficiency technology on their vehicles is located in the Market Data

Explained: What is octane?, Last revised: Nov. 17, 2022, available at: *https://www.eia.gov/energyexplained/gasoline/octane-in-depth.php* (accessed: Sept. 10, 2025).

[64] Manufacturers could increase their production of one type of vehicle with higher fuel economy, like the hybrid version of a conventional vehicle model, to meet the standards. For example, Ford has conventional and hybrid versions of its F–150 pickup truck, and Toyota has conventional, hybrid, and plug-in hybrid versions of its RAV4 sport utility vehicle.

[65] For each technology option, the analysis includes distinct technology cost and effectiveness values for 10 different types of vehicles, resulting in nearly half a million different technology effectiveness and cost data points.

[66] TURBO0 is the baseline turbocharged engine and TURBOD is TURBO0 with the addition of cylinder deactivation (DEAC). Chapter 3 of the Draft TSD provides more discussion on engine technologies.

[67] ADEACD is a dual-overhead camshaft engine with advanced cylinder deactivation. Chapter 3 of the Draft TSD provides more discussion on engine technologies.

Input File. Chapter 3.7 of the Draft TSD provides more discussion on how OC and AC efficiency technologies are developed and modeled. Preamble Section VI contains discussion of this program's updates in this rule.

To illustrate how NHTSA simulates technology application, throughout this section NHTSA follows the hypothetical vehicle mentioned above that begins the compliance simulation with a TURBOD engine. The agency's hypothetical vehicle, Generic Motors' Ravine Runner F Series, is a roomy, top-of-the-line sport utility vehicle (SUV). The Ravine Runner F Series starts the compliance simulation with technologies from most technology pathways; specifically, after looking at Generic Motors' website and marketing materials, the agency determines that it has technology that loosely fits within the following technologies that the agency considers in the CAFE Model: it has a turbocharged engine with cylinder deactivation, a fairly advanced 10-speed automatic transmission, a 12V start-stop system, the least advanced tire technology, a fairly aerodynamic vehicle body, and it employs a fairly advanced level of MR. NHTSA tracks the technologies on each vehicle using a ''technology key,'' which is the string of technology abbreviations for each vehicle. The vehicle technologies and their abbreviations that the agency considers in this analysis are shown in Draft TSD Chapter 2. The technology key for the Ravine Runner F Series is ''TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3.''

b. Defining Manufacturers' Current Technology Positions in the Analysis Fleet

The Market Data Input File is one of four Excel input files that the CAFE Model uses for compliance and effects simulation. The Market Data Input File's ''Vehicles'' tab (or worksheet) houses one of the most significant compilations of technology inputs and assumptions in the analysis, which is a characterization of the fleet of vehicle models each manufacturer produced for sale in the United States for MY 2024. This provides the starting point from which the CAFE Model adds fuel economy-improving technology. NHTSA calls this fleet the ''analysis fleet.'' The analysis fleet includes a number of inputs necessary for the Model to add fuel economy-improving technology to each vehicle for the compliance analysis and to calculate the resulting impacts for the effects analysis.

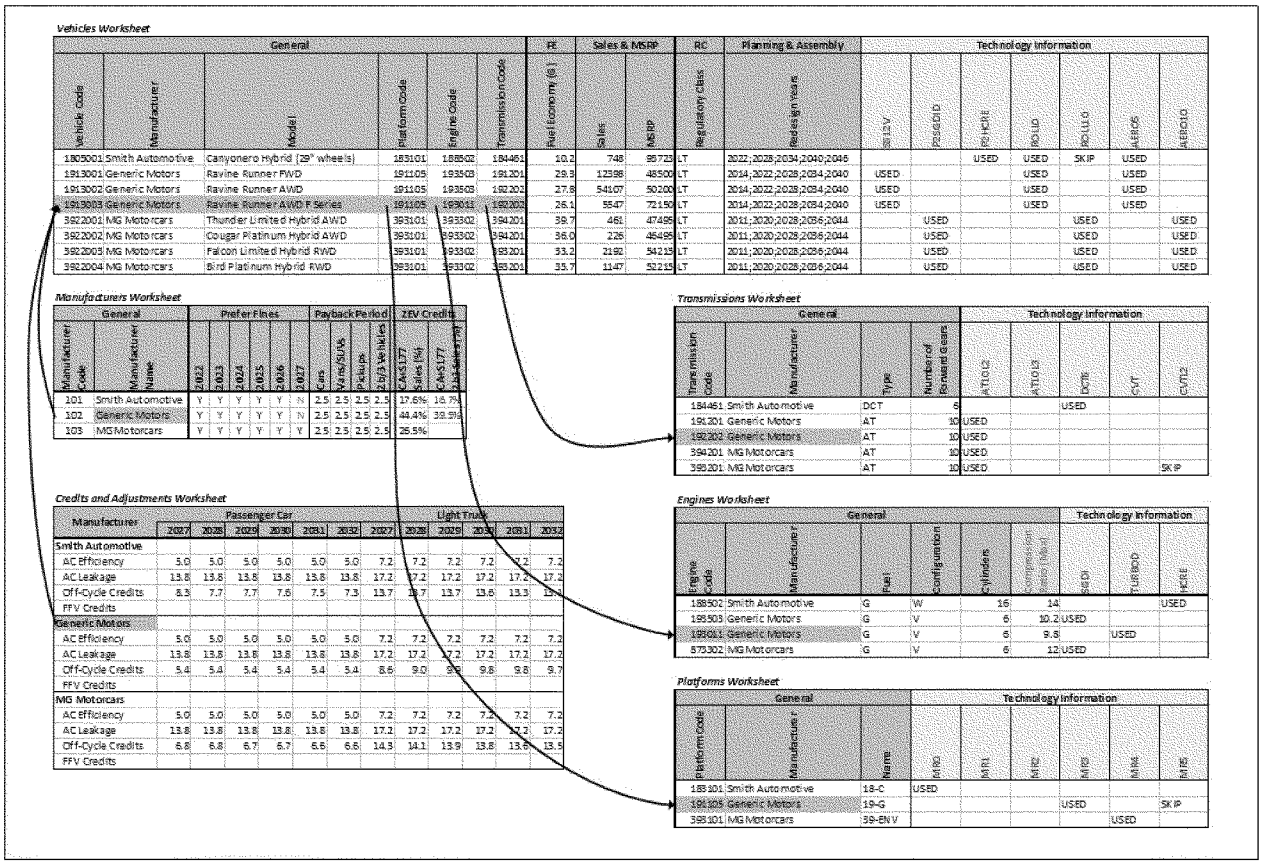
The ''Vehicles'' tab contains a separate row for each vehicle model. Vehicle models are vehicles that share the same fuel economy value and vehicle footprint. This means that vehicle models with different configurations that affect the vehicle's certification fuel economy value are distinguished in separate rows in the Vehicles tab. For example, the agency's Ravine Runner example vehicle comes in three different configurations—the Ravine Runner FWD, Ravine Runner AWD, and Ravine Runner F Series—which would result in three separate rows.

In each row, NHTSA also designates a vehicle's engine, transmission, and platform codes.[68] Vehicles that have the same engine, transmission, or platform code are deemed to ''share'' that component in the CAFE Model. Parts sharing helps manufacturers achieve economies of scale, deploy capital efficiently, and make the most of shared research and development expenses, while still presenting a wide array of consumer choices to the market. The CAFE Model has been developed to treat vehicles, platforms, engines, and transmissions as separate entities, which allows the modeling system to evaluate technology improvements on multiple vehicles that may share a common component concurrently. Sharing also enables realistic propagation, or ''inheriting,'' of previously applied technologies from an upgraded component down to the vehicle ''users'' of that component that have not yet realized the benefits of the upgrade. Section 2.1 and Section 4.4 of the CAFE Model Documentation contain additional information about the initial state of the fleet, as well as technology evaluation and inheriting within the CAFE Model.

Figure II–1 below shows how NHTSA separates the different configurations of the hypothetical Ravine Runner. NHTSA sees by the Platform Codes that these Ravine Runners all share the same platform, but only the Ravine Runner FWD and Ravine Runner AWD share an engine. Even so, all three certification fuel economy values are different, which is common for vehicles that differ in drive type (drive type meaning whether the vehicle has AWD, 4-wheel drive (4WD), front-wheel drive (FWD), or rear-wheel drive (RWD). While it is simpler to aggregate vehicles by model, ensuring that NHTSA captures model variants with different fuel economy values improves the accuracy of the analysis and the potential that estimated costs and benefits from different levels of standards are appropriate. NHTSA includes information about other vehicle technologies at the farthest right side of the Vehicles tab, and in the ''Engines,'' ''Transmissions,'' and ''Platforms'' worksheets, as discussed further below.

[68] Each numeric engine, transmission, or platform code designates important information about that vehicle's technology; for example, a vehicle's 6-digit transmission code includes information about the manufacturer, the vehicle's drive configuration (*e.g.,* front-wheel drive, all-wheel drive, 4WD, or rear-wheel drive), transmission type, number of gears (*i.e.,* a 6-speed transmission has 6 gears), and the transmission variant.

Figure II-1: Generic Motors' Ravine Runner F Series in the Market Data Input File[69]



Vehicles Worksheet

General						FE	Sales & MSRP		RC	Planning & Assembly	Technology Information						
Vehicle Code	Manufacturer	Model	Platform Code	Engine Code	Transmission Code	Fuel Economy (GGE)	Sales	MSRP	Regulatory Class	Redesign Years	SIZEV	PDSGDID	PEHDRE	PEHDID	PEHDID	AERO5	AERO10
1805001	Smith Automotive	Canyonero Hybrid (29" wheels)	183101	188502	184461	10.2	748	95723	LT	2022;2028;2034;2040;2046			USED	USED	SKIP	USED	
1913001	Generic Motors	Ravine Runner FWD	191105	193503	191201	29.3	12398	48500	LT	2014;2022;2028;2034;2040	USED			USED		USED	
1913002	Generic Motors	Ravine Runner AWD	191105	193503	192202	27.8	54107	50200	LT	2014;2022;2028;2034;2040	USED			USED		USED	
1913003	Generic Motors	Ravine Runner AWD F Series	191105	193011	192202	26.1	5547	72150	LT	2014;2022;2028;2034;2040	USED			USED		USED	
3922001	MG Motorcars	Thunder Limited Hybrid AWD	393101	393302	394201	39.7	461	47495	LT	2011;2020;2028;2036;2044		USED			USED		USED
3922002	MG Motorcars	Cougar Platinum Hybrid AWD	393101	393302	394201	36.0	226	46495	LT	2011;2020;2028;2036;2044		USED			USED		USED
3922003	MG Motorcars	Falcon Limited Hybrid RWD	393101	393302	395201	33.2	2192	54215	LT	2011;2020;2028;2036;2044		USED			USED		USED
3922004	MG Motorcars	Bird Platinum Hybrid RWD	393101	393302	395201	35.7	1147	52215	LT	2011;2020;2028;2036;2044		USED			USED		USED

Manufacturers Worksheet

General		Prefer Fines						Payback Period			ZEV Credits	
Manufacturer Code	Manufacturer Name	2023	2024	2025	2026	2027		Cars	Vans/SUVs	Pickups	2b/3 Vehicles	CAAS177 Sales (%)	CAAS177 Assessment (%)
101	Smith Automotive	Y	Y	Y	Y	Y	N	2.5	2.5	2.5	2.5	17.6%	16.7%
102	Generic Motors	Y	Y	Y	Y	Y	N	2.5	2.5	2.5	2.5	44.4%	38.5%
103	MG Motorcars	Y	Y	Y	Y	Y	Y	2.5	2.5	2.5	2.5	26.5%	

Transmissions Worksheet

General				Technology Information				
Transmission Code	Manufacturer	Type	Number of Forward Gears	ATO10	ATO10	DCT6	CVT	CVT2
184461	Smith Automotive	DCT	5			USED		
191201	Generic Motors	AT	10	USED				
192202	Generic Motors	AT	10	USED				
394201	MG Motorcars	AT	10	USED				
395201	MG Motorcars	AT	10	USED				SKIP

Credits and Adjustments Worksheet

Manufacturer	Passenger Car						Light Truck					
	2027	2028	2029	2030	2031	2032	2027	2028	2029	2030	2031	2032
Smith Automotive												
AC Efficiency	5.0	5.0	5.0	5.0	5.0	5.0	7.2	7.2	7.2	7.2	7.2	7.2
AC Leakage	13.8	13.8	13.8	13.8	13.8	13.8	17.2	17.2	17.2	17.2	17.2	17.2
Off-Cycle Credits	8.3	7.7	7.7	7.6	7.5	7.3	13.7	13.7	13.7	13.6	13.3	13.1
FFV Credits												
Generic Motors												
AC Efficiency	5.0	5.0	5.0	5.0	5.0	5.0	7.2	7.2	7.2	7.2	7.2	7.2
AC Leakage	13.8	13.8	13.8	13.8	13.8	13.8	17.2	17.2	17.2	17.2	17.2	17.2
Off-Cycle Credits	5.4	5.4	5.4	5.4	5.4	5.4	8.6	9.0	9.2	9.8	9.8	9.7
FFV Credits												
MG Motorcars												
AC Efficiency	5.0	5.0	5.0	5.0	5.0	5.0	7.2	7.2	7.2	7.2	7.2	7.2
AC Leakage	13.8	13.8	13.8	13.8	13.8	13.8	17.2	17.2	17.2	17.2	17.2	17.2
Off-Cycle Credits	6.8	6.8	6.7	6.7	6.6	6.6	14.3	14.1	13.9	13.8	13.6	13.5
FFV Credits												

Engines Worksheet

General							Technology Information		
Engine Code	Manufacturer	Fuel	Configuration	Cylinders	Compression Ratio (Max)		SIEDI	TURBOD	HCRE
188502	Smith Automotive	G	W	16	14				USED
193503	Generic Motors	G	V	6	10.2	USED			
193011	Generic Motors	G	V	6	9.8		USED		
873302	MG Motorcars	G	V	6	12	USED			

Platforms Worksheet

General			Technology Information					
Platform Code	Manufacturer	Name	MR0	MR1	MR2	MR3	MR4	MR5
183101	Smith Automotive	18-C	USED					
191105	Generic Motors	19-G				USED		SKIP
393101	MG Motorcars	39-ENV					USED	

Moving from left to right on the Vehicles tab, after including general information about vehicles and their compliance fuel economy value, NHTSA includes sales and manufacturer's suggested retail price (MSRP) data, regulatory class information (*e.g.,* domestic passenger automobile, import passenger automobile, or non-passenger automobile), and information about how NHTSA classifies vehicles for the effectiveness and safety analyses. Each of these data points is important to different parts of the compliance and effects analysis, so that the CAFE Model can accurately average the technologies required across a manufacturer's regulatory fleet to meet its CAFE standard or estimate the impacts of higher fuel economy standards on vehicle sales.

Next, NHTSA includes vehicle information necessary for applying different types of technology; for example, designating a vehicle's body style allows NHTSA to apply aerodynamic technology appropriately, and designating starting CW values allows the agency to apply MR technology more accurately. Importantly, this section also includes vehicle footprint data, which is needed because NHTSA sets footprint-based standards.

NHTSA also sets product design cycles, which are the years in which the CAFE Model can apply technologies to vehicles. Manufacturers often introduce fuel-saving technologies at a ''redesign'' of their product or adopt technologies at ''refreshes'' in between product redesigns. As an example, the redesigned third generation Chevrolet Silverado was released for MY 2019 and featured a new platform, updated drivetrain, increased towing capacity, reduced weight, improved safety, and expanded trim levels, to name a few improvements. For MY 2022, the Chevrolet Silverado received a refresh (or facelift as it is commonly called), with an updated interior, infotainment, and front-end appearance.[70] Setting these product design cycles provides realistic durations of product stability and ensures that the CAFE Model simulates the opportunities manufacturers have to apply technologies in line with refresh and redesign cycles.

During modeling, all improvements from technology application are initially realized on a component and then propagated (or inherited) down to the vehicles that share that component. As such, new component-level technologies are initially evaluated and applied to a platform, engine, or transmission during their respective redesign or refresh years. Any vehicles that share the same redesign or refresh schedule as the component apply these technology improvements during the same model year. The rest of the vehicles inherit technologies from the component during their refresh or redesign year (for engine- and transmission-level technologies) or during a redesign year only (for platform-level technologies). Section 4.4 of the CAFE Model Documentation contains additional information about technology evaluation and inheriting within the CAFE Model.

The CAFE Model also considers the potential safety effect of MR technologies and crash compatibility of

[69] Note that not all data columns are shown in this example for brevity.

[70] GM Authority, 2022 Chevy Silverado, Last revised: 2022, available at: *https://gmauthority.com/blog/gm/chevrolet/silverado/2022-chevrolet-silverado/* (accessed: Sept. 10, 2025).

different vehicle types. MR technologies lower the vehicle's CW, which may change crash compatibility and safety, depending on the type of vehicle. NHTSA assigns each vehicle in the Market Data Input File a ''safety class'' that best aligns with the CAFE Model's analysis of vehicle mass, size, and safety, and include the vehicle's starting CW.[71] [72]

The CAFE Model includes procedures to consider the direct labor impacts of manufacturers' responses to CAFE regulations, considering the assembly location of vehicles, engines, and transmissions; the percent U.S. content (based on the percent U.S. and Canadian content, as reported by manufacturers to NHTSA); and the dealership employment associated with new vehicle sales. Estimated labor information, by vehicle, is included in the Market Data Input File. Sales volumes included in and adapted from the market data also influence total estimated direct labor projected in the analysis. Chapter 6.2.5 of the Draft TSD contains additional discussion of the labor utilization analysis.

NHTSA then assigns the technologies to individual vehicles. This initial linkage of vehicle technologies is how the CAFE Model knows how to advance a vehicle down each technology pathway. Assigning CAFE Model technologies to individual vehicles is dependent on the mix of information the agency has about any particular vehicle and trends about how a manufacturer has added technology to that vehicle in the past, equations and models that translate real-world technologies to their counterparts in NHTSA's analysis (*e.g.,* drag coefficients and body styles can be used to determine a vehicle's AERO level), and the agency's engineering judgment.

As discussed further below, the agency uses information directly from manufacturers to populate some fields in the Market Data Input File, like vehicle HP ratings and vehicle weight. NHTSA also uses manufacturer data as an input to various other models that calculate how a manufacturer's real-world technology equates to a technology level in the agency's model. For example, the agency calculates initial MR, aerodynamic drag reduction, and ROLL levels by looking at industry-wide trends and calculating—through models or equations—levels of improvement for each technology. The models and algorithms that the agency uses are described further below and in detail in Chapter 3 of the Draft TSD. Other fields, like vehicle refresh and redesign years, are projected forward based on historic trends.

Recall the Ravine Runner F Series example with the technology key ''TURBOD; AT10L2, SS12V; ROLL0; AERO5; MR3.'' For this example, Generic Motor's publicly available spec sheet for the Ravine Runner F Series says that it uses Generic Motor's Turbo V6 engine with proprietary Adaptive Cylinder Management Engine (ACME) technology. Generic Motor's ACME improves fuel economy and lowers emissions by operating the engine using only three of the engine's cylinders in most conditions and using all six engine cylinders when more power is required. Based on this information, NHTSA would conclude that this engine is turbocharged and uses a form of cylinder deactivation, meaning it would be appropriately classified as TURBOD. Generic Motors uses this engine in several of their vehicles, and the specifications of the engine can be found in the Engines Tab of the Market Data Input File, under a six-digit engine code.[73]

This is a relatively easy engine to assign based on publicly available specification sheets, but some technologies are more difficult to assign. Manufacturers use different trade names or terms for different technology, and the way that the agency assigns the technology in the agency's analysis may not necessarily line up with how a manufacturer describes the technology. NHTSA must use some engineering judgment to determine how discrete technologies in the market best fit the technology options that the agency considers in the agency's analysis. The agency discusses factors used to assign each vehicle technology in the individual technology subsections below.

In addition to the Vehicles Tab that houses the analysis fleet, the Market Data Input File includes information that affects how the CAFE Model might apply technology to vehicles in the compliance simulation. Specifically, the Market Data Input File's ''Manufacturers'' tab includes a list of vehicle manufacturers considered in the analysis and several pieces of information about their economic and compliance behaviors. For this analysis, the compliance simulation assumes that manufacturers continue to apply technology to the extent practicable to reach compliance. This modeling change is made by indicating in the ''Manufacturers'' tab that all manufacturers will comply with NHTSA's standards and is consistent with the recent amendment to EPCA that set civil penalties (*i.e.,* fines) to $0 effective for MY 2022 vehicles and beyond.[74] The CAFE Model's compliance simulation algorithm is discussed in Section II.C.2.f.

Finally, NHTSA designates a ''payback period'' for each manufacturer. The payback period represents an assumption that consumers are willing to buy vehicles with more fuel economy technology because the fuel economy technology saves them money on gas in the long run. For the past several rulemaking analyses using the CAFE Model the agency has assumed that in the absence of CAFE or other regulatory standards, manufacturers apply technology that ''pays for itself''—by saving the consumer money on fuel—in 30-months, or 2.5 years. NHTSA has updated the agency's payback period for this proposed rule to assume a full 3-year payback period based on an examination of empirical economics literature. This is discussed in detail in Section II.E.1.a below, and in the Draft TSD and PRIA.

Before the agency begins building the Market Data Input File for any analysis, NHTSA must consider what model year vehicles comprise the analysis fleet. There is an inherent time delay in the data the agency can use for any particular analysis because NHTSA receives compliance data after a model year has been completed.

Using recent data for the analysis fleet is more likely to reflect the current vehicle fleet than older data. Recent data reflects (1) manufacturers' realized decisions on what fuel economy-improving technology to apply; (2) mix shifts in response to consumer preferences; (*e.g.,* more recent data reflects manufacturer and consumer preference towards larger vehicles),[75] and (3) industry sales volumes that incorporate substantive macroeconomic events. Using an analysis fleet year that

[71] Vehicle curb weight is the weight of the vehicle with all fluids and components but without the drivers, passengers, or cargo.

[72] NPRM preamble Section II.H.1 and Draft TSD Chapter 7.3 provides more in depth discussion on the impacts of mass reduction on safety.

[73] Like the transmission codes discussed above, the engine codes include information identifying the manufacturer, engine displacement (how many liters the engine is), whether the engine is naturally aspirated or force-inducted (turbocharged), and other unique engine attributes.

[74] *See* Public Law 119–21, 139 Stat. 72, sec. 40006 (July 4, 2025), *https://www.congress.gov/119/plaws/publ21/PLAW-119publ21.pdf.*

[75] See EPA, The 2024 EPA Automotive Trends Report, Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975, EPA–420–R–24–022, pp. 17—21 (2024), available at: *https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P101CUU6.TXT* (accessed: Sept. 10, 2025) (hereinafter, ''2024 EPA Automotive Trends Report'').

has been impacted by these transitory shocks may not represent trends in future years; however, on balance, updating to using the most complete set of available fleet data provides the most accurate analysis fleet for the CAFE Model to calculate compliance and effects of different levels of future fuel economy standards. Also, using recent data decreases the likelihood that the CAFE Model selects compliance pathways for future standards that affect vehicles already built in previous model years.[76]

At the time NHTSA starts building the analysis fleet, data received from vehicle manufacturers [77] offers the best snapshot of vehicles for sale in the United States in a model year. The mid-model year reports include information about individual vehicles at the vehicle configuration level. NHTSA uses the vehicle configuration, certification fuel economy, sales, regulatory class, and additional technology data from these reports as the starting point to build a ''row'' (*i.e.,* a vehicle configuration, with all necessary information about the vehicle) in the Market Data Input File's Vehicles Tab. Additional technology data comes from publicly available information, including vehicle specification sheets, manufacturer press releases, owner's manuals, and websites. NHTSA also generates some assumptions in the Market Data Input File for data fields where there is limited data, like refresh and redesign cycles for future model years, and technology levels for certain road load reduction technologies like MR and aerodynamic drag reduction.

For this analysis, the light-duty analysis fleet consists of every vehicle model in MY 2024 in nearly every configuration that has a different compliance fuel economy value. This results in nearly 4,000 individual rows in the Vehicles Tab of the Market Data Input File.

The next section discusses how the agency's analysis evaluates how effectively adding technology to a vehicle in the analysis fleet improves that vehicle's fuel economy value.

c. Technology Effectiveness Values

The CAFE Model uses technology effectiveness values to allow it to know which technologies to apply. Without these values, it does not know how effective any particular technology is at improving a vehicle's fuel economy value. Accurate technology effectiveness estimates require information about (1) the vehicle type and size; (2) other technologies on the vehicle or being added to the vehicle at the same time; and (3) and how the vehicle is driven. Any oversimplification of these complex factors could make the effectiveness estimates less accurate.

To build a database of technology effectiveness estimates that includes these factors, NHTSA partners with Argonne. Argonne has developed and maintains a modeling and simulation tool called Autonomie that generates technology effectiveness estimates for the CAFE Model. The Autonomie Model is a mathematical representation of an entire vehicle, including its individual technologies (such as the engine and transmission), overall vehicle characteristics (such as mass and aerodynamic drag), and environmental conditions (such as ambient temperature and barometric pressure). The Autonomie Model simulates vehicle behavior over time.

NHTSA simulates a vehicle model's behavior over the two-cycle tests used to measure vehicle fuel economy.[78] The two-cycle test is carried out by operating a vehicle on a dynamometer. Using a dynamometer is like running a car on a treadmill following a program—or more specifically, two programs. The programs are the Federal Test Procedure (FTP) and the Highway Fuel Economy Test (HFET). The FTP and HFET are also commonly referred to as the urban cycle and highway cycle, respectively. For the FTP drive cycle, the vehicle meets certain speeds at certain times during the test, or in technical terms, the vehicle must follow a designated speed trace.[79] The FTP is meant to simulate stop-and-go city driving, and the HFET is meant to simulate steady flowing highway driving at about 50 miles per hour (mph). The agency also uses Society of Automotive Engineers (SAE) recommended practices to simulate hybridized drive cycles,[80] which involves the test cycles mentioned above as well as additional test cycles to measure battery energy consumption and range. For PHEVs, this analysis utilizes only the gasoline (charge-sustaining) mode for the drive cycles.

Measuring every vehicle's fuel economy value by using the same test cycles ensures that the fuel economy certification results are repeatable for each vehicle model and comparable across all of the different vehicle models. When performing physical vehicle cycle testing, sophisticated test and measurement equipment is calibrated according to strict industry standards, which ensures repeatability and comparability of the results. Testing variables can include dynamometers, environmental conditions, types and locations of measurement equipment, and precise testing procedures. These physical tests provide the benchmarking empirical data used to develop and verify Autonomie's vehicle control algorithms and simulation results. Autonomie's inputs are discussed in more detail later in this section.

Full-vehicle modeling and simulation are also essential to measuring how all technologies on a vehicle interact. For example, if technology A improves a particular vehicle's fuel economy by 5 percent and technology B improves a particular vehicle's fuel economy by 10 percent, an analysis using single or limited point estimates may erroneously assume that applying both of these technologies together would achieve a simple additive fuel economy improvement of 15 percent. Single point estimates generally do not provide accurate effectiveness values because they do not capture complex relationships among technologies. Technology effectiveness often differs significantly depending on the vehicle type (*e.g.,* sedan or pickup truck) and the way in which the technology interacts with other technologies on the vehicle, as different technologies may provide different incremental levels of fuel economy improvement if implemented alone or in combination with other technologies. Any oversimplification of these complex factors could lead to less accurate technology effectiveness estimates.

[76] For example, in this analysis, the CAFE Model must apply technology to the MY 2024 fleet from MYs 2025–2026 for the compliance simulation that begins in MY 2027. While manufacturers have already built MY 2024 and beyond vehicles, the most current, complete dataset with regulatory fuel economy test results to build the analysis fleet at the time of writing remains MY 2024 data for the light-duty fleet.

[77] 49 U.S.C. 32907(a)(2) and 49 CFR part 537.

[78] NHTSA is statutorily required to use the two-cycle tests to measure vehicle fuel economy in the CAFE program. *See* 49 U.S.C. 32904(c) (''Testing and calculation procedures. . . . [T]he Administrator shall use the same procedures for passenger automobiles the Administrator used for model year 1975 (weighted 55 percent urban cycle and 45 percent highway cycle), or procedures that give comparable results.'').

[79] EPA, Emissions Standards Reference Guide: EPA Federal Test Procedure (FTP), Last revised: Mar. 13, 2025, available at: *https://www.epa.gov/emission-standards-reference-guide/epa-federal-test-procedure-ftp* (accessed: Sept. 10, 2025).

[80] SAE, Recommended Practice for Measuring the Exhaust Emissions and Fuel Economy of Hybrid-Electric Vehicles, Including Plug-in Hybrid Vehicles, SAE Standard J1711_202302 (2023), SAE International: Warrendale, PA, available at: *https://www.sae.org/standards/content/j1711_202302/* (accessed: Sept. 10, 2025); SAE, Battery Electric Vehicle Energy Consumption and Range Test Procedure, SAE Standard J1634_202104 (2021), SAE International: Warrendale, PA, available at: *https://www.sae.org/standards/content/j1634_202104/* (accessed: Sept. 10, 2025).

In addition, because manufacturers often add several fuel-saving technologies simultaneously when redesigning a vehicle, it is difficult to isolate the effect of adding any one individual technology to the full-vehicle system. Modeling and simulation offer the opportunity to isolate the effects of individual technologies by using a single or small number of initial vehicle configurations and incrementally adding technologies to those configurations. This provides a consistent reference point for the incremental effectiveness estimates for each technology and for combinations of technologies for each vehicle type. Vehicle modeling also reduces the potential for overcounting or undercounting technology effectiveness.

Argonne does not build an individual vehicle model for every single-vehicle configuration in NHTSA's light-duty Market Data Input File. This would be nearly impossible, because Autonomie requires very detailed data on hundreds of different vehicle attributes (*e.g.,* the weight of the vehicle's fuel tank, the weight of the vehicle's transmission housing, the weight of the engine, or the vehicle's 0–60 mph time) to build a vehicle model. For practical reasons, NHTSA cannot acquire 4,000 vehicles and obtain these measurements every time the agency promulgates a new rule, and the agency cannot acquire vehicles that have not yet been built. Rather, Argonne builds a discrete number of vehicle models representative of the most popular vehicles on sale today. The agency refers to the vehicle model's type and performance level as the vehicle's ''technology class.'' By assigning each vehicle in the Market Data Input File a ''technology class,'' NHTSA can connect it to the Autonomie effectiveness estimate that best represents how effective the technology would be on the vehicle, accounting for vehicle characteristics like body style (*e.g.,* sedan or pickup truck) and performance metrics. Because each vehicle technology class has unique characteristics, the effectiveness of technologies and combinations of technologies is different for each technology class.

There are 10 technology classes for this analysis: small car (SmallCar), small performance car (SmallCarPerf), medium car (MedCar), medium performance car (MedCarPerf), small SUV (SmallSUV), small performance SUV (SmallSUVPerf), medium SUV (MedSUV), medium performance SUV (MedSUVPerf), pickup truck (Pickup), and high towing pickup truck (PickupHT).

NHTSA uses a two-step process that involves two algorithms to give vehicles a ''fit score'' that determines which vehicles best fit into each technology class. At the first step, the agency determines the vehicle's size. At the second step, NHTSA determines the vehicle's performance level. Both algorithms consider several metrics about the individual vehicle and compare that vehicle to other vehicles in the analysis fleet. This process is discussed in detail in Draft TSD Chapter 2.2.

Consider NHTSA's example Ravine Runner F Series, which is a medium-sized performance SUV. The exact same combination of technologies on the Ravine Runner F Series operate differently in a compact car or pickup truck because they are different vehicle sizes. The example Ravine Runner F Series also achieves slightly better performance metrics than other medium-sized SUVs in the analysis fleet. By ''performance metrics,'' the agency means power, acceleration, handling, braking, and so on. For the performance versus standard technology classification, the agency considers the vehicle's estimated 0–60 mph time compared to an average 0–60 mph time for the vehicle's technology class. Accordingly, the ''technology class'' for the Ravine Runner F Series in the agency's analysis is ''MedSUVPerf,'' because it meets the criteria of a ''performance'' 0–60 mph acceleration time.

Table II–2 shows how vehicles in different technology classes that use the exact same fuel economy technology have very different absolute fuel economy values. Note that the Autonomie absolute fuel economy values are not used directly in the CAFE Model; NTHSA calculates the ratio between two Autonomie absolute fuel economy values (one for each technology key for a specific technology class) and applies that ratio to an analysis fleet vehicle's starting fuel economy value.

Table II-2: Examples of Technology Class Differences

Technology Class and Technology Key	Autonomie Absolute Fuel Economy Value (mpg)
MedSUVPerf TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3	30.8
MedSUV TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3	34.9
CompactPerf TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3	42.2
Pickup TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3	29.7

Depending on the technology, when two technologies are added to the vehicle together, they may not result in an additive fuel economy improvement. This is an important concept to understand because in Section II.D, NHTSA presents technology effectiveness estimates for every single combination of technology that could be applied to a vehicle. In some cases, technology effectiveness estimates show that a combined technology has a different effectiveness estimate than if the individual technologies were added together individually. However, this is expected and not an error. Continuing NHTSA's example from above, turbocharging technology and dynamic cylinder deactivation (DEAC) technology both improve fuel economy by reducing the engine displacement and accordingly burning less fuel. Turbocharging allows a manufacturer to use a smaller engine that can offer performance equivalent to a larger naturally aspirated engine, and its fuel efficiency improvements are, in part, due to the reduced displacement. DEAC effectively makes an engine with a particular displacement intermittently offer some of the fuel economy benefits of a smaller displacement engine by deactivating cylinders when the work demand does not require the full engine displacement and reactivating them as-needed to meet higher work demands;

the greater the displacement of the deactivated cylinders, the greater the fuel economy benefit. Therefore, a manufacturer upgrading to an engine that uses both a turbocharger and DEAC technology, like the TURBOD engine in the example above, would not see the full combined fuel economy improvement from that specific combination of technologies. Table II–3 shows a vehicle's fuel economy value when using the first-level DEAC technology and when using the first-level turbocharging technology, compared to the agency's example vehicle that uses both of those technologies combined with a TURBOD engine.

Table II-3: Example of Technology Synergies

MedSUVPerf Technology Key	Autonomie Absolute Fuel Economy Value (mpg)
DOHC; SGDI; AT10L2; SS12V; ROLL0; AERO5; MR3	28.6
DOHC; SGDI; DEAC; AT10L2; SS12V; ROLL0; AERO5; MR3	29.1
TURBO0; AT10L2; SS12V; ROLL0; AERO5; MR3	30.7
TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3	30.8

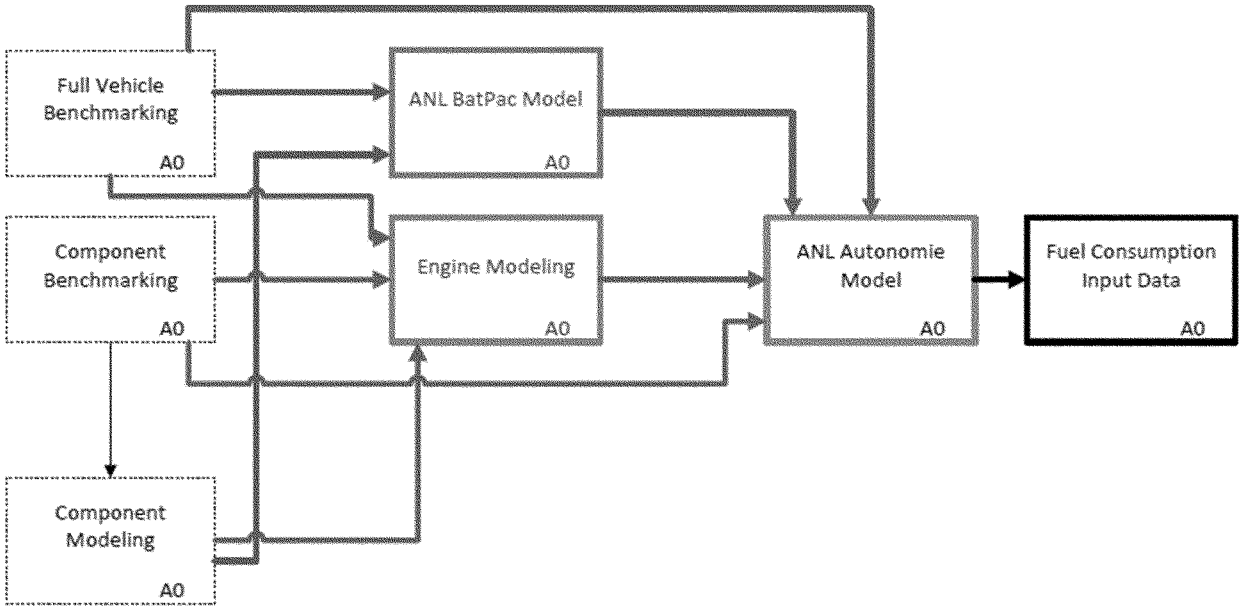
As expected, the percent improvement in Table II–3 between the first and second rows is 1.7 percent and between the third and fourth rows is 0.3 percent, even though the only difference within the two sets of technology keys is the DEAC technology (note that the agency only compares technology keys within the same technology class). This is because there are complex interactions between all fuel economy-improving technologies. The agency models these individual technologies and groups of technologies to reduce the uncertainty and improve the accuracy of the CAFE Model outputs.

Some technology synergies that NHTSA discusses in Section II.D include advanced engine and hybrid powertrain technology synergies. As an example, NHTSA does not see a particularly high effectiveness improvement from applying advanced engines to existing parallel strong hybrid (*e.g.,* P2) architectures.[81] In this instance, the P2 powertrain improves fuel economy, in part, by allowing the engine to spend more time operating at efficient engine speed and load conditions. This reduces the advantage of adding advanced engine technologies, which also improve fuel economy, by broadening the range of speed and load conditions for the engine to operate at high efficiency. This redundancy in fuel-saving mechanisms results in a lower effectiveness when the technologies are added to each other. Again, NHTSA expects that different combinations of technologies will provide different effectiveness improvements on different vehicle types. These examples all illustrate relationships observed using only full-vehicle modeling and simulation.

Just as NHTSA's CAFE Model analysis requires a large set of technology inputs and assumptions, the Autonomie modeling uses a large set of technology inputs and assumptions. Figure II–2 below shows the suite of fuel consumption input data used in the Autonomie modeling to generate the fuel consumption input data NHTSA uses in the CAFE Model.

[81] A parallel strong hybrid powertrain is fundamentally similar to a conventional powertrain but adds one electric motor to improve efficiency. Draft TSD Chapter 3 shows all of the parallel strong hybrid powertrain options that NHTSA has modeled in this analysis.

Figure II-2: Fuel Consumption Input Data Used in the Autonomie Modeling



As shown in Figure II–2 above, full-vehicle benchmarking is a major source of data for the Autonomie model. For full-vehicle benchmarking, vehicles are instrumented with sensors and tested on both the road and chassis dynamometers (*i.e.,* the full-vehicle treadmills used to exercise the vehicle to provide means to calculate vehicle's fuel economy values) under different conditions and duty-cycles. Vehicles are selected for benchmarking with the goal of selecting a mix of vehicles most representative of vehicle fleet and available technologies, taking into account sales volume, cost, and availability. Some examples of full-vehicle benchmark testing performed in conjunction with the agency's partners at Argonne include a 2019 Chevrolet Silverado, a 2021 Toyota Rav4 Prime, and a 2022 Hyundai Sonata Hybrid.[82] NHTSA has produced a report for each vehicle benchmarked, which can be found in the docket. As discussed further below, full-vehicle benchmarking data are used as inputs to the engine modeling and Autonomie full-vehicle simulation modeling. Component benchmarking is like full-vehicle benchmarking, but instead of testing a full vehicle, the agency instruments a single production component or prototype component with sensors and tests it on a similar duty-cycle as a full vehicle. Examples of components NHTSA benchmarks include engines, transmissions, axles, electric motors, and batteries. Component benchmarking data are used as an input to component modeling, where a production or prototype component is changed in fit, form, or function and modeled in the same scenario. As an example, NHTSA might model a decrease in the size of holes in fuel injectors to see the fuel atomization impact or see how it affects the fuel spray angle.

NHTSA uses a range of models to do the component modeling. As shown in Figure II–2, battery pack modeling using Argonne's BatPaC Model and engine modeling are two of the most significant component models used to generate data for the Autonomie modeling. NHTSA discusses BatPaC in detail in Section II.D, but briefly, BatPaC is the battery pack modeling tool used to estimate the cost of vehicle battery packs for all hybridized vehicles, which is based on the materials chemistry, battery design, and manufacturing design of the plants manufacturing the battery packs.

Engine modeling is used to generate engine fuel map models that define the fuel consumption rate for an engine equipped with specific technologies when operating over a variety of engine load and engine speed conditions. Some performance metrics captured in engine modeling include power, torque, airflow, volumetric efficiency, fuel consumption, turbocharger performance and matching, pumping losses, and more. Each engine map model has been developed ensuring the engine will still operate under real-world constraints using a suite of other models. Some examples of these models that ensure the engine map models capture real-world operating constraints include simulating heat release through a predictive combustion model, simulating knock characteristics through a kinetic fit knock model,[83] and using physics-based heat flow and friction models, among others. NHTSA simulates these constraints using data gathered from component benchmarking as well as engineering and physics calculations.

IAV develops the engine map models, using their GT–POWER modeling tool, by creating a base, or root, engine map and then modifying that root map, incrementally, to isolate the effects of the added technologies. The engine maps are based on real-world engine

[82] For all Argonne full-vehicle benchmarking reports, see Docket No. NHTSA–2023–0022–0010.

[83] Engine knock occurs when combustion of some of the air/fuel mixture in the cylinder does not result from propagation of the flame front ignited by the spark plug; rather one or more pockets of air/fuel mixture explode outside of the envelope of the normal combustion front. Engine knock can result in unsteady operation and damage to the engine.

designs. An important feature of the engine maps is that they use a knock model. As noted above, a knock model ensures that any engine size or specification that the agency models in the analysis does not result in engine knock, which could damage engine components in a real-world vehicle. Though the same engine map models are used for all vehicle technology classes, the effectiveness varies based on the characteristics of each class. For example, as discussed above, a compact car with a turbocharged engine has a different effectiveness value than a pickup truck with the same engine technology type. The engine map model development and specifications are discussed further in Chapter 3 of the Draft TSD.

Argonne also compiles a database of vehicle attributes and characteristics reasonably representative of the vehicles in that technology class used to build the vehicle models. Relevant vehicle attributes may include a vehicle's fuel efficiency, HP, 0–60 mph acceleration time, and stopping distance, among others, while vehicle characteristics may include whether the vehicle has all-wheel-drive, 18-inch wheels, summer tires, and so on. Argonne has identified representative vehicle attributes and characteristics for the light-duty fleet from publicly available information and automotive benchmarking databases, such as A2Mac1,[84] Argonne's Downloadable Dynamometer Database (D[3]),[85] EPA compliance and fuel economy data,[86] EPA guidance on 2-cycle tests,[87] and industry partnerships.[88] The resulting vehicle technology class baseline assumptions and characteristics database consists of over 100 different attributes like vehicle height and width and weights for individual vehicle parts.

Argonne then assigns ''reference'' technologies to each vehicle model. The reference technologies are the technologies on the first step of each CAFE Model technology pathway, and they closely (but not exactly) correlate to the technology abbreviations that NHTSA uses in the CAFE Model. As an example, the first Autonomie vehicle model in the MedSUVPerf technology class starts out with the least advanced engine, which is DOHC (a dual-overhead cam engine) in the CAFE Model, or eng01 in the Autonomie modeling. The vehicle has the least advanced transmission (AT5), the least advanced MR level (MR0), the least advanced aerodynamic body style (AERO0), and the least advanced ROLL level (ROLL0). The first vehicle model is also defined by initial vehicle attributes and characteristics that consist of data from the suite of sources mentioned above. Again, these attributes are meant to represent the average of vehicle attributes found on vehicles in a certain technology class.

Then, just as a vehicle manufacturer tests its vehicles to ensure they meet specific performance metrics, Autonomie ensures that the built vehicle model meets its performance metrics. NHTSA includes quantitative performance metrics in the agency's Autonomie modeling to ensure that the vehicle models can meet real-world performance metrics that consumers observe and that are important for vehicle utility and customer satisfaction. The four performance metrics that NHTSA uses in the Autonomie modeling for light-duty vehicles are low-speed acceleration (the time required to accelerate from 0 to 60 mph), high-speed passing acceleration (the time required to accelerate from 50 to 80 mph), gradeability (the ability of the vehicle to maintain constant 65 mph speed on a 6-percent upgrade), and towing capacity for light-duty pickup trucks. The agency has been using these performance metrics for the last several CAFE Model analyses, and vehicle manufacturers have agreed that these performance metrics are representative of the metrics considered in the automotive industry.[89] Argonne simulates the vehicle model driving the two-cycle tests (*i.e.,* running its treadmill ''programs'') to ensure that it meets its applicable performance metrics (*i.e.,* NHTSA's MedSUVPerf does not have to meet the towing capacity performance metric because it is not a pickup truck). These metrics are based on commonly used metrics in the automotive industry, including SAE J2807 tow requirements.[90] Additional details about how NHTSA sizes light-duty powertrains in Autonomie to meet defined performance metrics can be found in the CAFE Analysis Autonomie Documentation.

If the vehicle model does not initially meet one of the performance metrics, then Autonomie's powertrain sizing algorithm increases the vehicle's engine power. The increase in power is achieved by increasing engine displacement (which is the measure of the volume of all cylinders in an engine), which might involve an increase in the number of engine cylinders, which may lead to an increase in the engine weight. This iterative process then determines if the baseline vehicle with increased engine power and corresponding updated engine weight meets the required performance metrics. The powertrain sizing algorithm stops once all the baseline vehicle's performance requirements are met.

Some technologies require extra steps for performance optimization before the vehicle models are ready for simulation. Specifically, the sizing and optimization process is more complex for hybridized vehicles, which include hybrid electric vehicle (HEVs) and PHEVs, compared to vehicles with only ICE engines, as discussed further in the Draft TSD Chapter 3.3.4. As an example, a PHEV powertrain that can travel a certain number of miles on its battery energy alone (referred to as all-electric range (AER)), or as performing in electric-only mode) is also sized to ensure that it can

[84] A2Mac1: Automotive Benchmarking (proprietary data), available at: *https://www.a2mac1.com* (accessed: Sept. 10, 2025). A2Mac1 is subscription-based benchmarking service that conducts vehicle and component teardown analyses. Annually, A2Mac1 removes individual components from production vehicles, such as oil pans, electric machines, engines, and transmissions, among many other components. These components are weighed and documented for key specifications, which are then available to subscribers.

[85] Argonne National Laboratory, Downloadable Dynamometer Database, Last revised: 2025, available at: *https://www.anl.gov/taps/downloadable-dynamometer-database* (accessed: Sept. 10, 2025).

[86] EPA, Compliance and Fuel Economy Data: Data on Cars Used for Testing Fuel Economy, Last revised: May 19, 2025, available at: *https://www.epa.gov/compliance-and-fuel-economy-data/data-cars-used-testing-fuel-economy* (accessed: Sept. 10, 2025).

[87] EPA PD TSD, at pp. 2–265—2–266.

[88] North American Council for Freight Efficiency, Research & Analysis Are Fundamental (2025), available at: *https://www.nacfe.org/research/overview* (accessed: Sept. 10, 2025).

[89] See NHTSA–2021–0053–1492, at 134 (''Vehicle design parameters are never static. With each new generation of a vehicle, manufacturers seek to improve vehicle utility, performance, and other characteristics based on research of customer expectations and desires, and to add innovative features that improve the customer experience. [NHTSA and EPA] have historically sought to maintain the performance characteristics of vehicles modeled with fuel economy-improving technologies. Auto Innovators encourages the Agencies to maintain a performance-neutral approach to the analysis, to the extent possible. Auto Innovators appreciates that the Agencies continue to consider high-speed acceleration, gradeability, towing, range, traction, and interior room (including headroom) in the analysis when sizing powertrains and evaluating pathways for road-load reductions. All of these parameters should be considered separately, not just in combination. (For example, we do not support an approach where various acceleration times are added together to create a single 'performance' statistic. Manufacturers must provide all types of performance, not just one or two to the detriment of others.)'').

[90] SAE, Performance Requirements for Determining Tow-Vehicle Gross Combination Weight Rating and Trailer Weight Rating, SAE Standard J2807_202411, SAE International: Warrendale, PA, available at: *https://doi.org/10.4271/J2807_202411* (accessed: Sept. 10, 2025).

meet the performance requirements of the SAE standardized drive cycles mentioned above in electric-only mode. Autonomie follows EPA's regulatory guidance and uses the SAE J1711 test procedure to model the incremental effectiveness of adding PHEV technology to a vehicle. The procedure from this guidance is divided into several phases that model ''charge sustaining,'' ''charge depleting,'' and ''cold operation'' [91] calculations for different test cycles. This is described in detail in the CAFE Analysis Autonomie Documentation.[92] Draft TSD Chapter 3.3.4 and the CAFE Analysis Autonomie Documentation contain more information on PHEV effectiveness.

Every time a vehicle model in Autonomie adopts a new technology, the vehicle weight is updated to reflect the weight of the new technology. For some technologies, the direct weight change is easy to assess. For example, when a vehicle is updated to a higher geared transmission, the weight of the original transmission is replaced with the corresponding transmission weight (*e.g.,* the weight of a vehicle moving from a 6-speed automatic (AT6) to an 8-speed automatic (AT8) transmission is updated based on the 8-speed transmission weight). For other technologies, like engine technologies, calculating the updated vehicle weight is more complex. As discussed earlier, modeling a change in engine technology involves both the new technology adoption and a change in power (because the reduction in vehicle weight leads to lower engine loads and a resized engine). When a vehicle adopts new engine technology, the associated weight change to the vehicle is accounted for based on a regression analysis of engine weight versus power.[93]

In addition to using performance metrics commonly used by automotive manufacturers, NHTSA instructs Autonomie to mimic real-world manufacturer decisions by resizing engines only at specific intervals in the analysis and in specific ways. When a vehicle manufacturer is making decisions about how to change a vehicle model to add fuel economy-improving technology, the manufacturer could entirely *redesign* the vehicle, or the manufacturer could *refresh* the vehicle with relatively more minor technology changes. NHTSA discusses how the agency's modeling captures vehicle refreshes and redesigns in more detail below, but the details are easier to understand if the agency starts by discussing some straightforward yet important concepts. First, most changes to a vehicle's engine happen when the vehicle is redesigned and not refreshed, as incorporating a new engine in a vehicle is a 10- to 15-year endeavor at a cost of $750 million to $1 billion.[94] However, manufacturers will use that same basic engine, with only minor changes, across multiple vehicle models. NHTSA models engine ''inheriting'' from one vehicle to another in both the Autonomie modeling and the CAFE Model. During a vehicle refresh, one vehicle may inherit an already redesigned engine from another vehicle that shares the same platform. In the Autonomie modeling, when a new vehicle adopts fuel-saving technologies that are inherited, the engine is not resized (*i.e.,* the properties from the reference vehicle are used directly). While this may result in a small change in vehicle performance, manufacturers have consistently told NHTSA that the high costs for redesign and the increased manufacturing complexity that would result from resizing engines for small technology changes preclude them from doing so. In addition, when a manufacturer applies MR technology (*i.e.,* makes the vehicle lighter), the vehicle can use a less powerful engine because there is less weight to move. However, Autonomie will use a resized engine only at certain MR application levels, as a representation of how manufacturers update their engine technologies. Again, this is intended to reflect manufacturers' comments that it would be unreasonable and unaffordable to resize powertrains for every unique combination of technologies. NHTSA has determined that the agency's rules about performance neutrality and technology inheritance result in a fleet that is essentially performance neutral.

NHTSA's analysis ensures that vehicle models maintain consistent performance levels to allow NHTSA to estimate the costs and benefits of different levels of fuel economy standards more accurately. For its analysis, NHTSA wants to capture only the costs and benefits that result from NHTSA changing its CAFE standards. For example, a manufacturer may add a turbocharger to its engine without downsizing the engine and then direct all the additional engine work to additional vehicle HP instead of vehicle fuel economy improvements. If NHTSA modeled increases or decreases in performance because of fuel economy-improving technology, then that increase in performance has a monetized benefit attached to it that is not specifically due to the agency's fuel economy standards. By ensuring that the agency's vehicle modeling remains performance neutral, NHTSA can better ensure that the agency is reasonably capturing the costs and benefits due only to potential changes in the fuel economy standards.

Autonomie then adopts one single fuel-saving technology to the initial vehicle model, keeping everything else the same except for that one technology and the attributes associated with it. Once one technology is assigned to the vehicle model and the new vehicle model meets its performance metrics, the vehicle model is used as an input to the full-vehicle simulation. This means that Autonomie simulates driving the optimized vehicle models for each technology class on the test cycles NHTSA described above. As an example, the Autonomie modeling could start with 10 initial vehicle models (one for each technology class in the analysis). Those 10 initial vehicle models use a 5-speed automatic transmission (AT5). Argonne then builds 10 new vehicle models; the only difference between the 10 new vehicle models and the first set of vehicle models is that the new vehicle models have a 6-speed automatic transmission (AT6). Replacing the AT5 with an AT6 would lead either to an increase or decrease in the total weight of the vehicle because each technology class includes different assumptions about transmission weight. Argonne then ensures that the new vehicle models with the 6-speed automatic transmission meet their performance metrics. Argonne has 20 different vehicle models that can be simulated on the two-cycle tests. This process is repeated for each technology option and for each technology class. This results in 10 separate datasets, each with over

[91] SAE J1711 cold test operation occurs in both Charge Sustaining and Charge Depleting modes.

[92] Chapter ''Vehicle Sizing Process'' of the CAFE Analysis Autonomie Documentation.

[93] Merriam-Webster, Definition: Regression analysis, available at: *https://www.merriam-webster.com/dictionary/regression%20analysis* (accessed: Sept. 10, 2025) (''the use of mathematical and statistical techniques to estimate one variable from another especially by the application of regression coefficients, regression curves, regression equations, or regression lines to empirical data''). In this case, NHTSA is estimating engine weight by looking at the relationship between engine weight and engine power.

[94] 2015 NAS Report, at p. 256. It is likely that manufacturers have made improvements in the product lifetime and development cycles for engines since this NAS report and the report that NAS relied on, but NHTSA does not have data on how much. NHTSA believes that it is still reasonable to conclude that generating an all-new engine or transmission design with little to no carryover from the previous generation would be a notable investment.

100,000 results, which include information about a vehicle model made of specific fuel economy-improving technology and the fuel economy value that the vehicle model achieved by driving its simulated test cycles.

NHTSA condenses the million-or-so datapoints from Autonomie into three datasets used in the CAFE Model. These three datasets include (1) the fuel economy value that each modeled vehicle achieved while driving the test cycles, for every technology combination in every technology class (converted into ''fuel consumption,'' which is the inverse of fuel economy; fuel economy is mpg and fuel consumption is gallons per mile); (2) the fuel economy value for PHEVs driving those test cycles, when those vehicles drive on gasoline only; and (3) optimized battery costs for each vehicle that adopts some sort of hybridized powertrain (discussed in more detail below). NHTSA then uses these datapoints to produce the technology effectiveness values in the CAFE Model.

Technology effectiveness values allow the CAFE Model to simulate how manufacturers can improve fuel economy relative to a consistent reference point by adding technology and combinations of technologies. The effectiveness values represent the simulated relative improvement of fuel economy that can be applied to a vehicle when new technology is added. These values are calculated based on comparing the achieved fuel economies simulated using the Autonomie full-vehicle models.

NHTSA adds the technology effectiveness values to the CAFE Model as inputs. When the CAFE Model runs a simulation, the effectiveness values for that vehicle's class determine how much the vehicle's fuel economy improves with the application of each technology. The CAFE Model's compliance simulation begins with actual fuel economy values derived from compliance data. As the CAFE Model adds technology, the technology effectiveness values are applied to estimate the new fuel economy value for the vehicle, and the CAFE Model runs millions of combinations of technologies on different vehicles to find the most cost-effective means of compliance for each manufacturer and fleet.

Return to the Ravine Runner F Series example, which has a starting fuel economy value of just over 26 mpg and a starting technology key ''TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3.'' The equivalent Autonomie vehicle model has a starting fuel economy value of just over 30.8 mpg and is represented by the technology descriptors Midsize SUV, Perfo, Micro Hybrid, eng38, AUp 10, MR3, AERO1, or ROLL0. In MY 2028, the CAFE Model determines that Generic Motors needs to redesign the Ravine Runner F Series to reach Generic Motors' new CAFE standard. The Ravine Runner F Series now has new fuel economy-improving technology, a parallel strong HEV with a TURBOE engine, an integrated 8-speed automatic transmission, 30-percent improvement in ROLL, 20-percent aerodynamic drag reduction, and 10-percent lighter glider (*i.e.,* MR). Its new technology key is now P2TRBE, ROLL30, AERO20, MR3. Table II–4 shows how the incremental fuel economy improvement from the Autonomie simulations is applied to the Ravine Runner F Series' starting fuel economy value.

Table II-4: Example Translation from the Autonomie Effectiveness Database to the CAFE Model

Model	Starting Technology Key/Technology Descriptors	MPG	Ending Technology Key/Technology Descriptors	MPG
CAFE Model	TURBOD; AT10L2; SS12V; ROLL0; AERO5; MR3	26.1	P2TRBE, ROLL30, AERO20, MR3	36.3
Autonomie	Midsize_SUV, Perfo, Micro Hybrid, eng38, AUp, 10, MR3, AERO1, ROLL0	30.8	Midsize_SUV, Perfo, Par HEV, eng37, AUp 8, MR3, AERO4, ROLL3	42.9

Note that the fuel economy values NHTSA obtains from the Autonomie modeling are based on the city and highway test cycles (*i.e.,* the two-cycle test) described above. This is because NHTSA's analysis is based on the EPA procedures used for calculating fuel economy for CAFE compliance, which uses two-cycle testing.[95] In 2008, EPA introduced three additional test cycles to bring fuel economy ''label'' values from two-cycle testing in line with the efficiency values consumers were experiencing in the real world, particularly for hybrids. This is known as 5-cycle testing. Generally, the revised 5-cycle testing values have proven to be a good approximation of what consumers will experience while driving and are significantly more representative than the previous two-cycle test values at representing real-world fuel economy. Though the compliance modeling uses two-cycle fuel economy values, the agency uses the ''on-road'' fuel economy values, which are the ratio of 5-cycle to 2-cycle testing values (*i.e.,* the CAFE compliance values to the ''label'' values)[96] to calculate the value of fuel savings to the consumer in the effects analysis. This is because the 5-cycle test fuel economy values better represent

[95] 49 U.S.C. 32904(c) (EPA ''shall measure fuel economy for each model and calculate average fuel economy for a manufacturer under testing and calculation procedures prescribed by the Administrator. However, except under section 32908 of this title, the Administrator shall use the same procedures for passenger automobiles the Administrator used for model year 1975 (weighted 55 percent urban cycle and 45 percent highway cycle), or procedures that give comparable results.'').

[96] NHTSA applied a certain percentage difference between the 2-cycle test value and 5-cycle test value to represent the gap in compliance fuel economy and real-world fuel economy.

fuel savings that consumers will experience from real-world driving. PRIA Chapter 4.3.1 and Section 5.3.2 of the CAFE Model Documentation contain more information about these calculations. NHTSA's discussion of the effects analysis is presented later in this section.

In sum, NHTSA uses Autonomie to generate modeling and simulation technology effectiveness estimates. These estimates ensure that the modeling captures differences in technology effectiveness due to (1) vehicle size and performance relative to other vehicles in the analysis fleet; (2) other technologies on the vehicle or being added to the vehicle at the same time; and (3) how the vehicle is driven. The modeling approach allows the isolation of technology effects in the analysis supporting an accurate assessment and comports with the NAS 2015 recommendation to use full-vehicle modeling supported by the application of lumped improvements at the sub-model level.[97]

In NHTSA's analysis, ''technology effectiveness values'' are the relative difference between the fuel economy value for one Autonomie vehicle model driving the two-cycle tests and a second Autonomie vehicle model that uses new technology driving the two-cycle tests. NHTSA adds the difference between two Autonomie-generated fuel economy values to a vehicle in the Market Data Input File's CAFE compliance fuel economy value. NHTSA then calculates the costs and benefits of different levels of fuel economy standards using the incremental improvement required to bring an analysis fleet vehicle model's fuel economy value to a level that contributes to a manufacturer's fleet meeting its CAFE standard.

In the next section, Technology Costs, NHTSA describes the process of generating costs for the Technologies Input File.

d. Technology Costs

NHTSA estimates present and future costs for fuel-saving technologies by taking into consideration the type of vehicle or type of engine when technology costs vary by application. These cost estimates are based on three main inputs. First, direct manufacturing costs (DMCs), or the component and labor costs of producing and assembling the physical parts and systems, are estimated assuming high-volume production. Second, NHTSA estimates indirect costs. DMCs generally do not include the indirect costs of tools, capital equipment, financing, engineering, sales, administrative support, or return on investment. NHTSA accounts for these indirect costs via a scalar markup of DMCs, which is termed the retail price equivalent (RPE). Finally, the costs for technologies may change over time as industry streamlines design and manufacturing processes. To model this, the agency estimates potential cost improvements with cost learning. The retail cost of equipment in any future year is estimated to be equal to the product of the DMC, RPE, and cost learning. Considering the retail cost of equipment, instead of merely DMCs, allows NHTSA to account for the real-world price effects of a technology as well as market realities. Each of these technology cost components is described briefly below and in the following individual technology sections as well as in detail in Chapters 2 and 3 of the Draft TSD.

DMCs are the component and assembly costs of the physical parts and systems that make up a complete vehicle. NHTSA uses agency-sponsored tear-down studies of vehicles and parts to estimate the DMCs of individual technologies, in addition to independent tear-down studies, other publications, and confidential business information (CBI). In the simplest cases, NHTSA sponsors studies to produce results that confirm or refute third-party industry estimates and determine alignment with confidential information provided by manufacturers and suppliers. In cases where the tear-down study results differ significantly from credible independent sources, the agency scrutinizes the study assumptions and sometimes revises or updates the analysis accordingly.

Due to the variety of technologies and their applications and the cost and time required to conduct detailed tear-down analyses, NHTSA did not sponsor teardown studies for every technology. In addition, the analysis includes some fuel-saving technologies that are pre-production or sold in very small pilot volumes, but for whom appropriate data are available for the range of vehicles the agency models. For those technologies, NHTSA could not conduct a tear-down study to assess costs because the product is not yet in the marketplace for evaluation. In these cases, the agency relies upon third-party estimates and confidential information from suppliers and manufacturers; however, there are some concerns with relying on CBI to estimate costs. The agency and the source may have had incongruent or incompatible definitions of the reference point from which to measure costs. The source may have provided DMCs at a date many years in the future and assumed very high production volumes, important caveats to consider for agency analysis. In addition, a source may provide incomplete information. In other cases, intellectual property considerations and strategic business partnerships may have contributed to a manufacturer's cost information and could be difficult to account for in the CAFE Model, as not all manufacturers may have access to proprietary technologies at stated costs. In light of these concerns, NHTSA carefully evaluates new information, especially regarding emerging technologies.

While costs for fuel-saving technologies reflect the best estimates available today, technology cost estimates likely will change in the future as technologies are deployed, production is expanded, and nascent technologies mature. For emerging technologies, NHTSA uses the best information available at the time of the analysis and continues to update cost assumptions for any future analysis. Chapter 3 of the Draft TSD discusses each category of technologies (*e.g.,* engines, transmissions, or hybridization) and the cost estimates the agency uses for this analysis.

As discussed above, direct costs represent the cost associated with acquiring raw materials, fabricating parts, and assembling vehicles with the various technologies that manufacturers are expected to use to improve the fuel economy of their fleets. They include materials, labor, and variable energy costs required to produce and assemble the vehicle. However, they do not include overhead costs required to develop and produce the vehicle, costs incurred by manufacturers or dealers to sell vehicles, or the profit manufacturers and dealers make from their investments. These items together contribute to the price consumers ultimately pay for the vehicle. Table II–5 illustrates how these components can affect retail prices.

[97] 2015 NAS Report, at p. 292.

Table II-5: Retail Price Components

Direct Costs	
Manufacturing Cost	Cost of materials, labor, and variable energy needed for production
Indirect Costs	
Production Overhead	
Warranty	Cost of providing product warranty
Research and Development	Cost of developing and engineering the product
Depreciation and amortization	Depreciation and amortization of manufacturing facilities and equipment
Maintenance, repair, and operations	Cost of maintaining and operating manufacturing facilities and equipment
Corporate Overhead	
General and Administrative	Salaries of nonmanufacturing labor, operations of corporate offices, and others
Retirement	Cost of pensions for nonmanufacturing labor
Health Care	Cost of health care for nonmanufacturing labor
Selling Costs	
Transportation	Cost of transporting manufactured goods
Marketing	Manufacturer costs of advertising manufactured goods
Dealer Costs	
Dealer selling expense	Dealer selling and advertising expense
Dealer profit	Net Income to dealers from sales of new vehicles
Net income	Net income to manufacturers from production and sales of new vehicles

To estimate total consumer costs (*i.e.,* both direct and indirect costs), NHTSA multiplies a technology's DMCs by an indirect cost factor (the RPE) to represent the average price for fuel-saving technologies at retail. The RPE markup factor is based on an examination of historical financial data contained in 10–K reports filed by manufacturers with the Securities and Exchange Commission (SEC). It represents the ratio between the retail price of motor vehicles and the direct costs of all activities in which manufacturers engage.

For more than three decades, the retail price of motor vehicles has been, on average, roughly 50 percent above the direct cost expenditures of manufacturers. That is, the retail price is approximately 1.5 times the direct cost expenditures.[98] This ratio has been consistent, averaging roughly 1.5 with minor variations from year to year over this period. At no point has the RPE markup based on 10–K reports exceeded 1.6 or fallen below 1.4, based on data from 1972–1997 and 2007.[99] During this timeframe, the average annual increase in real direct costs was 2.5 percent, and the average annual increase in real indirect costs was also 2.5 percent. The RPE averages 1.5 across the lifetime of technologies of all ages, with a lower average in earlier years of a technology's life, and, because of learning effects on direct costs, a higher average in later years. Many automotive industry stakeholders have either endorsed the 1.5 markup or have estimated alternative RPE values. As seen in Table II–6, all estimates range between 1.4 and 2.0, and most are in the 1.4 to 1.7 range.[100]

[98] Rogozhin, A. et al., Automobile Industry Retail Price Equivalent and Indirect Cost Multipliers, Finale, EPA–420–R–09–003, EPA: Ann Arbor, MI (2009), available at: *https://nepis.epa.gov/Exe/ZyPDF.cgi/P100AGJ1.PDF?Dockey=P100AGJ1.PDF* (accessed: Sept. 10, 2025); Spinney, B.C. et al., Advanced Air Bag Systems Cost, Weight, and Lead Time Analysis Summary Report, National Highway Traffic Safety Administration: Washington, DC (1999).

[99] Data is not available for intervening years, but results for 2007 seem to indicate no significant change in the historical trend.

[100] See Comment of the Alliance of Automobile Manufacturers, Docket No. EPA–HQ–OAR–2018–0283–6186 at 143 (Oct. 26, 2018), available at: *https://www.regulations.gov/comment/EPA-HQ-OAR-2018-0283-6186* (accessed: Sept. 10, 2025) ("The Alliance supports the use of retail price equivalents in the compliance cost modeling . . . .").

Table II-6: Alternate Estimates of the RPE[101]

Author and Year	Value, Comments
Jack Faucett Associates for EPA, 1985	1.26 initial value, later corrected to 1.7+ by Sierra research
Vyas et al., 2000	1.5 for outsourced, 2.0 for OEM, and hybrid vehicles
NRC, 2002	1.4 (corrected to > by Duleep)
McKinsey and Company, 2003	1.7 based on European study
CARB, 2004	1.4 (derived using the JFA initial 1.26 value, not the corrected 1.7+ value)
Sierra Research for American Automobile Association, 2007	2.0 or >, based on Chrysler data
Duleep, 2008	1.4, 1.56, 1.7 based on integration complexity
NRC, 2011	1.5 for Tier 1 supplier, 2.0 for OEM
NRC, 2015	1.5 for OEM

An RPE of 1.5 does not mean that manufacturers automatically mark up each vehicle by exactly 50 percent. Rather, it means that, over time, the competitive marketplace has resulted in pricing structures that average out to this relationship across the entire industry. Prices for any individual model may be marked up at a higher or lower rate depending on market demand. On average, over time and across the vehicle fleet, consumers spend about $1.50 for each dollar of direct costs incurred by manufacturers. Based on NHTSA's own evaluation and the widespread use and acceptance of the RPE by automotive industry stakeholders, the agency has determined that the RPE provides a reasonable indirect cost markup for use in the analysis. A detailed discussion of indirect cost methods and the basis for the agency's use of the RPE to reflect these costs, rather than other indirect cost markup methods, is available in the Final Regulatory Impact Analysis (FRIA) for the 2020 final rule.[102]

Finally, manufacturers make improvements to production processes over time, which often result in lower costs. ''Cost learning'' reflects the effect of experience and volume on the cost of production, which generally results in better utilization of resources, leading to higher and more efficient production. As manufacturers gain experience through production, they refine production techniques, raw material and component sources, and assembly methods to maximize efficiency and reduce production costs.

NHTSA estimates cost learning by considering methods established by T.P. Wright and later expanded upon by J.R. Crawford. Wright, examining aircraft production, found that every doubling of cumulative production of airplanes resulted in decreasing labor hours at a fixed percentage. This fixed percentage is commonly referred to as the progress rate or progress ratio, where a lower rate implies faster learning as cumulative production increases. J.R. Crawford expanded upon Wright's learning curve theory to develop a single unit cost model, which estimates the cost of the nth unit produced where the following information is known: (1) cost to produce the first unit; (2) cumulative production of n units; and (3) the progress ratio.

Consistent with Wright's learning curve, most technologies in the CAFE Model use the basic approach by Wright, where NHTSA estimates technology cost reductions by applying a fixed percentage to the projected cumulative production of a given fuel economy technology in a given model year.[103] The agency estimates the cost to produce the first unit of any given technology by identifying the DMC for a technology in a specific model year. As discussed in detail below, and in Chapter 3 of the Draft TSD, NHTSA's technology DMCs come from studies, teardown reports, other publicly available data, and feedback from manufacturers and suppliers. Because different studies or cost estimates are based on costs in specific model years, the agency identifies the ''base'' model years for each technology where the learning factor is equal to 1.00. Then, the agency applies a progress ratio to back-calculate the cost of the first unit produced. The majority of technologies in the CAFE Model use a progress ratio (*i.e.,* the slope of the learning curve, or the rate at which cost reductions occur with respect to cumulative production) of approximately 0.89, which is derived from average progress ratios researched in studies funded or identified by NHTSA.[104] Many fuel economy

[101] Duleep, K.G., Analysis of Technology Cost and Retail Price, Presentation to Committee on Assessment of Technologies for Improving LDV Fuel Economy, Detroit, MI (2008); Jack Faucett Associates, Update of EPA's Motor Vehicle Emission Control Equipment Retail Price Equivalent (RPE) Calculation Formula, Report, No. 68–03–3244, EPA: Ann Arbor, MI (1985), available at: *https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=940047LI.txt* (accessed: Sept. 10, 2025); McKinsey & Company, Preface to the Auto Sector Cases, New Horizons Multinational Company Investment in Developing Economies (2023); Transportation Research Board and National Research Council, Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards, National Academies Press: Washington, DC, pp. 5, 12 (2002), available at: *https://nap.nationalacademies.org/catalog/10172/effectiveness-and-impact-of-corporate-average-fuel-economy-cafe-standards;* National Research Council, Assessment of Fuel Economy Technologies for Light-Duty Vehicles, National Academies Press: Washington, DC (2011), available at: *https://nap.nationalacademies.org/catalog/12924/assessment-of-fuel-economy-technologies-for-light-duty-vehicles* (accessed: Sept 10, 2025); NRC, Cost, Effectiveness, and Deployment of Fuel Economy Technologies in LDVs, National Academies Press (2015); Sierra Research, Inc, Study of Industry-Average Mark-Up Factors Used to Estimate Changes in Retail Price Equivalent (RPE) for Automotive Fuel Economy and Emissions Control Systems, Sierra Research, Inc.: Sacramento, CA (2007); Vyas, A. et al., Comparison of Indirect Cost Multipliers for Vehicle Manufacturing, Center for Transportation Research: Argonne, IL (2000), available at: *https://publications.anl.gov/anlpubs/2000/05/36074.pdf* (accessed: Sept. 10, 2025).

[102] NHTSA and EPA, FRIA: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Year 2021–2026 Passenger Cars and Light Trucks (2020), available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/final_safe_fria_web_version_200701.pdf* (accessed: Sept. 10, 2025).

[103] NHTSA uses statically projected cumulative volume production estimates because the CAFE Model does not support dynamic projections of cumulative volume at this time.

[104] Simons, J.F., Cost and Weight Added by the Federal Motor Vehicle Safety Standards for MY 1968–2012 Passenger Cars and LTVs, Report No. DOT HS 812 354, NHTSA: Washington DC, pp. 30–33 (2017), available at: *https://downloads.regulations.gov/NHTSA-2021-0053-1643/attachment_44.pdf* (accessed: Oct. 2, 2025); Argote, L. et al., The Acquisition and Depreciation of Knowledge in a Manufacturing Organization—Turnover and Plant Productivity, Working Paper, Graduate School of Industrial Administration, Carnegie Mellon University (1997); Benkard, C.L., Learning and Forgetting: The Dynamics of Aircraft Production, *The American Economic Review.* Vol.

technologies that have existed in vehicles for some time will have a gradual sloping learning curve implying that cost reductions from learning is moderate and eventually becomes less steep toward MY 2050. Conversely, newer technologies have an initial steep learning curve where cost reduction occurs at a high rate. Mature technologies generally have a flatter curve and may not incur much cost reduction, if at all, from learning. Draft TSD Chapter 2.4.4 provides an illustration showing various slopes of learning curves.

The agency assigns groups of similar technologies or technologies of similar complexity to each learning curve. While the grouped technologies differ in operating characteristics and design, NHTSA chooses to group them based on market availability, complexity of technology integration, and production volume of the technologies that can be implemented by manufacturers and suppliers. In general, the agency considers most basic engine and transmission technologies to be mature technologies that do not experience any additional improvements in design or manufacturing. Other basic engine technologies, like VVL, SGDI, and DEAC, decrease in costs through around MY 2036, because those were introduced into the market more recently. All advanced engine technologies follow the same general pattern of a gradual reduction in costs until MY 2036, when they plateau and remain flat. NHTSA expects the cost to decrease as production volumes increase, manufacturing processes are improved, and economies of scale are achieved. The agency has assigned advanced engine technologies based on a singular preceding technology to the same learning curve as that preceding technology. Similarly, the more advanced transmission technologies experience a gradual reduction in costs through MY 2031, when they plateau and remain flat. Lastly, the agency estimates that the learning curves for road load technologies, with the exception of the most advanced MR level (which decreases at a fairly steep rate through MY 2040, as discussed further below and in Chapter 3.4 of the Draft TSD), will decrease through MY 2036 and then remain flat.

For technologies that have been in production for many years, like some engine and transmission technologies, this approach produces reasonable estimates that NHTSA can compare against other studies and publicly available data. Generating the learning curve for battery packs for hybrid vehicles in future model years is significantly more complicated, and NHTSA discusses how the agency generated those learning curves in detail in Chapter 3.3 of the Draft TSD. NHTSA's battery pack learning curves recognize that there are many factors that could potentially lower battery pack costs over time outside of cost reductions from improvements in manufacturing processes due to knowledge gained through experience in production.

Table II–7 shows how some of the technologies on the MY 2024 Ravine Runner F Series decrease in cost over several years. Note that these costs are specifically applicable to the MedSUVPerf class, and other technology classes may have different costs for the same technologies. These costs are pulled directly from the Technology Costs Input File, meaning that they include the DMC, RPE, and learning.

Table II-7: Absolute Costs for Example Ravine Runner F Series Technologies in 2024$

Technology (MedSUVPerf)	2024	2027	2031
TURBOD (8C2B)	$10,118.42	$10,090.64	$10,061.14
AT10L2	$3,213.19	$3,190.24	$3,172.38
SS12V	$309.44	$289.97	$273.68
AERO5	$60.52	$57.87	$55.36

e. Simulating Tax Credits

The Inflation Reduction Act (IRA) included several tax credits intended to encourage the adoption of clean vehicles.[105] OB3 amended these credits and removed many of the clean vehicle credits.[106] Consistent with prior rulemakings, NHTSA also assumes that hybrids do not qualify for the IRA tax credits because their battery size is below the minimum thresholds set within the IRA. As noted throughout this preamble, NHTSA is statutorily prohibited from considering the fuel economy of dedicated automobiles and therefore has excluded dedicated vehicles from the analysis. The agency considers the fuel-based efficiency of dual-fueled vehicles, such as PHEVs, which are the only vehicles the agency models that are eligible for tax credits.

NHTSA models three provisions of the IRA only through MY 2025 and does not model any of these provisions from MY 2026 forward. The first is the advanced manufacturing production tax credit (AMPC), which provides a $35 per kWh tax credit for manufacturers of battery cells and an additional $10 per kWh for manufacturers of battery modules (all applicable to manufacture in the United States).[107]

90(4): pp. 1034–54 (2000), available at: *https://www.aeaweb.org/articles?id=10.1257/aer.90.4.1034* (accessed: Oct. 2, 2025); Epple, D. et al., Organizational Learning Curves: A Method for Investigating Intra-Plant Transfer of Knowledge Acquired through Learning by Doing, *Organization Science.* Vol. 2(1): pp. 58–70 (1991), available at: *https://www.jstor.org/stable/2634939* (accessed: Oct. 2, 2025); Epple, D. et al., An Empirical Investigation of the Microstructure of Knowledge Acquisition and Transfer Through Learning by Doing, *Operations Research,* Vol. 44(1): pp. 77–86 (1996), available at: *https://ideas.repec.org/a/inm/oropre/v44y1996i1p77-86.html* (accessed: Oct. 2, 2025); Levitt, S.D. et al., Toward an Understanding of Learning by Doing: Evidence From an Automobile Assembly Plant, Journal of Political Economy, Vol. 121(4): pp. 643–81 (2013), available at: *https://www.nber.org/papers/w18017* (accessed: Sept. 10, 2025).

[105] Public Law 117–169, 136 Stat. 1818 (Aug. 16, 2025). *https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf.*

[106] Enacted as Public Law 119–21, 139 Stat. 72 (July 4, 2025) *https://www.congress.gov/119/plaws/publ21/PLAW-119publ21.pdf.*

[107] 26 U.S.C. 45X. If a manufacturer produces a battery module without battery cells, it is eligible to claim up to $45 per kWh for the battery module. Two other provisions of the AMPC are not modeled at this time; (1) a credit equal to 10 percent of the manufacturing cost of electrode active materials and (2) a credit equal to 10 percent of the manufacturing cost of critical minerals for battery production. NHTSA is not modeling these credits directly because of how battery costs are estimated, and to avoid the potential to double-count the tax credits if they are included into other analyses that feed into NHTSA's inputs. For a full account of the credit and any limitations, please refer to the statutory text.

NHTSA also models two credits available to new vehicle buyers, the clean vehicle credit (30D) [108] and the credit for qualified commercial clean vehicles (45W) [109] (collectively, the Clean Vehicle Credits or ''CVCs''). The30D credit provides up to $7,500 toward the purchase of clean vehicles with critical minerals either extracted or processed in the United States or a country with which the United States has a free trade agreement or recycled in North America and battery components manufactured or assembled in North America.[110] In contrast to 30D, the 45W credit does not have the same critical minerals and production restraints, but instead the credit value is the lesser of the incremental cost to purchase a comparable ICE vehicle or 15 percent of the cost basis for PHEVs up to $7,500 for vehicles with GVWR less than 14,000. To date, the Department of the Treasury has allowed all eligible vehicles to qualify for the maximum value provided by statute based on DOE's Incremental Purchase Cost Methodology and Results for Clean Vehicles report.[111] The 45W credit is also available only to commercial purchasers; however, the Department of the Treasury determined that leased vehicles qualify given that the ''purchaser'' is the financing company.

NHTSA assumes, based on the updated constraints in OB3 that the impact of the credits would be *de minimis,* particularly for the vehicles and model years considered in this analysis. Thus, the agency removes the availability of CVCs consistent with the AMPC tax credit discussed below. NHTSA includes a sensitivity case related to the AMPC, which is discussed in detail in PRIA Chapter 9, and monitors this area to develop assumptions related to the updated AMPC provisions to include for the final rule. NHTSA also does not model individual state tax credits or rebate programs. State clean vehicle tax credits and rebates vary from jurisdiction to jurisdiction and are subject to more uncertainty than their Federal counterparts.[112] Tracking sales by jurisdiction and modeling each program's individual compliance program would require significant revisions to the CAFE Model and likely provide minimal changes in the net outputs of the analysis.

NHTSA jointly models the CVCs. Both credits are available at the time of sale and provide up to $7,500 towards the purchase of light-duty vehicles placed in service before the end of 2025. Since only one of the CVCs may be claimed for purchasing a given vehicle, NHTSA models them jointly.

As mentioned above, NHTSA is including the tax credits in its analysis through MY 2025. This was a natural terminal point for the CVCs, which are set to expire this year. The agency elected not to model the AMPC in future model years because of the more stringent foreign entity of concern (FEOC) constraints (*i.e.,* constrained eligibility for the tax credit based on materials sources) and American component threshold percentages. NHTSA conducts a sensitivity analysis in which the tax credits are included in the analysis for taking effect through the standard-setting years.

The agency assumes that manufacturers and consumers will each capture half of the dollar value of the AMPC and CVCs. The agency assumes that manufacturers' shares of both credits will offset part of the cost to supply models eligible for the credits—PHEVs, specifically. The subsidies reduce the costs of eligible vehicles and increase their attractiveness to buyers. Because the AMPC credit scales with battery capacity, NHTSA determines average battery energy capacity for passenger cars, and light trucks based on Argonne simulation outputs. Draft TSD Chapter 2.3.2 contains a detailed discussion of these assumptions. NHTSA accounts for all the eligibility requirements of 30D, and the AMPC, such as the location of final assembly and battery production, the origin of critical minerals, and the income restrictions of 30D through the credit schedules constructed in part based off of these factors and allows all PHEVs produced and sold during the timeframe that tax credits are offered to be eligible for those credits subject to the MSRP restrictions discussed above.[113]

To account for the agency's inability dynamically to model sourcing requirements and income limits for 30D, NHTSA uses projected values of the average value of 30D and the AMPC for the proposal. The projections increase throughout the analysis due to the expectation that gradual improvements in supply chains over time would allow more vehicles to qualify for the credits.

NHTSA uses a DOE report that provides combined values of the CVCs.[114] These values consider the latest information of PHEV penetration rates, PHEV retail prices, the share of United States PHEV sales that meet the critical minerals and battery component requirements, the share of vehicles that exclude suppliers that are ''Foreign Entities of Concern,'' and lease rates for vehicles that qualify for the 45W CVC. The DOE projections are the most detailed and rigorous projections of credit availability that NHTSA is aware of at this time. If DOE releases projections that reflect the passing of OB3 into law, NHTSA will consider using those projections for the final rule. According to DOE's analysis, the average credit value for the CVCs across all PHEV sales in a given year never reaches its full $7,500 value for all vehicles. DOE, therefore, projects a maximum average credit value of $6,000. Draft TSD Chapter 2.5.3 includes more information on the average AMPC credit per kWh that NHTSA uses in this proposal.

The CAFE Model accounts for the statutory MSRP restrictions of 30D by assuming that the CVCs cannot be applied to cars with an MSRP above $55,000 or other vehicles with an MSRP above $80,000, which are ineligible for 30D. 45W does not have the same MSRP restrictions; however, because NHTSA is unable to model the CVCs separately at this time, the agency has to choose whether to model the restriction for both CVCs or not to model the restriction at all. NHTSA chooses to include the restriction for both CVCs to be conservative.[115] Chapter 2.5.2 of the Draft TSD contains additional details on

[108] 26 U.S.C. 30D. For a full account of the credit and any limitations, please refer to the statutory text.

[109] 26 U.S.C. 45W. For a full account of the credit and any limitations, please refer to the statutory text.

[110] Vehicle price and consumer income limitations apply to § 30D credits, as well. See Congressional Research Service, Tax Provisions in the Inflation Reduction Act of 2022 (H.R. 5376) (2022), available at: *https://www.congress.gov/crs-product/R47202* (accessed: Sept. 10, 2025).

[111] See Internal Revenue Service, Frequently Asked Questions Related to New, Previously-Owned and Qualified Commercial Clean Vehicle Credits, Q4 and Q8 (2022), available at: *https://www.irs.gov/pub/taxpros/fs-2022-42.pdf* (accessed: Sept. 10, 2025).

[112] States have additional mechanisms to amend or remove tax incentives or rebates. Sometimes, even after these programs are enacted, uncertainty persists. See Farah, N., The Untimely Death of America's ''Most Equitable'' EV Rebate, Last revised: Jan. 30, 2023, available at: *https://www.eenews.net/articles/the-untimely-death-of-americas-most-equitable-ev-rebate/* (accessed: Sept. 10, 2025).

[113] *See* 88 FR 56179 (Aug. 17, 2023) for a more detailed explanation of the process used for the previous proposal.

[114] U.S. Department of Energy, Estimating Federal Tax Incentives for Heavy Duty Electric Vehicle Infrastructure and for Acquiring Electric Vehicles Weighing Less Than 14,000 Pounds, Memorandum (Mar. 11, 2024).

[115] Bureau of Transportation Statistics, New and Used Passenger Car and Light Truck Sales and Leases, available at: *https://www.bts.gov/content/new-and-used-passenger-car-sales-and-leases-thousands-vehicles* (accessed: Sept. 10, 2025).

how NHTSA implements the IRA and OB3 tax credits.

NHTSA uses real dollars for future costs and benefits, such as technology costs in future model years. Including the tax credits as nominal dollars instead of real dollars artificially raises the value of the credits in respect to other costs, so NHTSA converts the DOE projections to real dollars.

The CAFE Model projects vehicles in model year cohorts rather than on a calendar year basis. Given that model years and calendar years can be misaligned (*e.g.,* a MY 2024 vehicle could be sold in CYs 2023, 2024, or even 2025), choosing which calendar year a model year falls into is important for assigning tax credits that are phased out during the analytical period. NHTSA analyzes the timing of new vehicle sales and new vehicle registrations and determines that, for this proposed rule, it is appropriate to assume that credits available in a given calendar year are available to all vehicles sold in the following model year. By contract, NHTSA models vehicles in a given model year as eligible for credits available in the same calendar year. As a result, NHTSA applies the credits to MYs 2024–2025 in this analysis.

f. Technology Applicability Equations and Rules

As NHTSA describes above, the CAFE Model simulates cost-effective ways that vehicle manufacturers could comply with CAFE standards, subject to limits that ensure that the Model reasonably replicates manufacturers' decisions in the real world. This section describes the equations the CAFE Model uses to determine how to apply technology to vehicles, including whether technologies are cost effective, and why the agency believes the CAFE Model's calculation of potential compliance pathways reasonably represents manufacturers' decision-making. This section also gives a high-level overview of real-world limitations that vehicle manufacturers face when designing and manufacturing vehicles and how the agency includes those in the technology inputs and assumptions in the analysis.

For each manufacturer's fleet, the CAFE Model first determines whether any technology should be ''inherited'' from an engine, transmission, or platform that currently uses the technology and should be applied to a vehicle that is due for a refresh or redesign. NHTSA describes above how vehicle manufacturers use the same or similar engines, transmissions, and platforms across multiple vehicle models, and the agency tracks vehicle models that share technology by assigning Engine, Transmission, and Platform Codes to vehicles in the analysis fleet. As an example, variants of the Ford 10R80 10-speed transmission are currently used in the following Ford Motor Company vehicles: 2017-present Ford F–150, 2018-present Ford Mustang, 2018-present Ford Expedition/Lincoln Navigator, 2019-present Ford Ranger, and the 2020-present Ford Explorer/Lincoln Aviator. The 2WD variant of the 10R80, as applied to the CAFE Model, is shared by the 2WD Expedition models, 2WD F–150 models, and the Mustang, thus linking these models by the same Transmission Code. If one of these three vehicle model types receives a transmission upgrade, the other two would automatically receive the same upgrade at their next redesign or refresh.

After applying inherited technologies, the Model begins the process of evaluating what technologies could be applied to the manufacturer's vehicles. The CAFE Model applies the most cost-effective technology out of the universe of technology options that the Model could potentially apply. To determine whether a particular technology is cost effective, the Model calculates the ''effective cost'' of multiple technology options and chooses the option that results in the lowest ''effective cost.'' A technology that has an effective cost less than zero (Equation II–4 results in a negative number) is considered cost effective, as a negative effective cost implies that the technology ''pays for itself.'' The ''effective cost'' calculation is actually multiple calculations, but this section describes only the highest levels of that logic; interested readers can consult the CAFE Model Documentation for additional information on the calculation of effective cost. Equation II–4 shows the CAFE Model's effective cost calculation for this analysis.

Equation II-4: CAFE Model Effective Cost Calculation

$$EffCost = \frac{TechCost_{Total} - TaxCredits_{Total} - FuelSavings_{Total} - \Delta Fines}{\Delta ComplianceCredits}$$

Where:

$TechCost_{Total}$:
the total cost of a candidate technology evaluated on a group of selected vehicles;
$TaxCredits_{Total}$*:*
the cumulative value, if any, of additional vehicle and battery tax credits (or Federal incentives) resulting from application of a candidate technology evaluated on a group of selected vehicles;
$FuelSavings_{Total}$*:*
the value of the reduction in fuel consumption (or fuel savings) resulting from application of a candidate technology evaluated on a group of selected vehicles;
$\Delta Fines$*:*
the change in manufacturer's fines in the analysis year, if applicable;
$\Delta ComplianceCredits$*:*
the change in manufacturer's CAFE compliance credits in the analysis year (denominated in thousands of gallons);
EffCost:
the calculated effective cost attributed to application of a candidate technology evaluated on a group of selected vehicles.

The components of this ''cost per credit'' effective cost calculation are described further here. The CAFE Model considers the total cost of a technology (TechCost) that could be applied to a group of connected vehicles, just as a vehicle manufacturer might consider what new technologies it has ready for the market and which vehicles should and could receive the upgrade. Next, like the technology costs, the CAFE Model calculates the total value of Federal incentives (TaxCredits) available for a technology that could be applied to a group of vehicles and subtracts that total incentive from the total technology costs. The total fuel cost savings (FuelSavings) are the savings in fuel expense resulting from switching from one technology to another. For this, the CAFE Model must calculate the total fuel cost for the vehicle before application of a technology and subtract the total fuel cost for the vehicle after calculation of that technology. The total fuel cost for a given vehicle depends on both the price of gas (or gasoline equivalent fuel) and the number of miles that a vehicle is driven, among other factors.[116] As

[116] This fuel cost savings is calculated using the miles driven over 3 years, based on the assumption that consumers are likely to buy vehicles with fuel

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technology is applied to vehicles in groups, the total fuel cost for the vehicle is then multiplied by the sales volume of a vehicle in a model year to equal total fuel cost savings, which is then subtracted in the numerator of the effective cost equation. Finally, in the numerator, the agency subtracts the change in a manufacturer's expected fines (ΔFines), which are set at $0 for this analysis as a result of Public Law 119–21, before and after application of a specific technology, if any.[117] This approach can be thought of as subtraction of the fines *avoided* by upgrading to a certain technology. Then, the result from the sequence above is divided by the change in compliance credits (Δ*ComplianceCredits*), which means a manufacturer's credits earned in a compliance category before and after the application of a technology to a group of vehicles. This approach can be thought of as dividing the result by the *gain* in credits resulting from upgrading to a certain technology.

After inherited technologies and cost-effective technologies are applied, the CAFE Model determines whether the manufacturer's fleet meets its CAFE standard. If the manufacturer is still not in compliance, the Model applies non-cost-effective technologies (which have an effective cost greater than zero) until it runs out of technology options.

The Model runs the compliance simulation successively and accounts for technology added during each previous model year by carrying forward technologies between model years once they are applied. The CAFE Model does this by mirroring real-world decisions of manufacturers to carry forward most technologies between model years, concentrating the application of new technology to vehicle redesigns or mid-cycle ''freshenings,'' and design cycles vary widely among manufacturers and specific products. Comments from manufacturers and Model peer reviewers for past CAFE rules have strongly supported explicit year-by-year simulation. The multi-year planning capability increases the Model's ability to simulate manufacturers' real-world behavior, accounting for the fact that manufacturers will seek out compliance paths for several model years at a time, while accommodating the year-by-year requirement.

In addition to the Model's technology application decisions pursuant to the compliance simulation algorithm, several technology inputs and assumptions work together to determine which technologies the CAFE Model can apply. The technology pathways, discussed in detail above, are one significant way that the agency instructs the CAFE Model to apply technology. Again, the pathways define mutually exclusive technologies (*i.e.,* those that cannot be applied at the same time) and define the direction in which vehicles can advance as the modeling system evaluates specific technologies for application. Then, the arrows between technologies instruct the Model on the order in which to evaluate technologies on a pathway, to ensure that a vehicle that uses a more fuel-efficient technology cannot downgrade to a less efficient option.

In addition to technology pathway logic, NHTSA uses several technology applicability rules to replicate better manufacturers' decision-making. The ''skip'' input—represented in the Market Data Input File as ''SKIP'' in the appropriate technology column corresponding to a specific vehicle model—is particularly important for accurately representing how a manufacturer applies technologies to their vehicles in the real world. This tells the Model not to apply a specific technology to a specific vehicle model. SKIP inputs are used to simulate manufacturer decisions, including: (1) parts and process sharing; (2) stranded capital; and (3) performance neutrality.

First, parts sharing includes the concepts of platform, engine, and transmission sharing, which are discussed in detail in Section II.C.2 and Section II.C.3, above. A ''platform'' refers to engineered underpinnings shared on several differentiated vehicle models and configurations. Manufacturers share and standardize components, systems, tooling, and assembly processes within their products (and occasionally with the products of another manufacturer) to manage complexity and costs for development, manufacturing, and assembly. Detailed discussion for this type of SKIP is provided in the ''adoption features'' section for different technologies, if applicable, in Chapter 3 of the Draft TSD.

Similar to vehicle platforms, manufacturers create engines that share parts. For instance, manufacturers may use different piston strokes on a common engine block or bore out common engine block castings with different diameters to create engines with an array of displacements. Head assemblies for different displacement engines may share many components and manufacturing processes across the engine family. Manufacturers may finish crankshafts with the same tools to similar tolerances. Engines on the same architecture may share pistons and connecting rods, and the same engine architecture may include both 6- and 8-cylinder engines. One engine family may appear on many vehicles on a platform, and changes to that engine may or may not carry through to all the vehicles. Some engines are shared across a range of different vehicle platforms. Vehicle model/configurations in the analysis fleet that share engines belonging to the same platform are identified as such, and the agency also may apply a SKIP to a particular engine technology where it is known that a manufacturer shares an engine throughout several of their vehicle models and the engine technology is not appropriate for any of the platforms that share the same engine.

It is important to note that manufacturers can define a ''common'' engine platform in different ways. Some manufacturers consider engines as ''common'' if the engines share an architecture, components, or manufacturing processes. Other manufacturers take a narrower approach and consider engines ''common'' only if the parts in the engine assembly are the same. In some cases, manufacturers designate each engine in each application as a unique powertrain. For example, a manufacturer may have listed two engines separately for a pair that share designs for the engine block, the crankshaft, and the head because the accessory drive components, oil pans, and engine calibrations differ between the two. In practice, many engines share parts, tooling, and assembly resources, and manufacturers often coordinate design updates between two similar engines. NHTSA considers engines to be on a common platform (for purposes of coding, discussed in Section II.C.2 above, and for SKIP application) if the engines share a common cylinder count and configuration, displacement, valvetrain, and fuel type, or if the engines only differ slightly in compression ratio (CR), HP, and displacement.

Parts sharing also includes the concept of sharing manufacturing lines (the systems, tooling, and assembly processes discussed above), because manufacturers are unlikely to build a new manufacturing line to build a completely new engine. A new engine designed to be mass manufactured on an existing production line has limits in number of parts used, type of parts used, weight, and packaging size due to the weight limits of the pallets, material handling interaction points, and

economy-improving technology that pays for itself within 3 years.

[117] See Section VI noting the value of civil penalties are set to $0 in this analysis.

conveyance line design to produce one unit of a product. The restrictions are reflected in the usage of a SKIP of engine technology that the manufacturing line would not accommodate.

SKIPs also relate to instances of stranded capital when manufacturers amortize research, development, and tooling expenses over many years, especially for engines and transmissions. The traditional production life cycles for transmissions and engines have been a decade or longer. If a manufacturer launches or updates a product with fuel-saving technology, and then later replaces that technology with an unrelated or different fuel-saving technology before the equipment and research and development investments have been fully paid off, there will be unrecouped, or stranded, capital costs. Quantifying stranded capital costs accounts for such lost investments. One design where manufacturers take an iterative redesign approach, as described in a recent SAE paper,[118] is the MacPherson strut suspension. It is a popular low-cost suspension design, and manufacturers use it across their fleets. As the agency observed previously, manufacturers may be shifting their investment strategies in ways that may alter how stranded capital could be considered. For example, some suppliers sell similar transmissions to multiple manufacturers. Such arrangements allow manufacturers to share in capital expenditures or amortize expenses more quickly. Manufacturers share parts on vehicles around the globe, achieving greater scale and greatly affecting tooling strategies and costs.

As a proxy for stranded capital, the CAFE Model accounts for platform and engine sharing and includes redesign and refresh cycles for significant and less significant vehicle updates. This analysis continues to rely on the CAFE Model's explicit year-by-year accounting for estimated refresh and redesign cycles, and shared vehicle platforms and engines, to moderate the cadence of technology adoption and thereby limit the implied occurrence of stranded capital and the need to account for it explicitly. In addition, confining some manufacturers to specific advanced technology pathways through technology adoption features acts as a proxy to account for stranded capital indirectly. Adoption features specific to each technology, if applied on a manufacturer-by-manufacturer basis, are discussed in each technology section.

D. Technology Pathways, Effectiveness, and Cost

The previous section has discussed, at a high level, how NHTSA generates the technology inputs and assumptions used in the CAFE Model. The process for generating these inputs and assumptions involves NHTSA using engineering judgment to evaluate and synthesize data from a variety of sources, including data submitted by vehicle manufacturers; consolidated publicly available data, such as press materials, marketing brochures, and other information; data from collaborative research, testing, and modeling with other Federal agencies and laboratories; data from research, testing, and modeling with independent organizations; data and assumptions from work done for prior rules; and feedback from stakeholders on prior rules and meetings conducted prior to the commencement of this rulemaking, to the extent it is still relevant and applicable.

This section discusses the specific technology pathways, effectiveness, and cost inputs and assumptions used in the compliance analysis. As an example, NHTSA has explained in the previous section that the starting point for estimating technology costs is an estimate of the DMC—the component and assembly costs of the physical parts and systems that make up a complete vehicle—for any particular technology. This section then explains how NHTSA bases the transmission technology DMCs on estimates from NAS.

After spending over a decade refining the technology pathways, effectiveness, and cost inputs and assumptions used in successive CAFE Model analyses, NHTSA has developed guiding principles to ensure that the CAFE Model's compliance analysis reflects impacts reasonably expected in the real world. These guiding principles are as follows:

Technologies have complementary or non-complementary interactions with the full-vehicle technology system. The fuel economy improvement from any individual technology must be considered in conjunction with the other fuel economy-improving technologies applied to the vehicle, because technologies added to a vehicle do not result in a simple additive fuel economy improvement from each individual technology. In particular, NHTSA expects this result from engine and other powertrain technologies that improve fuel economy by allowing the ICE to spend more time operating at efficient engine speed and load conditions or from combinations of engine technologies that work to reduce the effective displacement of the engine.

The effectiveness of a technology depends on the type of vehicle to which the technology is being applied. When discussing ''vehicle type'' in the analysis, NHTSA is referring to the vehicle technology classes (*e.g.,* a small car, a medium performance SUV, or a pickup truck), among other classes. A small car and a medium performance SUV that use the exact same technology start with very different fuel economy values; so, when the exact same technology is added to both of those vehicles, the technology provides a different effectiveness improvement for each of those vehicles.

The cost and effectiveness values for each technology are reasonably representative of what can be achieved across the entire industry. Each technology model employed in the analysis is designed to be representative of a wide range of specific technology applications used in industry. Some manufacturers' systems may perform better or worse than the modeled systems and some may cost more or less than the modeled systems; however, employing this approach ensures that, on balance, the analysis captures a reasonable level of costs and benefits that would result from any manufacturer applying the technology.

A consistent reference point for cost and effectiveness values must be identified before assuming that a cost or effectiveness value could be employed for any individual technology. For example, this analysis uses a set of engine map models developed by starting with a small number of engine configurations, and then, in a systematic and controlled process, adding specific well-defined technologies to create a new map for each unique technology combination. Again, providing a consistent reference point to measure incremental technology effectiveness values ensures that NHTSA is capturing accurate effectiveness values for each technology combination.

The following sections discuss the engine, transmission, hybridization, MR, aerodynamic, tire rolling resistance, and other vehicle technologies considered in this analysis. The following sections discuss:

- How NHTSA defines technology in the CAFE Model; [119]

[118] Pilla, S. et al., Parametric Design Study of McPherson Strut to Stabilizer Bar Link Bracket Weld Fatigue Using Design for Six Sigma and Taguchi Approach, SAE Technical Paper 2021–01–0235, SAE International: (2021), available at: *https://doi.org/10.4271/2021-01-0235* (accessed: Sept. 10, 2025).

[119] Note: Due to the diversity of definitions industry employs for technology terms, or in

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- How NHTSA assigns technology to vehicles in the analysis fleet used as a starting point for this analysis;
- Any adoption features applied to the technology, so the analysis better represents manufacturers' real-world decisions;
- Technology effectiveness values; and
- Technology cost.

Note that the following technology effectiveness sections provide *examples* of the *range* of effectiveness values that a technology could achieve when applied to the entire vehicle system, in conjunction with the other fuel economy-improving technologies already in use on the vehicle. To see the incremental effectiveness values for any particular vehicle moving from one technology key to a more advanced technology key, see the CAFE Model Fuel Economy Adjustment Files that are installed as part of the CAFE Model Executable File, and *not* in the input/output folders. Similarly, the technology costs provided in each section are *examples* of absolute costs seen in specific model years, for specific vehicle classes. The Technologies Input File contains all absolute technology costs used in the analysis across all model years.

1. Engine Paths

ICE vehicles convert chemical energy in fuel to useful mechanical power. The chemical energy in the fuel is released and converted to mechanical power by being oxidized, or burned, inside the engine. The air/fuel mixture entering the engine and the burned fuel/exhaust by-products leaving the engine are the working fluids in the engine. The engine power output is a direct result of the work interaction between these fluids and the mechanical components of the engine.[120] The generated mechanical power is used to perform useful work, such as vehicle propulsion.[121]

NHTSA classifies the extensive variety of light-duty vehicle ICE technologies into discrete Engine Paths. These paths are used to model the most representative characteristics, costs, and performance of the fuel economy-improving engine technologies most likely available during the rulemaking timeframe. The paths are intended to be representative of the range of potential performance levels for each engine technology. In general, the paths are tied to ease of implementation of additional technology and how closely related the technologies are. The technology paths are presented in Chapter 3.1.1 of the Draft TSD.

The Engine Paths have been selected and refined over a period of more than 10 years, based on engines in the market, stakeholder comments, and engineering judgment, subject to the following factors: the included technologies are those most likely available during the rulemaking timeframe and within the range of potential performance levels for each technology, and excluded technologies are those unlikely to be feasible in the rulemaking timeframe, unlikely to be compatible with U.S. fuels, or for which there was not appropriate data available to allow the simulation of effectiveness across all vehicle technology classes in this analysis.

The Engine Paths begin with one of the three base engine configurations: dual-overhead camshaft (DOHC) engines have two camshafts per cylinder head (one operating the intake valves and one operating the exhaust valves), single overhead camshaft (SOHC) engines have a single camshaft, and overhead valve (OHV) engines also have a single camshaft located inside of the engine block (beneath the valves rather than overhead) connected to a rocker arm through a pushrod that actuates the valves. DOHC and SOHC engine configurations are common in the light-duty fleet.

The next step along an Engine Path is the Basic Engine Path technologies. These include variable valve lift (VVL), stoichiometric gasoline direct injection (SGDI), and a basic level of cylinder deactivation (DEAC). VVL dynamically adjusts how far the valve opens and reduces fuel consumption by reducing pumping losses and optimizing airflow over a broader range of engine operating conditions. Instead of injecting fuel at lower pressures and before the intake valve, SGDI injects fuel directly into the cylinder at high pressures allowing for more precise fuel delivery while providing a cooling effect and allowing for an increase in the CR, more optimal spark timing for improved efficiency, or both. DEAC disables the intake and exhaust valves and turns off fuel injection and spark ignition on select cylinders, which effectively allows the engine to operate temporarily as if it were smaller while also reducing pumping losses to improve efficiency. For this proposal, NHTSA has integrated variable valve timing (VVT) technology in all non-diesel engines, so there is not a separate box for it on the Basic Engine Path. VVL, SGDI, and DEAC can be applied to an engine individually or in combination with each other.

Moving beyond the Basic Engine Path technologies are the ''advanced'' engine technologies, which means that applying the technology—both in NHTSA's analysis and in the real world—requires significant changes to the structure of the engine or an entirely new engine architecture. The advanced engine technologies represent the application of alternate combustion cycles, various applications of forced induction technologies, or advances in cylinder deactivation.

Advanced cylinder deactivation (ADEAC) systems, also known as rolling or dynamic cylinder deactivation systems, allow the engine to vary the percentage of cylinders deactivated and the sequence in which cylinders are deactivated. Depending on the engine's speed and associated torque requirements, an engine might have most cylinders deactivated (*e.g.,* low torque conditions, as with slower speed driving) or it might have all cylinders activated (*e.g.,* high torque conditions, as with merging onto a highway).[122] An engine operating at low-speed/low-torque conditions can save fuel by operating at a fraction of its total displacement. NHTSA models two ADEAC technologies, advanced cylinder deactivation on a single overhead camshaft engine (ADEACS), and ADEACD.

Forced induction gasoline engines include both supercharged and turbocharged downsized engines, which can pressurize or force more air into an engine's intake manifold when higher power output is needed. The raised pressure results in an increased amount of airflow into the cylinder to support combustion, increasing the specific power of the engine. The first-level turbocharged downsized technology (TURBO0) engine represents a basic level of forced air induction technology being applied to a DOHC engine. A cooled exhaust gas recirculation (CEGR) system takes engine exhaust gases, passes them through a heat exchanger to reduce their temperature, then mixes them with incoming air in the intake

describing the specific application of technology, the terms defined here may differ from how the technology is defined in some parts of the industry.

[120] Heywood, J. B., Internal Combustion Engine Fundamentals, McGraw-Hill Education (2018), Chapter 1 (hereinafter, Heywood (2018)).

[121] *Ibid,* containing a complete discussion on fundamentals of engine characteristics, such as torque, torque maps, engine load, power density, brake mean effective pressure (BMEP), combustion cycles, and components.

[122] See Tula Technology, Inc. Dynamic Skip Fire, available at: *https://www.tulatech.com/combustion-engine/* (accessed: Sept. 10, 2025), discussing how the company's proprietary cylinder deactivation technology operates in real-world situations. NHTSA's modeled ADEAC system is not based on this specific system, and therefore the effectiveness improvement is different in NHTSA's analysis than with this system; however, the theory still applies.

manifold to reduce peak combustion temperature, thereby improving fuel efficiency and emissions. NHTSA models the base TURBO0 turbocharged engine with the addition of cooled exhausted recirculation (TURBOE), basic cylinder deactivation (TURBOD), variable valve lift (TURBO1), and advanced cylinder deactivation (TURBOAD). Advancing further into the Turbo Engine Path leads to an engine with a higher BMEP, which is a function of displacement and power. In other words, the higher the BMEP, the higher the power density of the engine. NHTSA models an advanced turbocharging technology (TURBO2) that runs increasingly higher turbocharger boost levels, burning more fuel and making more power for a given displacement. This analysis pairs turbocharging with engine downsizing, meaning that the turbocharged downsized engines improve vehicle fuel economy by using less fuel to power the smaller engine while maintaining vehicle performance.

The technology pathways represent an increase in the level or combinations of technologies being applied, with lower levels at the top and higher levels at the bottom of the path. Chapter 3.1.1 of the Draft TSD shows the technology pathways for visualization purposes; however, the CAFE Model could apply any cost-effective combinations of technologies from those given pathways. Levels of improvement are dependent upon the vehicle class and the technology combinations. Again, in general, the paths are tied to ease of implementation of additional technology and how closely related the technologies are. An example of how this applies to the TURBO family of technologies is described below. The pathways are not aligned from ''least effective'' to ''most effective'' because assuming so would ignore several important considerations, including how technologies interact on a vehicle, how technologies interact on vehicles of different sizes that have different power requirements, and how hardware changes may be required for a particular technology For example, the scenario below describes how, once a manufacturer downsizes an engine accompanying the application of a turbocharger, it would most likely not re-upsize the engine to add a less advanced turbocharger. The interaction of these technology combinations is discussed in more detail in Draft TSD Chapter 2.

While TURBO0 is modeled with cooled EGR (TURBOE) and with DEAC (TURBOD), these technologies do not apply to TURBO1 or TURBO2; this decision is intentional. NHTSA defines TURBO1 in the analysis by adding VVL to the TURBO0 engine, and TURBO2 is the highest turbo downsized engine with a high BMEP. The benefits of cooled EGR and DEAC on TURBO1 and TURBO2 technologies would occur at high engine speeds and loads, which do not occur on the two-cycle tests. Because NHTSA measured technology effectiveness in this analysis based on the delta in improvements in vehicles' two-cycle test fuel consumption values, adding cooled EGR and DEAC to TURBO1 and TURBO2 would provide little effectiveness improvement for the corresponding increase in cost, a technology decision that the agency does not believe manufacturers would adopt in the real world. NHTSA's modeling effectively captured these complex interactions among technologies—an example of why effectiveness values from different technologies cannot simply be added together.[123] This potential for added costs with limited efficiency benefit is also an example of why the CAFE Model technology tree is not ordered from least to most effective technology and why particular technologies are included on the technology tree while others are not. Draft TSD Chapter 2 provides more discussion on interactions among individual technologies in the full-vehicle simulations.

Consistent with the approach of preventing moving backward in the technology tree, the Model does not allow a vehicle assigned a TURBO2 technology to adopt a TURBOE technology. A vehicle in the analysis fleet that is assigned the TURBO2 technology indicates a manufacturer made the decision to either skip over or move on from lower levels of force induction technology. Moving backwards in the technology tree from TURBO2 to any of the lower turbo technologies would require the engine to be upsized to meet the same performance metrics as the analysis fleet vehicle. As discussed further in Section II.C.2.c, NHTSA ensures the vehicles in this analysis meet similar performance levels after the application of fuel economy-improving technology, because the agency's objective is to measure the costs and benefits of manufacturers responding to CAFE standards in this analysis, and not the costs or benefits related to changing performance metrics in the fleet. Moving from a higher to a lower turbo technology works counter to saving fuel as the engine would grow in displacement, requiring more fuel, adding frictional losses, and increasing weight and cost. Accordingly, the agency believes that the Turbo engine pathway appropriately captures the ways manufacturers might apply increasing levels of turbocharging technology to their vehicles.

In this analysis, high compression ratio (HCR) engines represent a class of engines that achieve a higher level of fuel efficiency by implementing a high geometric CR with varying degrees of late intake valve closing (LIVC) (*i.e.,* closing the intake valve later than usual) using VVT, and without the use of an electric drive motor.[124] These engines operate on a modified Atkinson cycle, allowing for improved fuel efficiency under certain engine load conditions while still offering enough power not to require an electric motor; however, there are limitations on how HCR engines can apply LIVC and the types of vehicles that can use this technology. The way that each individual manufacturer implements a modified Atkinson cycle is unique, as each manufacturer must balance not only fuel efficiency considerations, but also emissions, on-board diagnostics, and safety considerations, which include the vehicle being able to operate responsively to the driver's demand.

NHTSA defines HCR engines as being naturally aspirated, gasoline, spark ignition (SI), using a geometric CR of 12.5:1 or greater,[125] and able dynamically to apply various levels of LIVC based on load demand. An HCR engine uses less fuel for each engine cycle, which increases fuel economy but decreases power density (or torque). Generally, during high loads—when more power is needed—the engine will use variable valve actuation to reduce the level of LIVC by closing the intake valve earlier in the compression stroke (leaving more air/fuel mixture in the combustion chamber), increasing the effective CR, reducing over-expansion, and sacrificing efficiency for increased power density.[126] However, there is a

[123] NHTSA–2021–0053–0007–A3 at 15; NHTSA–2021–0053–0002–A9, at pp. 21–23.

[124] LIVC is a method manufacturers use to reduce the effective compression ratio and allow the expansion ratio to be greater than the compression ratio resulting in improved fuel economy but reduced power density. Further technical discussion on HCR and Atkinson engines are discussed in Draft TSD Chapter 3.1.1.2.3. The 2015 NAS Report, Appendix D, includes a short discussion on thermodynamic engine cycles.

[125] Note that even if an engine has a compression ratio of 12.5:1 or greater, it does not necessarily mean it is an HCR engine in NHTSA's analysis, as discussed below. NHTSA looks at a number of factors to perform baseline engine assignments.

[126] Variable valve actuation is a general term used to describe any single or combination of VVT, VVL,

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limit to how much the air-fuel mixture can be compressed before ignition in the HCR engine due to the potential for engine knock.[127] Engine knock can be mitigated in HCR engines with higher octane fuel; however, the fuel specified for use in most vehicles is not higher octane fuel. Conversely, at low loads, the engine will typically increase the level of LIVC by closing the intake valve later in the compression stroke, reducing the effective CR, increasing the over-expansion, and sacrificing power density for improved efficiency. By closing the intake valve later in the compression stroke (*i.e.,* applying more LIVC), the engine's displacement is effectively reduced, which results in less air and fuel for combustion and a lower power output.[128] Varying LIVC can be used to mitigate, but not eliminate, the low power density issues that can constrain the application of an Atkinson-only engine.

The phrase ''low power density issues'' translates to a low torque density,[129] meaning that the engine cannot create the torque required at necessary engine speeds to meet load demands. To the extent that a vehicle requires more power in a given condition than an engine with low power density can provide, that engine would experience issues like engine knock for the reasons discussed above; more importantly, an engine designer would not allow a particular engine design to be used in conditions where the engine has the potential to operate in unsafe conditions in the first place. Instead, a manufacturer could significantly increase an engine's displacement (*i.e.,* size) to overcome those low power density issues,[130] or could add an electric motor and battery pack to provide the engine with more power; however, a far more effective pathway would be to apply a different type of engine technology, like a downsized, turbocharged engine.[131] Because of these limitations with HCR engines, NHTSA restricts the Model from applying this technology to vehicles that would be negatively impacted by the technology, like pickup trucks.[132]

Vehicle manufacturers' intended performance attributes for a vehicle—like payload and towing capability, features for off-road use, and other attributes that affect aerodynamic drag and rolling resistance—dictate whether an HCR engine can be a suitable technology choice for that vehicle.[133] As vehicles require higher payloads and towing capacities,[134] experience road load increases from larger all-terrain tires or less aerodynamic designs, or experience driveline losses for AWD and 4WD configurations, more engine torque is required at all engine speeds. When more engine torque is required, the application of HCR technology becomes less effective and more limited.[135] For these reasons, and to maintain a performance-neutral analysis, NHTSA limits non-hybrid and non-plug-in-hybrid HCR engine application to certain categories of vehicles.[136]

NHTSA includes three HCR Engine Path technology options in this analysis: (1) a first-level Atkinson-enabled engine (HCR) with VVT and SGDI; (2) an Atkinson-enabled engine with cooled exhaust gas recirculation (HCRE); and, (3) an Atkinson-enabled engine with DEAC (HCRD). This updated family of HCR engine map models also reflects the statement in NHTSA's May 2, 2022, final rule that a single engine that employs an HCR, CEGR, *and* DEAC ''is unlikely to be utilized in the rulemaking timeframe based on comments received from the industry leaders in HCR technology application.'' [137]

These three HCR Engine Path technology options (HCR, HCRE, HCRD) should not be confused with the hybrid and plug-in hybrid electric pathway options that also utilize HCR engines in combination with a P2 hybrid powertrain (*e.g.,* P2HCR, P2HCRE, PHEV20H, and PHEV50H); those hybridization path options are discussed in Section II.D.3 below. In contrast, Atkinson engines in NHTSA's power-split hybrid powertrains (SHEVPS, PHEV20PS, and PHEV50PS) run the Atkinson Cycle full time but are connected to an electric motor. The full-time Atkinson engines are also discussed in Section II.D.3.

The Miller cycle is another alternative combustion cycle that effectively uses an extended expansion stroke, similar to the Atkinson cycle but with the application of forced induction to improve fuel efficiency. Miller cycle-enabled engines have a similar trade-off in power density as Atkinson engines; the lower power density requires a larger volume engine in comparison to an Otto cycle-based turbocharged system for similar applications.[138] To address the impacts of the extended expansion stroke on power density during high load operating conditions, the Miller cycle operates in combination

and variable valve duration used to dynamically alter an engine's valvetrain during operation.

[127] Engine knock in spark ignition engines occurs when combustion of some of the air/fuel mixture in the cylinder does not result from propagation of the flame front ignited by the spark plug rather, one or more pockets of air/fuel mixture explode outside of the envelope of the normal combustion front.

[128] Power = (force × displacement)/time.

[129] Torque = radius × force.

[130] 2024 EPA Trends Report at 54 (''As vehicles have moved towards engines with a lower number of cylinders, the total engine size, or displacement, is also at an all-time low.''). The discussion below describes why NHTSA does not believe manufacturers will increase the displacement of HCR engines to make the necessary power because of the negative impacts it has on fuel efficiency.

[131] See Toyota, 2024 Toyota Tacoma Makes Debut on the Big Island, Hawaii (2023), available at: *https://pressroom.toyota.com/2024-toyota-tacoma-makes-debut-on-the-big-island-hawaii/* (accessed: Sept. 10, 2025). The 2024 Toyota Tacoma comes in eight ''grades,'' all of which use a turbocharged engine.

[132] Draft TSD Chapter 3.1.1.2.3 includes more discussion on HCR and HCR restrictions.

[133] Supplemental Comments of Toyota Motor North America, Inc., Notice of Proposed Rulemaking: Safer Affordable Fuel-Efficient Vehicles Rule, Docket ID Numbers: NHTSA–2018–0067 and EPA–HQ–OAR–2018–0283, at 6; Feng, R. et al. Investigations of Atkinson Cycle Converted from Conventional Otto Cycle Gasoline Engine, SAE Technical Paper 2016–01–0680, (2016), available at: *https://www.sae.org/publications/technical-papers/content/2016-01-0680/* (accessed: Sept. 10, 2025).

[134] See Tucker, S., What Is Payload: A Complete Guide. Kelly Blue Book, (last revised: Feb. 2, 2023), available at: *https://www.kbb.com/car-advice/payload-guide/#link3* (accessed: Sept. 10, 2025). (''Roughly speaking, payload capacity is the amount of weight a vehicle can carry, and towing capacity is the amount of weight it can pull. Automakers often refer to carrying weight in the bed of a truck as hauling to distinguish it from carrying weight in a trailer or towing.'').

[135] See Supplemental Comments of Toyota Motor North America, Inc., Docket Nos: NHTSA–2018–0067 and EPA–HQ–OAR–2018–0283 at 6, 8 (March 25, 2019), available at: *https://www.regulations.gov/comment/NHTSA-2018-0067-12376* (accessed: Sept. 10, 2025) (Supplemental Toyota Comments) (''Tacoma has a greater coefficient of drag from a larger frontal area, greater tire rolling resistance from larger tires with a more aggressive tread, and higher driveline losses from 4WD. Similarly, the towing, payload, and off-road capability of pick-up trucks necessitate greater emphasis on engine torque and horsepower over fuel economy. This translates into engine specifications such as a larger displacement and a higher stroke-to-bore ratio. . . . Tacoma's higher road load and more severe utility requirements push engine operation more frequently to the less efficient regions of the engine map and limit the level of Atkinson operation. . . . This endeavor is not a simple substitution where the performance of a shared technology is universal. Consideration of specific vehicle requirements during the vehicle design and engineering process determine the best applicable powertrain.'').

[136] To maintain performance neutrality when sizing powertrains and selecting technologies, NHTSA performs a series of simulations in Autonomie, which are further discussed in the Draft TSD Chapter 2.3.4 and in the CAFE Analysis Autonomie Documentation. The concept of performance neutrality is discussed in detail above in Section II.C.2.c, Technology Effectiveness Values, and additional reasons why NHTSA maintains a performance neutral analysis are discussed in Section II.C.2.f, Technology Applicability Equations and Rules.

[137] 87 FR 25796 (May 2, 2022).

[138] National Research Council, Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles—2025–2035, National Academies Press: Washington, DC (2021), available at: *https://doi.org/10.17226/26092* (accessed: Sept. 10, 2025) (hereinafter, ''2021 NAS report'').

with a forced induction system. In NHTSA's analysis, the first-level Miller cycle-enabled engine includes the application of variable turbo geometry technology (VTG), or what is also known as a variable-geometry turbocharger. VTG technology allows for the adjustment of key geometric characteristics of the turbocharging system, thus allowing adjustment of boost profiles and response based on the engine's operating needs. The adjustment of boost profile during operation increases the engine's power density over a broader range of operating conditions and increases the functionality of a Miller cycle-based engine. The use of a variable geometry turbocharger also supports the use of CEGR. NHTSA's second level of VTG engine technology (VTGE) is an advanced Miller cycle-enabled system that includes the application of at least a 40V-based electronic boost system. An electronic boost system has an electric motor added to assist the turbocharger; the motor assist mitigates turbocharger lag and low boost pressure by providing the extra boost needed to overcome the torque deficit at low engine speeds.

Variable compression ratio (VCR) engines work by changing the length of the piston stroke of the engine to optimize the CR and improve thermal efficiency over the full range of engine operating conditions. Engines that use VCR technology are currently in production as small-displacement, turbocharged, in-line four-cylinder, high BMEP applications.

Diesel engines have several characteristics that result in better fuel efficiency over traditional gasoline engines, including reduced pumping losses due to lack of (or greatly reduced) throttling, high-pressure direct injection of fuel, a combustion cycle that operates at a higher CR, and a very lean air/fuel mixture relative to an equivalent-performance gasoline engine. However, diesel technologies require additional systems to control NO_X emissions, such as a NO_X adsorption catalyst system or a urea/ammonia selective catalytic reduction system. NHTSA included two levels of diesel engine technology in the analysis: the first-level diesel engine technology (Advanced Diesel Engine (ADSL)) is a turbocharged diesel engine, and the more advanced diesel engine (DSLI) adds DEAC to the ADSL engine technology. The diesel engine maps are new for this analysis. The light-duty diesel engine maps are based on a modern 3.0L turbo-diesel engine.

Finally, compressed natural gas (CNG) systems are ICE vehicles that run on natural gas as a fuel source. The fuel storage and supply systems for these engines differ tremendously from gasoline, diesel, and flexible-fuel vehicles.[139] The CNG engine option has been included in past analyses; however, the light-duty analysis fleet does not include any dedicated CNG vehicles. As with the last analyses, CNG engines are included as an analysis fleet-only technology and are not applied to any vehicle that did not already include a CNG engine.

There are other vehicle technologies that work in various ways to improve fuel efficiency, such as turbo compounding, negative valve overlaps in-cylinder fuel reforming (NVO), passive prechamber combustion (PPC), and high energy ignition; however, NHTSA's analysis did not include these technologies. While suitable explanations for their exclusion could be that these technologies are in various stages of development and some, like PPC, are in very limited production, the primary reason NHTSA opted not to include them in the analysis is that the agency believes these technologies will not gain enough adoption during the rulemaking timeframe. This topic was discussed in detail in the 2022 final rule,[140] and the agency has not found evidence of significant development since then that would indicate manufacturers are now pursuing these costly technologies within the same standard-setting years.

The first step in assigning engine technologies to vehicles in the analysis fleet is to use data for each manufacturer to determine which vehicle platforms share engines. Within each manufacturer's fleet, NHTSA develops and assigns unique engine codes based on configuration, technologies applied, displacement, CR, and power output. NHTSA also assigns engine technology classes, which are codes that identify engine architecture (*i.e.,* how many cylinders the engine has, whether it is a DOHC or SOHC, and so on) to account accurately for engine costs in the analysis.

When assigning engine technologies to vehicles in the analysis fleets, it is important to consider the actual technologies on a manufacturer's engine and compare them to the engine technologies in the analysis. NHTSA has over 250 unique engine codes in the light-duty analysis fleet, meaning that the technologies present on those engines in the real world must be identified and matched to the 29 engine map models (and therefore engine technology on the technology tree)[141] that best represents those real-world engines. When considering how best to fit each of those 250 engines to the 29 engine technologies and engine map models, NHTSA uses specific technical elements contained in manufacturer publications, press releases, vehicle benchmarking studies, technical publications, manufacturer's specification sheets, occasionally CBI (for specific technologies, displacement, CR, and power mentioned above), and engineering judgment. For example, an engine having a 13.0:1 CR is a good indication that the engine would be considered an HCR engine. Some engines that achieve a slightly lower CR (*e.g.,* 12.5), may also be considered an HCR engine depending on other technology on the engine, such as the inclusion of SGDI, increased engine displacement compared to other competitors, reduction of engine parasitic losses through variable or electric oil and water pumps, or the combination of these technologies. Importantly, engine technologies are never assigned based on one factor alone but rather using data and engineering judgment to assign complex real-world engines to their corresponding engine technologies in the analysis. NHTSA believes that the initial characterization of the fleet's engine technologies reasonably captures the current state of the market while maintaining a reasonable amount of analytical complexity. Also, in addition to the 29 engine map models used in the Engine Paths Collection, there are 16 additional potential powertrain technology assignments available in the Hybridization Paths Collection.

Engine technology adoption in the Model is defined through a combination of technology path logic, refresh and redesign cycles, phase-in capacity limits,[142] and SKIP logic. Path logic defines technology adoption by preventing an engine design from moving from one advanced engine tree to another. Once in an advanced engine tree, it must stay there. For example, any light-duty basic engine can adopt one of the TURBO engine technologies, but vehicles that have turbocharged engines in the analysis fleet stay on the

[139] Flexible-fuel vehicles (FLEX) are designed to run on gasoline or gasoline-ethanol blends of up to 85 percent ethanol.

[140] 87 FR 25784 (May 2, 2022).

[141] NHTSA assigns each engine code technology that most closely corresponds to an engine map; for most technologies, one box on the technology tree corresponds to one engine map that corresponds to one engine code.

[142] Though NHTSA applies phase-in caps for this analysis, as discussed in Chapter 3.1.1 of the Draft TSD, those phase-in caps are not binding because the Model has several other less advanced technologies available to apply first at a lower cost, as well as the redesign schedules. The Draft TSD contains more information on engine phase-in caps.

Turbo Engine Path to prevent unrealistic engine technology change in the short timeframe considered in the rulemaking analysis. This represents the concept of stranded capital, which is when manufacturers amortize research, development, and tooling expenses over many years. Besides technology path logic, which applies to all manufacturers and technologies, NHTSA places additional constraints on the adoption of VCR and HCR technologies.

VCR technology requires a complete redesign of the engine and, in the analysis fleet, Nissan is the only manufacturer (including the Infiniti brand) to incorporate this technology. VCR engines are complex, costly by design, and address many of the same efficiency losses as mainstream technologies like turbocharged downsized engines. This makes it unlikely that a manufacturer that has already started down an incongruent technology path would adopt VCR technology. Because of these issues, VCR engine technology adoption is limited to original equipment manufacturers (OEMs) that have already employed the technology and their partners. NHTSA does not believe any other manufacturers will invest in developing and market this technology in their fleet in the rulemaking timeframe.

As recognized in past analyses,[143] HCR engines excel in lower power applications for lower load conditions, such as driving around a city or steady state highway driving without large payloads. Thus, their adoption is more limited than some other technologies. Accordingly, HCR engines are subject to three limitations.

First, vehicles with 405 or more HP, and (to simulate parts sharing) vehicles that share engines with vehicles with 405 or more HP, are not allowed to adopt HCR engines due to their prescribed power needs being more demanding and likely not supported by the lower power density found in HCR-based engines.[144] Because LIVC essentially reduces the engine's displacement, to make more power and keep the same levels of LIVC, manufacturers would need to increase the displacement of the engine to make the necessary power. NHTSA does not believe manufacturers will increase the displacement of their engines to accommodate HCR technology adoption, because as displacement increases, so do friction, pumping losses, and fuel consumption. This bears out in industry trends: total engine size (or displacement) is at an all-time low, and trends show that industry focus on turbocharged downsized engine packages are leading to their much higher market penetration.[145] Separately, as seen in the analysis fleet, manufacturers generally use HCR engines in applications where the vehicle's power requirements fall significantly below the agency's HCR HP threshold. In fact, the average HP for the sales-weighted average of vehicles in the analysis fleet that use HCR Engine Path technologies is 194 hp, demonstrating that HCR engine use has indeed been limited to lower hp applications, and well below the 405 hp threshold. In fringe cases where a vehicle classified as having higher load requirements does have an HCR engine, it is coupled to a hybrid system.[146]

Second, to maintain a performance-neutral analysis,[147] pickup trucks and (to simulate parts sharing) [148] vehicles that share engines with pickup trucks are excluded from receiving HCR engines that are not accompanied by a hybrid powertrain. In other words, pickup trucks and vehicles that share engines with pickup trucks can receive HCR-based engine technologies only in the Hybridization Paths Collection of technologies. Pickup trucks and vehicles that share engines with pickup trucks are excluded from receiving HCR engines not accompanied by a hybrid powertrain because these often-heavier vehicles have higher low-speed torque needs, higher base road loads, increased payload and towing requirements,[149] and have powertrains sized and tuned to perform this additional work beyond what passenger cars are required to conduct. Again, vehicle manufacturers' intended performance attributes for a vehicle—like payload and towing capability, intention for off-road use, and other attributes that affect aerodynamic drag and rolling resistance—dictate whether an HCR engine can provide a reasonable fuel economy improvement for that vehicle.[150] For example, road loads are composed of aerodynamic loads, which include vehicle frontal area and its drag coefficient, along with tire rolling resistance, all of which contribute to higher engine loads as vehicle speed increases.[151] NHTSA assumes that a manufacturer intending to apply HCR technology to their pickup truck or vehicle that shares an engine with a pickup truck would do so in combination with an electric system to assist with the vehicle's load needs.

Finally, HCR engine application is restricted for some heavily performance-focused manufacturers that have demonstrated a significant commitment to power-dense technologies such as

[143] The discussions at 83 FR 43038 (Aug. 24, 2018), 85 FR 24383 (Apr. 30, 2020), 86 FR 49658 and 49661 (Sept. 3, 2021), and 87 FR 25786 and 25790 (May 2, 2022) are incorporated here by reference.

[144] Heywood (2018) at Chapter 5.

[145] See 2024 EPA Trends Report at 54, 85.

[146] See the Market Data Input File. As an example, the reported total system horsepower for the Ford Maverick HEV is also 191 hp, well below the 405 hp threshold. See also the Lexus LC/LS 500h: the Lexus LC/LS 500h also uses premium fuel to reach this performance level.

[147] As discussed in detail in Section II.C.2.c and II.C.2.f above, NHTSA maintains a performance-neutral analysis to capture only the costs and benefits of manufacturers adding fuel economy-improving technology to their vehicles in response to CAFE standards.

[148] See Section II.C.2.f.

[149] See SAE, Performance Requirements for Determining Tow-Vehicle Gross Combination Weight Rating and Trailer Weight Rating, SAE Standard J2807_202411, SAE International: Warrendale, PA, available at: *https://doi.org/10.4271/J2807_202411* (accessed: Sept. 10, 2025).; Reed, T, SAE J207 Tow Tests—The Standard, Motortrend (2015), available at: *https://www.motortrend.com/how-to/1502-sae-j2807-tow-tests-the-standard/* (accessed: Sept. 10, 2025). When stating ''increased payload and towing requirements,'' NHTSA is referring to a literal defined set of requirements that manufacturers follow to ensure the manufacturer's vehicle can meet a set of performance measurements when building a tow vehicle to give consumers the ability to ''cross-shop'' between different manufacturers' vehicles. As discussed in detail above in Section II.C.2.c and II.C.2.f, NHTSA maintains a performance-neutral analysis to ensure that the analysis is only accounting for the costs and benefits of manufacturers adding technology in response to CAFE standards. This means that adoption features, like the HCR application restriction, are applied to a vehicle that begins the analysis with specific performance measurements, like a pickup truck, where application of the specific technology would likely not allow the vehicle to meet the manufacturer's baseline performance measurements.

[150] ICCT asked NHTSA to stop quoting a 2019 Toyota comment explaining why NHTSA does not allow HCR engines in pickup trucks, stating that Toyota's purpose in explaining that the Tacoma and Camry achieve different effectiveness improvements using their HCR engines is being misinterpreted. See NHTSA–2018–0067–12387 NHTSA disagrees. Toyota's comment is still relevant for this proposed rule as the limitations of the technology have not changed, which Toyota describes in the context of comparing why the technology provides a benefit in the Camry that one should not expect to see in the Tacoma. See Supplemental Toyota Comments at 6, 8. Note that Toyota also submitted a second set of supplemental comments (NHTSA–2018–0067–12431) that confirms NHTSA's understanding of the most important concept to support NHTSA's decision to limit HCR adoption on pickup trucks, which is that Atkinson operation is limited on pickup trucks. See Supplemental Comments of Toyota Motor North America, Inc., in the NHTSA Docket No. NHTSA–2018–0067–12376–A1 at 8–9 in *Regulations.gov*. See Supplemental Comments of Toyota Motor North America, Inc., Docket Nos. NHTSA–2018–0067 and EPA–HQ–OAR–2018–0283 at 2–3 (July 15, 2019), available at: *https://www.regulations.gov/comment/NHTSA-2018-0067-12431* (accessed: Sept. 10, 2025).

[151] 2015 NAS Report, at pp. 207–242.

turbocharged downsizing,[152] such that their fleets use nearly 100 percent turbocharged downsized engines. This means that no vehicle manufactured by these manufacturers can receive an HCR engine. Again, this adoption feature is implemented to avoid an unquantified amount of stranded capital that would be realized if these manufacturers switched from one technology to another.

Note that these adoption features apply only to vehicles that receive HCR engines that are not accompanied by a hybrid powertrain. A P2 hybrid system that uses an HCR engine overcomes the low-speed torque needs using the electric motor and thus has no restrictions or SKIPs applied.

NHTSA realizes that engine technology, vehicle type, and their applications are always evolving. The Hyundai Santa Cruz, a unibody pickup truck with a 4-cylinder HCR engine, is one example of a pickup truck with a non-hybrid HCR engine. However, the Santa Cruz is not comparable in capability to other pickup models like the Tacoma, Colorado, and Canyon, and it therefore cannot be assumed that those pickup models should be able to adopt non-hybrid HCR technology as well. Small unibody pickup trucks like the Santa Cruz and the Ford Maverick do not have the same capabilities and functionality as a mid-size body-on-frame pickup like the Toyota Tacoma.[153] NHTSA believes that its current restrictions for HCR are reasonable and appropriate, and the agency has not been presented with any new information that would suggest otherwise. NHTSA's stance on this issue has also borne out in real-world trends. Manufacturers who currently offer HCR engines in their fleets and therefore had the potential to introduce HCR technologies on recently redesigned vehicles that previously used high-displacement NA engines (such as Toyota Tacoma or Chevrolet Colorado) or TURBO technologies (such as the Mazda CX–90 replacing CX–9) have instead opted to introduce or continue to pursue turbocharged or hybrid engines. NHTSA does not believe HCR in its current state can provide enough fuel efficiency benefit for us to remove the current HCR restrictions; however, this by no means precludes manufacturers from developing and deploying HCR technology for future iterations of their pickup trucks.

NHTSA also emphasizes that, in the real world, manufacturers are not required to follow the technology pathways to compliance that the agency models in the standard-setting analysis but can instead take their own pathway based on their respective business models, technology availability, market share, and others. The CAFE Model simulates an example of a low-cost compliance pathway, and no manufacturer has to comply with the pathway as it has been modeled. Instead, manufacturers are free to choose their own path to compliance. NHTSA has added features and restrictions into the CAFE Model to make the compliance simulation more representative of how manufacturers make decisions about technology adoption in the real world. This is to ensure that the CAFE Model does not simulate unrealistic compliance pathways. For example, if the CAFE Model simulated manufacturers abandoning one technology in favor for another, particularly with respect to HCR technology for pickup trucks and high HP vehicles, the results and corresponding costs and benefits would be unrealistic and could lead to NHTSA setting standards that are more stringent than maximum feasible. For this and other reasons, the agency endeavors to model the most realistic and low-cost pathway to compliance. NHTSA's standard-setting analysis is also restricted in ways that manufacturers are not, increasing the likelihood that manufacturers will not follow the technology pathways projected in the standard-setting analysis.[154]

How effective an engine technology is at improving a vehicle's fuel economy depends on several factors, such as the vehicle's technology class and any additional technology added or removed from the vehicle in conjunction with the new engine technology, as discussed in Section II.C above. The Autonomie model's full-vehicle simulation results provide most of the effectiveness values that are used as inputs to the CAFE Model. Chapter 2.4 of the Draft TSD and the CAFE Analysis Autonomie Documentation provide a full discussion of the Autonomie modeling. The Autonomie modeling uses engine map models as the primary inputs for simulating the effects of different engine technologies.

Engine maps provide a three-dimensional representation of engine performance characteristics at each engine speed and load point across the operating range of the engine. Engine maps have the appearance of topographical maps, typically with engine speed on the horizontal axis and engine torque, power, or BMEP on the vertical axis. A third engine characteristic, such as brake-specific fuel consumption (BSFC), is displayed using contours overlaid across the speed and load map. The contours provide the values for the third characteristic in the regions of operation covered on the map. Other characteristics typically overlaid on an engine map include engine emissions, engine efficiency, and engine power. The engine maps developed to model the behavior of the engines in this analysis are referred to as engine map models.

The engine map models used in this analysis are representative of technologies currently in production or expected to be available in the rulemaking timeframe. The engine map models are developed to be representative of the performance achievable across the industry for a given technology, and they are not intended to represent the performance of a single manufacturer's specific engine. NHTSA targets a broadly representative performance level because the same combination of technologies produced by different manufacturers will differ in performance, due to manufacturer-specific designs for engine hardware, control software, and emissions calibration. Accordingly, the agency expects that the engine maps developed for this analysis will differ from engine maps for manufacturers' specific engines. However, it is intended and expected that the incremental changes in performance modeled for this analysis, due to changes in technologies or technology combinations, will be similar to the incremental changes in performance observed in manufacturers' engines for the same changes in technologies or technology combinations.

IAV developed most of the engine map models used in this analysis. IAV is one of the world's leading automotive industry engineering service partners with an over 35-year history of performing research and development for powertrain components, electronics, and vehicle design.[155] SwRI developed the light-duty diesel engine maps for this analysis. SwRI has been providing automotive science, technology, and engineering services for over 70

[152] Three manufacturers that meet the criteria (near 100 percent turbo downsized fleet, and future hybrid systems are based on turbo downsized engines) described and are excluded: BMW, Mercedes-Benz, and Jaguar Land Rover.

[153] The specification of 2024 Ford Maverick, Toyota Tacoma, and Hyundai Santa Cruz are in the docket accompanying this proposed rule.

[154] 49 U.S.C. 32902(h).

[155] IAV Automotive Engineering, available at: *https://www.iav.com/* (accessed: Sept. 10, 2025).

years.[156] Both IAV and SwRI developed these engine maps using the GT–POWER© Modeling tool (GT–POWER). GT–POWER is a commercially available industry-standard engine performance simulation tool. GT–POWER can be used to predict detailed engine performance characteristics, such as power, torque, airflow, volumetric efficiency, fuel consumption, turbocharger performance and matching, and pumping losses.[157]

Just like Argonne optimizes a single vehicle model in Autonomie following the addition of a singular technology to the vehicle model, these engine map models were built in GT–POWER by incrementally adding engine technology to an initial engine—built using engine test data, component test data, and manufacturers' and suppliers' technical publications—and then optimizing the engine to consider real-world constraints like heat, friction, and knock. One of the basic assumptions the agency makes when developing these engine maps is using 87 octane Tier 3 gasoline because it is the most common octane rating on which engines are designed to operate, and it is the test fuel manufacturers will have to use for EPA fuel economy testing.[158] [159] [160] A small number of initial engine configurations with well-defined BSFC maps are used, and then, in a systematic and controlled process, specific well-defined technologies are added to optimize a BSFC map for each unique technology combination. This could theoretically be done through engine or vehicle testing, but such an approach would require conducting tests on a single engine, and each configuration would require physical parts and associated engine calibrations to assess the impact of each technology configuration. This is impractical for the rulemaking analysis because of the extensive design, prototype part fabrication, development, and laboratory resources that are required to evaluate each unique configuration. Both NHTSA and the automotive industry use modeling as an approach to assess an array of technologies with more limited physical testing. Modeling offers the opportunity to isolate the effects of individual technologies by using a single or small number of initial engine configurations and incrementally adding technologies to those initial configurations. This provides a consistent reference point for the BSFC maps for each technology and for combinations of technologies that enable us to identify and quantify carefully the differences in effectiveness among technologies.

Before its use in the Autonomie analysis, both IAV and SwRI validated the generated engine maps against a global database of benchmarked data, engine test data, single-cylinder test data, prior modeling studies, technical studies, and information presented at conferences.[161] IAV and SwRI also validated the effectiveness values from the simulation results against detailed engine maps produced from the Argonne engine benchmarking programs, as well as published information from industry and academia.[162] This ensures reasonable representation of simulated engine technologies. Additional details and assumptions that are used in the engine map modeling are described in detail in Chapter 3.1 of the Draft TSD and the CAFE Analysis Autonomie Model Documentation chapter titled ''Autonomie—Engine Model.''

Note that absolute BSFC levels are never applied from the engine maps to any vehicle model or configuration for the rulemaking analysis; only the absolute fuel economy values from the full-vehicle Autonomie simulations are used to determine incremental effectiveness for switching from one technology to another technology. The incremental effectiveness is then applied to the absolute fuel economy or fuel consumption value of vehicles in the analysis fleet, which are based on CAFE or FE compliance data. For subsequent technology changes, NHTSA applies incremental effectiveness changes to the absolute fuel economy level of the previous technology configuration. Therefore, for a technically sound analysis, it is most important that the differences in BSFC among the engine maps be accurate and not the absolute values of the individual engine maps.

While the fuel economy improvements for most engine technologies in the analysis are derived from the database of Autonomie full-vehicle simulation results, the analysis incorporates a handful of what the agency refers to as ''analogous effectiveness values.'' These are used when an engine map model is not available for a particular technology combination. To generate an analogous effectiveness value, data from analogous technology combinations for available engine map models are used by conducting a pairwise comparison to generate a data set of emulated performance values for adding technology to an initial application. Analogous effectiveness values are used only for four SOHC technologies. NHTSA has determined that the effectiveness results using these analogous effectiveness values provided reasonable results. This process is discussed further in Chapter 3.1.4.2 of the Draft TSD.

The engine technology effectiveness values for all vehicle technology classes can be found in Chapter 3.1.4 of the Draft TSD. These values show the calculated improvement for upgrading the listed engine technology for a given combination of other technologies. The range of effectiveness values listed for each specific technology (*e.g.,* TURBO1) represents the addition of the TURBO1 technology to every technology combination that could select the addition of TURBO1. These values are derived from the Argonne Autonomie simulation dataset and the righthand side Y-axis shows the number of Autonomie simulations that achieve each percentage effectiveness improvement point. The dashed line and gray shading indicate the median and 1.5X interquartile range (IQR), which is a helpful metric to identify outliers. After comparing these histograms to the box and whisker plots

[156] Southwest Research Institute, available at: *https://www.swri.org* (accessed: Sept. 10, 2025).

[157] This weblink has additional information on the GT–POWER tool: *https://www.gtisoft.com/gt-power/.*

[158] 79 FR 23414 (Apr. 28, 2014).

[159] DOE, Selecting the Right Octane Fuel, available at: *https://www.fueleconomy.gov/feg/octane.shtml#:~:text=You%20should%20use%20the%20octane%20rating%20required%20for,others%20are%20designed%20to%20use%20higher%20octane%20fuel* (accessed: Sept. 10, 2025).

[160] It is also important to note that regulation of fuels used for determining CAFE compliance is outside the scope of NHTSA's authority. 49 U.S.C. 32904(c).

[161] Friedrich, I. et al., Automatic Model Calibration for Engine-Process Simulation with Heat-Release Prediction, SAE Technical Paper 2006–01–0655, Warrendale, VA: SAE International (2006), available at: *https://doi.org/10.4271/2006-01-0655* (accessed: Sept. 10, 2025); Rezaei, R. et al., Zero-Dimensional Modeling of Combustion and Heat Release Rate in DI Diesel Engines, *SAE International Journal Of Engines.* Vol. 5(3) at 874–85 (2012), available at: *https://doi.org/10.4271/2012-01-1065* (accessed: Sept. 10, 2025); Berndt, R. et al., Multistage Supercharging for Downsizing with Reduced Compression Ratio, *MTZ Worldwide.* Vol. 76 at 10–11 (2015), available at: *https://doi.org/10.1007/s38313-015-0036-4* (accessed: Sept. 10, 2025); Neukirchner, H. et al., Symbiosis of Energy Recovery and Downsizing, *MTZ Worldwide,* Vol. 75 at 4–9 (2014), available at: *https://doi.org/10.1007/s38313-014-0219-4* (accessed: Sept. 10, 2025).

[162] Bottcher, L., Grigoriadis, P., ANL—BSFC map prediction Engines 22–26, Washington, DC: National Highway Traffic Safety Association (2019), available at: *https://lindseyresearch.com/wp-content/uploads/2021/09/NHTSA-2021-0053-0002-20190430_ANL_Eng-22-26-Updated_Docket.pdf* (accessed: Sept. 10, 2025); Reinhart, T., Engine Efficiency Technology Study, Final Report, SwRI Project No. 03.26457, San Antonio, TX: Southwest Research Institute (2022), available at: *https://downloads.regulations.gov/EPA-HQ-OAR-2022-0829-0230/attachment_17.pdf* (accessed: Aug. 18, 2025).

presented in prior CAFE program rule documents, the number of effectiveness outliers is extremely small.

The engine costs in NHTSA's analysis are the product of engine DMCs, RPE, and the LE, updated to a consistent dollar year. Engine DMCs are obtained from multiple sources but primarily from the 2015 NAS report.[163] For VTG and VTGE technologies (*e.g.,* Miller Cycle), NHTSA uses cost data from a FEV technology cost assessment performed for International Council on Clean Transportation (ICCT),[164] which is aggregated using individual component and system costs from the 2015 NAS report. Costs from the 2015 NAS report that have referenced a Northeast States Center for a Clean Air Future (NESCCAF) 2004 report [165] are considered, but NHTSA believes the reference material from the FEV report provides more updated cost estimates for the VTG technology.

All engine technology costs start with a base engine cost, and then additional technology costs are based on cylinder and bank count and configuration; the DMC for each engine technology is a function of unit cost times either the number of cylinders or number of banks, based on how the technology is applied to the system. The total costs for all engine technologies in all model years across all vehicle classes can be found in the Technologies Input File.

2. Transmission Paths

Transmissions transmit torque generated by the engine from the engine to the wheels. Transmissions primarily use two mechanisms to improve fuel efficiency: (1) a wider gear range, which allows the engine to operate longer at higher efficiency speed-load points and (2) improvements in friction or shifting efficiency (*e.g.,* improved gears, bearings, seals, pumps, and other components), which reduce parasitic losses.

NHTSA models only automatic transmissions in the light-duty analysis. The three subcategories of automatic transmissions that are modeled in this analysis include traditional automatic transmissions (AT), dual-clutch transmissions (DCT), and continuously variable transmissions (CVT and eCVT).[166] The agency also includes high efficiency gearbox (HEG) technology improvements as options to the transmission technologies (designated as L2 or L3 in the analysis to indicate level of technology improvement).[167] There has been a significant reduction in manual transmissions over the years, and they make up less than 1 percent of the vehicles produced in MY 2024.[168] Due to the declining trend of manual transmissions and their current low production volumes, NHTSA has removed manual transmissions from this analysis and assigned vehicles using manual transmissions as DCTs in the analysis fleet.

To assign transmission technologies to vehicles in the analysis fleets, NHTSA identifies which Autonomie transmission model is most like a vehicle's real-world transmission, considering the transmission's configuration, costs, and effectiveness. As with engines, data from manufacturers' CAFE reports and publicly available information are used to assign transmissions to vehicles and determine which platforms share transmissions. Transmission codes that include information about the manufacturer, drive configuration, transmission type, and number of gears are used to link shared transmissions in a manufacturer's fleet. Just as manufacturers share transmissions in multiple vehicles, the CAFE Model treats transmissions as ''shared'' if they share a transmission code and transmission technologies will be adopted together.

While identifying an AT's gear count is fairly easy, identifying HEG levels for ATs and CVTs is more difficult. NHTSA reviews the age of the transmission design, relative performance versus previous designs, and technologies incorporated to assign an HEG level. There are no HEG Level 3 automatic transmissions in the analysis fleet. NHTSA finds all 7-speed, all 9-speed, all 10-speed, and some 8-speed automatic transmissions to be advanced transmissions operating at HEG Level 2 equivalence. The agency assigns eight-speed automatic transmissions and CVTs newly introduced for the light-duty market in MY 2016 and later as HEG Level 2. All other automatic transmissions are assigned to their respective transmission's initial technology level (*e.g.,* AT6, AT8, and CVT). For DCTs, the number of gears in the assignments usually match the number of gears listed by the data sources, with some exceptions (dual-clutch transmissions with seven and nine gears are assigned to DCT6 and DCT8, respectively). NHTSA assigns any vehicle in the light-duty analysis fleet with a power-split hybrid (SHEVPS) powertrain an electronic continuously variable transmission (eCVT). Finally, the limited number of manual transmissions in the light-duty fleet are assigned as DCTs, as manual transmissions are not modeled in Autonomie for this analysis.

Most transmission adoption features are instituted through technology path logic (*i.e.,* decisions about how less advanced transmissions of the same type can advance to more advanced transmissions of the same type). Technology pathways are designed to prevent ''branch hopping''—changes in transmission type that would correspond to significant changes in transmission architecture—for vehicles that are relatively advanced on a given pathway. For example, any automatic transmission with more than five gears cannot move to a DCT. NHTSA also prevents ''branch hopping'' as a proxy for stranded capital, which is discussed in more detail in Section II.C and Chapter 2.6 of the Draft TSD.

The automatic transmission path precludes adoption of other transmission types once a platform progresses past an AT8. This restriction is used to avoid the significant level of stranded capital loss that could result from adopting a completely different transmission type shortly after adopting an advanced transmission, which would occur if a different transmission type has been adopted after AT8 in the rulemaking timeframe. Vehicles that did not start out with AT7L2 transmissions cannot adopt that technology in the Model. It is likely that other vehicles will not adopt the AT7L2 technology, as vehicles that have moved to more advanced automatic transmissions have

[163] Table S.2, at pp. 7–8 of National Research Council, Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles, National Academies Press: Washington, DC (2015), available at: *https://doi.org/10.17226/21744* (accessed: Sept. 10, 2025) (hereinafter, ''2015 NAS report'').

[164] Isenstadt A. et al., Downsized, Boosted Gasoline Engines, Draft, International Council on Clean Transportation (2016), available at: *https://theicct.org/publication/downsized-boosted-gasoline-engines-2/* (accessed: Sept. 10, 2025).

[165] NESCCAF, Reducing Greenhouse Gas Emissions from Light-Duty Motor Vehicles, Final Report (2004), available at: *https://www.nesccaf.org/documents/rpt040923ghglightduty.pdf* (accessed: Sept. 10, 2025).

[166] Note that eCVT transmissions are only coupled with hybrid electric drivetrains and are therefore not included as a standalone transmission option on the CAFE Model's technology pathways.

[167] See 2015 NAS Report at 191. HEG improvements for transmissions represent incremental advancements in technology that improve efficiency, such as reduced friction seals, bearings and clutches, super finishing of gearbox parts, and improved lubrication. These advancements are all aimed at reducing frictional and other parasitic loads in transmissions to improve efficiency. NHTSA considers three levels of HEG improvements in this analysis based on the NAS 2015 recommendations and CBI data.

[168] 2024 EPA Automotive Trends Report.

overwhelmingly moved to 8-speed and 10-speed transmissions.[169]

Vehicles that do not originate with a CVT or vehicles with multispeed transmissions beyond AT8 in the analysis fleet cannot adopt CVTs. Vehicles with multispeed transmissions greater than AT8 demonstrate increased ability to operate the engine at a highly efficient speed and load. Once on the CVT path, the platform is allowed to apply only improved CVT technologies. Due to the limitations of current CVTs, discussed in Draft TSD Chapter 3.2, this analysis restricts the application of CVT technology on light-duty vehicles with greater than 300 lb.-ft of engine torque. This is because of the higher torque (load) demands of those vehicles and CVT torque limitations based on durability constraints. NHTSA believes the 300 lb.-ft restriction represents an increase over current levels of torque capacity that is likely to be achieved during the rulemaking timeframe. This restriction aligns with CVT application in the analysis fleet, in that CVTs are seen only on vehicles with under 280 lb.-ft of torque.[170] In addition, this restriction is used to avoid stranded capital. Finally, the analysis allows vehicles in the analysis fleet that have DCTs to apply an improved DCT and allows vehicles with an AT5 to consider DCTs. Drivability and durability issues with some DCTs have resulted in a low relative adoption rate over the last decade. This is also broadly consistent with manufacturers' technology choices.[171]

Autonomie models transmissions as a sequence of mechanical torque gains. The torque and speed are multiplied and divided, respectively, by the current ratio for the selected operating condition. Furthermore, torque losses corresponding to the torque/speed operating point are subtracted from the torque input. Torque losses are defined based on a three-dimensional efficiency lookup table that has the following inputs: input shaft rotational speed, input shaft torque, and operating condition. NHTSA populates transmission template models in Autonomie with characteristics data to model specific transmissions.[172] Characteristics data are typically tabulated data for transmission gear ratios, maps for transmission efficiency, and maps for torque converter performance, as applicable. Different transmission types require different quantities of data. The characteristics data for these models come from peer-reviewed sources, transmission and vehicle testing programs, results from simulating current and future transmission configurations, and confidential data obtained from OEMs and suppliers.[173] HEG improvements are modeled via improvements to the efficiency map of the transmission. As an example, the AT8 model data comes from a transmission characterization study.[174] The AT8L2 has the same gear ratios as the AT8; however, gear efficiency map values are increased to represent application of the HEG level 2 technologies. The AT8L3 models the application of HEG level 3 technologies using the same principle, further improving the gear efficiency map over the AT8L2 improvements. There are 15 transmissions in the light-duty analysis, and each transmission is modeled in Autonomie with defined gear ratios, gear efficiencies, gear spans, and unique shift logic for the technology configuration to which the transmission is applied. These transmission maps are developed to represent the gear counts and span, shift and torque converter lockup logic, and efficiencies that can be seen in the fleet, along with upcoming technology improvements, all while balancing key attributes, such as drivability, fuel economy, and performance neutrality. This modeling is discussed in detail in Chapter 3.2 of the Draft TSD and the CAFE Analysis Autonomie Documentation chapter titled ''Autonomie—Transmission Model.''

The effectiveness values for the transmission technologies, for all light-duty technology classes, are shown in Chapter 3.2.4 of the Draft TSD. Note that the effectiveness for the AT5 and eCVT technologies is not shown. The eCVT transmissions do not have standalone effectiveness values because those technologies are implemented only as part of hybrid-electric powertrains. The AT5 has no effectiveness values because it is a reference-point technology against which all other transmission technologies are compared.

NHTSA's transmission DMCs come from the 2015 NAS report and studies cited therein. The costs are taken almost directly from the 2015 NAS report adjusted to the current dollar year or for the appropriate number of gears. Chapter 3.2 of the Draft TSD discusses the specific 2015 NAS report costs used to generate these transmission cost estimates, and all transmission costs across all model years can be found in the CAFE Model's Technologies Input File. NHTSA has used the 2015 NAS report transmission costs for the last several light-duty CAFE Model analyses (since re-evaluating all transmission costs for the 2020 final rule) and has not received comments or feedback on these costs.

3. Hybridization Paths

The hybridization paths each include a set of technologies that share common hybrid powertrain components, like batteries and electric motors, for certain vehicle functions that were powered solely by ICEs traditionally. While all vehicles (including conventional ICE vehicles) use batteries and electric motors in some form, some component designs and powertrain architectures contribute to greater levels of hybridization than others, allowing the vehicle to use less gasoline or other fuel.

As explained elsewhere, NHTSA endeavors to model how manufacturers could apply technology to respond to CAFE standards. Hybrid technologies can improve fuel economy, and NHTSA believes that the inputs and assumptions selected to represent hybrid technologies are reasonable to use in NHTSA's CAFE Model. NHTSA provides details of the inputs and assumptions in the Draft TSD accompanying this proposed rule and provides more information regarding the agency's rationale and approach throughout Section II and III of this preamble.

Unlike with other technologies in the analysis, Congress placed specific limitations on how NHTSA considers the fuel economy of alternative fueled vehicles, which includes not only BEVs and FCEVs but also PHEVs.[175] For PHEVs, which are discussed in this section in addition to other hybrid technologies, NHTSA restricts its analysis by using fuel economy values that assume ''charge sustaining''

[169] 2024 EPA Automotive Trends Report, at p. 79, Figure 4.24.

[170] Market Data Input File.

[171] 2024 EPA Automotive Trends Report, at p. 79, Figure 4.24.

[172] Autonomie Input and Assumptions Description Files.

[173] Argonne National Laboratory, Downloadable Dynamometer Database, Last revised: 2025, available at: *https://www.anl.gov/taps/downloadable-dynamometer-database;* Kim, N. et al., Advanced Automatic Transmission Model Validation Using Dynamometer Test Data, SAE 2014–01–1778, presented at the SAE World Congress: Detroit, MI (2014); Kim, N. et al., Development of a Model of the Dual Clutch Transmission in Autonomie and Validation With Dynamometer Test Data, *International Journal of Automotive Technologies,* Vol. 15(2): pp. 263–71 (2014), available at: *https://www.sae.org/publications/technical-papers/content/2014-01-1778/* (accessed: Sept. 10, 2025).

[174] CAFE Analysis Autonomie Documentation chapter titled ''Autonomie—Transmission Model.''

[175] 49 U.S.C. 32902(h)(1) and (2). In determining maximum feasible fuel economy levels, ''the Secretary of Transportation—(1) may not consider the fuel economy of dedicated automobiles; [and] (2) shall consider dual fueled automobiles to be operated only on gasoline or diesel fuel.''

(gasoline-only) operation only.[176] The fuel economies of BEVs and FCEV technologies are excluded entirely from NHTSA's standard-setting analysis.[177] Draft TSD Chapter 2.2 contains discussion of NHTSA's consideration of PHEVs, BEVs, and FCEVs in the EIS analysis.

Among the simpler configurations with the fewest hybrid components is micro HEV technology (SS12V), which uses a 12-volt system that simply restarts the engine from a stop. Mild HEVs use a 48-volt belt integrated starter generator (BISG) system that restarts the engine from a stop and provides some regenerative braking functionality.[178] Mild HEVs are often also capable of minimal electric assist to the engine on take-off.

Strong hybrid-electric vehicles (SHEVs) have higher system voltages compared to mild hybrids with BISG systems and are capable of engine stop/start, regenerative braking, electric motor assist of the engine at higher speeds and power demands with the ability to provide limited all-electric propulsion. Common SHEV powertrain architectures, classified by the interconnectivity of common hybrid vehicle components, include both a series-parallel architecture by power-split device (SHEVPS) as well as a parallel architecture (SHEVP2). SHEVP2s—though enhanced by the electric components, including just one electric motor—remains fundamentally similar to a conventional powertrain.[179] In contrast, SHEVPS powertrains are considerably different than a conventional powertrain, as they use two electric motor/generators, which allows the use of a lower power-density engine. This results in a higher potential for fuel economy improvement compared to a SHEVP2, though the SHEVPS engine power density is lower.[180] Put another way, ''[a] disadvantage of the power split architecture is that when towing or driving under other real-world conditions, performance is not optimum.'' [181] In contrast, ''[o]ne of the main reasons for using parallel hybrid architecture is to enable towing and meet maximum vehicle speed targets.'' [182] This is an important distinction to understand why NHTSA allows certain types of vehicles to adopt SHEVP2 powertrains and not SHEVPS powertrains.

PHEVs utilize a combination gasoline-electric powertrain, like that of a SHEV, but have the ability to plug into the electric grid to recharge the battery, like that of a BEV; this contributes to all-electric mode capability in both blended and non-blended PHEVs.[183] The analysis includes PHEVs with an AER of 20 and 50 miles to encompass the range of PHEV AER in the market today. Draft TSD Chapter 3.3 contains more information on every hybrid technology considered in the analysis, including common acronyms and a brief description of each hybrid technology. For brevity, NHTSA refers to technologies by their acronyms in this section.

As with previous CAFE analyses, there are a number of engine options available for SHEVs and PHEVs. These engines better represent the variety of different hybrid architectures and engine options available in the real world for SHEVs and PHEVs while still maintaining a reasonable level of analytical complexity.

NHTSA did not include additional mild hybrid technology such as more capable, higher output 48-volt mild hybrid systems beyond P0 mild hybrids, such as ''P2, P3, or P4 configurations'' [184] which offer additional benefits of ''electric power take-offs'' [185] (*i.e.,* launch assist) or ''slow-speed electric driving'' [186] on the vehicle's drive axle(s). NHTSA will consider mild hybrid advancements in future analysis if they become more prevalent in the U.S. market.

As described in Draft TSD Chapter 3.3, NHTSA assigns hybrid technologies to vehicles in the analysis fleet [187] using manufacturer-submitted CAFE compliance information, publicly available technical specifications, marketing brochures, articles from reputable media outlets, and data subscriptions.[188] Draft TSD Chapter 3.3.2 shows the penetration rates of hybrid technologies in the standard-setting analysis fleets. Over half the analysis fleet has some level of hybridization, with the vast majority—over 50 percent of the fleet—being micro hybrids. Like the other technology pathways, as the CAFE Model adopts hybrid technologies for vehicles, more advanced levels of hybrid technologies will supersede all prior levels, while certain technologies within each level are mutually exclusive. The only adoption feature applicable to micro (SS12V) and mild (BISG) hybrid technology is path logic; vehicles may adopt micro and mild hybrid technology only if the vehicle did not already have a more advanced level of hybridization.

The adoption features that NHTSA applies to strong hybrid technologies include path logic, powertrain substitution, and vehicle class restrictions. Per the technology pathways, SHEVPS, P2x, P2TRBx, and the P2HCRx technologies are considered mutually exclusive. When the Model applies one of these technologies, the others are immediately disabled from future application. However, all vehicles on the strong hybrid pathways can still advance to one or more of the plug-in technologies, when applicable in the modeling scenario (*i.e.,* allowed in the Model).

When the Model applies any strong hybrid technology to a vehicle, the transmission technology on the vehicle is superseded; regardless of the transmission originally present, P2 hybrids adopt an advanced 8-speed automatic transmission (AT8L2), and PS hybrids adopt a continuously variable transmission via power-split device (eCVT). When the Model applies the P2

[176] NHTSA has estimated two sets of technology effectiveness values using the Argonne full-vehicle simulations: one set does not include the electrification portion of PHEVs, and one set includes the combined fuel economy for both ICE operation and electric operation. Draft TSD Chapter 3.3 has more information.

[177] CAFE Model Documentation at S4.6 Technology Fuel Economy Improvements.

[178] See 2015 NAS Report, at p. 130 (''During braking, the kinetic energy of a conventional vehicle is converted into heat in the brakes and is thus lost. An electric motor/generator connected to the drivetrain can act as a generator and return a portion of the braking energy to the battery for reuse. This is called regenerative braking. Regenerative braking is most effective in urban driving and in the urban dynamometer driving schedule (UDDS) cycle, in which about 50 percent of the propulsion energy ends up in the brakes (NRC 2011, 18).'').

[179] Kapadia, J. et al., Powersplit or Parallel—Selecting the Right Hybrid Architecture, *SAE International Journal of Alternative Power,* Vol. 6(1): pp. 68—76 (2017), available at: *https://doi.org/10.4271/2017-01-1154* (accessed: Sept. 10, 2025) (hereinafter, ''Kapadia et al. (2017)''). Parallel hybrids architecture typically adds the electrical system components to an existing conventional powertrain.

[180] *Id.*

[181] 2015 NAS Report, at p. 134.

[182] Kapadia et al. (2017).

[183] Some PHEVs operate in charge-depleting mode (*i.e.,* ''electric-only'' operation—depleting the high-voltage battery's charge) before operating in charge-sustaining mode (similar to strong hybrid operation, the gasoline and electric powertrains work together), while other (blended) PHEVs switch between charge-depleting mode and charge-sustaining mode during operation.

[184] John German, Docket No. NHTSA–2023–0022–53274–A1 at 6–7.

[185] MECA, Docket No. NHTSA–2023–0022–63053–A1 at 13.

[186] ICCT, Docket No. NHTSA–2023–0022–54064–A1 at 20.

[187] The standard-setting analysis fleet does NOT contain BEVs or FCEVs; the EIS fleet considers all technologies, including BEVs and FCEVs.

[188] Wards Intelligence, U.S. Car and Light Truck Specifications and Prices, 22 Model Year (2022), available at: *https://omdia.tech.informa.com/welcome* (accessed: Sept. 10, 2025).

technology, the Model can consider various engine options to pair with the P2 architecture according to existing engine path constraints—taking into account relative cost effectiveness. For SHEVPS technology, the existing engine is replaced with a full-time Atkinson cycle engine.[189] For P2s, NHTSA picks the 8-speed automatic transmission to supersede the vehicle's incoming transmission technology. This is because most P2s in the market use an 8-speed automatic transmission,[190] therefore it is representative of the fleet now. NHTSA also thinks that 8-speed transmissions are representative of the transmissions that will continue to be used in these hybrid vehicles, as NHTSA anticipates manufacturers will continue to use these ''off-the-shelf'' transmissions based on availability and ease of incorporation in the powertrain. The eCVT (power-split device) *is* the transmission for SHEVPSs and is therefore the technology NHTSA has picked to supersede the vehicle's prior transmission when adopting the SHEVPS powertrain.

SKIP logic is also used to constrain adoption of SHEVPS and PHEVx0PS technologies. These technologies are ''skipped'' for vehicles with engines[191] that meet one of the following conditions: the engine belongs to an excluded manufacturer;[192] the engine belongs to a pickup truck (*i.e.,* the engine is on a vehicle assigned the ''pickup'' body style); the engine's peak HP is more than 405 hp; or the engine is on a non-pickup vehicle but is shared with a pickup. The reasons for these conditions are similar to those for the SKIP logic that NHTSA applies to HCR engine technologies, discussed in more detail in Section II.D.1. In the real world, performance vehicles with certain powertrain configurations cannot adopt the technologies listed above and maintain vehicle performance without redesigning the entire powertrain.

It may be helpful to understand why NHTSA does not apply SKIP logic to P2s but does apply SKIP logic to SHEVPSs. Note the difference between SHEVP2 and SHEVPS architectures: P2 architectures are better for ''larger vehicle applications because they can be integrated with existing conventional powertrain systems that already meet the additional attribute requirements'' of large-vehicle segments.[193] No SKIP logic applies to P2s because NHTSA believes that this type of hybridized powertrain is sufficient to meet all the performance requirements for all types of vehicles. Manufacturers have proven this with vehicles like the Ford F–150 Hybrid and Toyota Tundra Hybrid.[194] If NHTSA were to size (in the Autonomie simulations) the SHEVPS motors and engines to achieve ''not optimum'' performance, the electric motors would be unrealistically large (on both a size and cost basis), and the accompanying engine also would have to be a very large displacement engine, which is not characteristic of how vehicle manufacturers apply SHEVPS to ICE vehicles in the real world. Instead, for vehicle applications that have particular performance requirements—which the analysis defines as vehicles with engines that belong to an excluded manufacturer, engines belonging to a pickup truck or shared with a pickup truck, or the engine's peak HP is more than 405 hp—those vehicles can adopt P2 architectures that should be able to handle the vehicle's performance requirements.

While strong hybridization is allowed on all vehicle types, NHTSA allows different types of strong hybrid powertrains to be applied to different types of vehicles for the reasons discussed above. NHTSA believes that allowing SHEVPS and P2 powertrains to be applied subject to the base vehicle's performance requirements is a reasonable approach to maintaining a performance-neutral analysis.

The engine and transmission technologies on a vehicle are superseded when PHEV technologies are applied. For example, the Model applies an AT8L2 transmission with all PHEV20T/50T plug-in technologies, and the Model applies an eCVT transmission for all PHEV20PS/50PS and PHEV20H/50H plug-in technologies in the fleet; Draft TSD Chapter 3.3 provides more details on different system combinations of hybridization. A vehicle adopting PHEV20PS/50PS receives a hybrid full-time Atkinson cycle engine, and a vehicle adopting PHEV20H/PHEV50H receives an HCR engine. For PHEV20T/50T, the vehicle receives a TURBO1 engine.

Autonomie determines the effectiveness of each hybridized powertrain type by modeling the basic components, or building blocks, for each powertrain and then combining the components modularly to determine the overall efficiency of the entire powertrain. The components, or building blocks, which contribute to the effectiveness of a hybridized powertrain in the analysis include the vehicle's battery, electric motors, power electronics, and accessory loads. Autonomie identifies components for each hybridized powertrain type and then interlinks those components to create a powertrain architecture. Autonomie then models each hybridized powertrain architecture and provides an effectiveness value for each architecture. For example, Autonomie determines a PHEV's efficiency in part by considering the efficiencies of the battery (including charging efficiency), the electric traction drive system (ETDS) (the electric machine and power electronics), and mechanical power transmission devices.[195] Autonomie further combines the modeled hybrid components of the hybrid powertrain to include the ICE and related power for transmission components.[196] Argonne uses data from their Advanced Mobility Technology Laboratory (AMTL) to develop Autonomie's hybrid powertrain models. The modeled powertrains are not intended to represent any specific manufacturer's architecture but act as surrogates predicting representative levels of effectiveness for each hybrid technology. NHTSA discusses the procedures for modeling each of these subsystems in detail in the Draft TSD and in the CAFE Analysis Autonomie Documentation and provides a summary below.

The fundamental components of a hybrid powertrain's propulsion system—the electric motor and inverter—ultimately determine the vehicle's performance and efficiency. For this analysis, Autonomie employs a set of electric motor efficiency maps created by Oak Ridge National Laboratory (ORNL), one for a traction

[189] This engine type is designated as Eng26 in the list of engine map models used in the analysis. Draft TSD Chapter 3.1.1.2.3 provides more information.

[190] NHTSA is aware that some Hyundai vehicles use six-speed transmissions, and some Ford vehicles use 10-speed transmissions, but NHTSA has observed that the majority of P2s use eight-speed transmissions.

[191] This refers to the engine assigned to the vehicle in the 2022 analysis fleet.

[192] Excluded manufacturers include BMW, Daimler, and Jaguar Land Rover.

[193] Kapadia et al. (2017).

[194] Buchholz, K., 2022 Toyota Tundra: V8 Out, Twin-Turbo Hybrid Takes Over, Warrendale, VA: SAE International, Last revised: Aug. 22, 2021, available at: *https://www.sae.org/news/2021/09/2022-toyota-tundra-gains-twin-turbo-hybrid-power* (accessed: Sept. 10, 2025); Visnic, B., Hybridization the Highlight of Ford's All-New 2021 F–150, Last revised: June 30, 2020, available at: *https://www.sae.org/articles/hybridization-highlight-fords-new-2021-f-150-sae-ma-03885* (accessed: Sept. 10, 2025).

[195] Iliev, S. et al., Vehicle Technology Assessment, Model Development, and Validation of a 2021 Toyota RAV4 Prime, DOT HS 813 356, NHTSA: Washington, DC (2023), available at: *https://downloads.regulations.gov/NHTSA-2023-0022-0010/attachment_6.pdf* (accessed: Sept. 10, 2025).

[196] See the CAFE Analysis Autonomie Documentation.

motor and an inverter, the other for a motor/generator and inverter.[197] The electric motor efficiency maps, created from production vehicles like the 2007 Toyota Camry hybrid and the 2011 Hyundai Sonata hybrid, represent electric motor efficiency as a function of torque and motor rotations per minute (RPM). These efficiency maps provide nominal and maximum speeds, as well as a maximum torque curve. Argonne uses the maps to determine the efficiency characteristics of the motors, which include some of the losses due to power transfer through the electric machine.[198] Specifically, Argonne scales the efficiency maps, specific to powertrain type, to have total system peak efficiencies ranging from 96 to 98 percent [199]—such that their peak efficiency value corresponds to the latest state-of-the-art technologies, as opposed to retaining dated system efficiencies (90 to 93 percent).[200]

Beyond the powertrain components, Autonomie also considers electric accessory devices that consume energy and affect overall vehicle effectiveness, such as headlights, radiator fans, wiper motors, engine control units, transmission control units, cooling systems, and safety systems. In real-world driving and operation, the electrical accessory load on the powertrain varies depending on how the driver uses certain features and the condition in which the vehicle is operating, such as night driving or hot weather driving. However, for regulatory test cycles related to fuel economy, the electrical load is repeatable because the fuel economy regulations control these factors. Accessory loads during test cycles vary by powertrain type and vehicle technology class, since distinctly different powertrain components and vehicle masses consume different amounts of energy.

The analysis fleets consist of different vehicle types with varying accessory electrical power demand. For instance, vehicles with different motor and battery sizes require different sizes of electric cooling pumps and fans to manage component temperatures optimally. Autonomie has built-in models that can simulate these varying subsystem electrical loads. However, for this analysis, NHTSA uses a fixed (by vehicle technology class and powertrain type), constant power draw to represent the effect of these accessory loads on the powertrain on the 2-cycle test. NHTSA intends and expects that fixed accessory load values will, on average, have similar impacts on effectiveness as found on actual manufacturers' systems. This process is in line with the past analyses.[201] [202] NHTSA aggregates electrical accessory load modeling assumptions for the different powertrain types (hybridized and conventional) and technology classes from data from the Draft TAR, EPA Proposed Determination,[203] data from manufacturers,[204] research and development data from DOE's Vehicle Technologies Office,[205] [206] [207] and DOT-sponsored vehicle benchmarking studies completed by Argonne's AMTL.

Certain technologies' effectiveness for reducing fuel consumption requires optimization through the appropriate sizing of the powertrain. Autonomie uses sizing control algorithms based on data collected from vehicle benchmarking,[208] and the modeled hybrid components are sized based on performance neutrality considerations. This analysis iteratively minimizes the size of the powertrain components to maximize efficiency while enabling the vehicle to meet multiple performance criteria. The Autonomie simulations use a series of resizing algorithms that contain ''loops,'' such as the acceleration performance loop (0–60 mph), which automatically adjusts the size of certain powertrain components until a criterion, like the 0–60 mph acceleration time, is met. As the algorithms examine different performance or operational criteria that must be met, no single criterion can degrade; once a resizing algorithm completes, all criteria will be met, and some may be exceeded as a necessary consequence of meeting others.

Autonomie applies different powertrain sizing algorithms depending on the type of vehicle considered because different types of vehicles not only contain specific, optimized components, but they must also operate in varying driving modes. While the conventional powertrain sizing algorithm must consider only the power of the engine, the more complex algorithm for hybridized powertrains must simultaneously consider multiple factors, which could include the engine power, electric machine power, battery power, and battery capacity. Also, while the resizing algorithm for all vehicles must satisfy the same performance criteria, the algorithm for some electric powertrains must also allow those hybridized vehicles to operate in certain driving cycles, like the US06 cycle, without assistance of the combustion engine and ensure the electric motor/generator and battery can handle the vehicle's regenerative braking power, all-electric mode operation, and intended range of travel.

To establish the effectiveness of the technology packages, Autonomie simulates the vehicles' performance on compliance test cycles.[209] For vehicles with conventional powertrains and micro hybrid powertrains, Autonomie simulates the vehicles using the 2-cycle test procedures and guidelines.[210] For mild HEVs and strong HEVs, Autonomie simulates the same 2-cycle test, with the addition of repeating the drive cycles until the final state-of-charge (SOC) is approximately the same as the initial SOC, a process described in SAE J1711; SAE J1711 also provides test cycle guidance for testing specific to plug-in

[197] Burress, T. et al., Evaluation of the 2007 Toyota Camry Hybrid Synergy Drive System, ORNL: Washington, DC (2008), available at: *https://doi.org/10.2172/928684* (accessed: Sept. 10, 2025) (hereinafter, ''Burress et al. (2008)''); Olszewski, M., Annual Progress Report for the Power Electronics and Electric Machinery Program, ORNL/TM–2011/263, ORNL: Washington, DC (2011), available at: *https://info.ornl.gov/sites/publications/files/Pub31483.pdf* (accessed: Sept. 10, 2025) (hereinafter, ''Olszewski (2011)'').

[198] CAFE Analysis Autonomie Documentation chapter titled ''Vehicle and Component Assumptions—Electric Machines—Electric Machine Efficiency Maps.''

[199] CAFE Analysis Autonomie Documentation chapter titled ''Vehicle and Component Assumptions—Electric Machines—Electric Machine Peak Efficiency Scaling.''

[200] Burress et al. (2008); Olszewski (2011).

[201] Technical Assessment Report at Chapter 5 (2016).

[202] EPA Proposed Determination TSD at pp. 2–270 (2016).

[203] *Id.*

[204] Alliance of Automobile Manufacturers (now Auto Innovators) Comments on Draft TAR, at p. 30.

[205] DOE, Electric Drive Systems Research and Development, Office of Energy Efficiency & Renewable Energy (EERE) (2025), available at: *https://www.energy.gov/eere/vehicles/electric-drive-systems-research-and-development* (accessed: Sept. 10, 2025).

[206] Argonne National Laboratory, Advanced Mobility Technology Laboratory (AMTL) (2025), available at: *https://www.anl.gov/taps/advanced-mobility-technology-laboratory* (accessed: Sept. 10, 2025).

[207] DOE's lab years are 10 years ahead of manufacturers' potential production intent (*e.g.,* 2020 lab year is MY 2030).

[208] CAFE Analysis Autonomie Documentation chapter titled ''Vehicle Sizing Process—Vehicle Powertrain Sizing Algorithms—Light-Duty Vehicles—Conventional Vehicle Sizings Algorithm.''

[209] EPA, How Vehicles are Tested (2025), available at: *https://www.fueleconomy.gov/feg/how_tested.shtml* (accessed: Sept. 10, 2025); Good, D., EPA Test Procedures for Electric Vehicles and Plug-in Hybrids, Draft Summary, EPA: Washington, DC (2017), available at: *https://www.fueleconomy.gov/feg/pdfs/EPA%20test%20procedure%20for%20EVs-PHEVs-11-14-2017.pdf* (accessed: Sept. 10, 2025); CAFE Analysis Autonomie Documentation, chapter titled ''Test Procedure and Energy Consumption Calculations.''

[210] 40 CFR part 600.

HEVs.[211] PHEVs have a different range of modeled effectiveness during ''standard-setting'' CAFE Model runs, in which the PHEV operates under a ''charge sustaining'' (gasoline-only) mode—similar to how SHEVs function.

Chapters 2.4 and 3.3 of the Draft TSD and the CAFE Analysis Autonomie Documentation chapter titled ''Test Procedure and Energy Consumption Calculations'' discuss the components and test cycles used to model each hybrid powertrain type; please refer to those chapters for more technical details on each of the modeled technologies discussed in this section.

The range of effectiveness for the hybrid technologies used in this analysis is a result of the interactions between the components listed above and how the modeled vehicle operates on its respective test cycle. This range of values results in some modeled effectiveness values being close to real-world measured values and some modeled values departing from measured values, depending on the level of similarity between the modeled hardware configuration and the real-world hardware and software configurations. The range of effectiveness values for the hybrid technologies applied in the fleet is shown in Draft TSD Figure 3–23 and Figure 3–24.

Some advanced engine technologies indicate low effectiveness values when paired with hybrid architectures. The low effectiveness results from the application of advanced engines to existing P2 architectures. This effect is expected and illustrates the importance of using the full-vehicle modeling to capture interactions between technologies and to capture instances of both complementary technologies and non-complementary technologies. In developing its hybrid engine maps, NHTSA considers the engine, engine technologies, electric motor power, and battery pack size. The hybrid engine maps are calibrated to operate in their respective hybrid architecture most effectively and to allow the electric machine to provide propulsion or assistance in regions of the engine map that are less efficient. As the Model sizes the powertrain for any given application, it considers all these parameters as well as performance neutrality metrics to provide the most efficient solution. In this instance, the P2 powertrain improves fuel economy, in part, by allowing the engine to spend more time operating at efficient engine speed and load conditions. This reduces the advantage of adding advanced engine technologies, which also improve fuel economy, by broadening the range of speed and load conditions for the engine to operate at high efficiency. This redundancy in fuel-saving mechanisms results in a lower effectiveness when the technologies are added to each other.

The technology effectiveness values are developed specifically to support analyses for a rulemaking timeframe. For example, the hybrid Atkinson engine peak thermal efficiency was updated based on 2017 Toyota Prius engine data.[212] As mentioned above, Argonne scales the efficiency maps, specific to powertrain type, to have total system peak efficiencies ranging from 96 to 98 percent [213]—such that their peak efficiency value corresponds to the latest state-of-the-art technologies, as opposed to retaining dated system efficiencies (90 to 93 percent).[214] The 2016 maps scaled to peak efficiency are equivalent to (if not exceed) efficiencies seen in vehicles today and in the future. Though the base references for these technologies are from a few years ago, NHTSA has worked with Argonne to update individual inputs to reflect the latest improvements. Accordingly, NHTSA has made no changes to the electric machine efficiency maps for this proposed rule analysis.

When the CAFE Model turns a vehicle powered by an ICE into a hybridized vehicle, it must remove the parts and costs associated with the ICE (and, potentially, the transmission—depending on the hybridization level and powertrain type) and add the costs of a battery pack and other non-battery hybridization components, such as the electric motor and power inverter. To estimate battery pack costs for this analysis, NHTSA needs an estimate of how much battery packs cost now (*i.e.,* a ''base year'' cost) and estimates of how that cost could reduce over time (*i.e.,* the ''learning effect''). The general concept of learning effects is discussed in detail in Section II.C and in Chapter 2 of the Draft TSD, while the specific learning effect NHTSA applied to battery pack costs in this analysis is discussed below. NHTSA estimates base year battery pack costs for most hybrid technologies using BatPaC, which is an Argonne model designed to calculate the cost of hybrid battery packs.

Traditionally, a user would use BatPaC to cost a battery pack for a single vehicle, and the user would vary factors such as battery cell chemistry, battery power and energy, battery pack interconnectivity configurations, battery pack production volumes, charging constraints, or combinations of these factors, to name a few, to see how those factors would increase or decrease the cost of the battery pack. However, several hundreds of thousands of simulated vehicles in the analysis have hybridized powertrains, meaning that NHTSA would have to run individual BatPaC simulations for each full-vehicle simulation that requires a battery pack. This would have been computationally intensive and impractical. Instead, Argonne staff builds ''lookup tables'' with BatPaC that provide battery pack manufacturing costs, battery pack weights, and battery pack cell capacities for vehicles with varying power requirements modeled in these large-scale simulation runs.

Just like with other vehicle technologies, the specifications of different vehicle manufacturers' battery packs are extremely diverse. NHTSA, therefore, endeavored to develop battery pack costs that reasonably encompass the cost of battery packs for vehicles in each technology class.

In conjunction with the agency's partners at Argonne working on the CAFE analysis Autonomie modeling, NHTSA references assessment and outlook reports,[215] vehicle teardown reports,[216] and stakeholder

[211] PHEV testing is broken into several phases based on SAE J1711: charge-sustaining on the city and HWFET cycle, and charge-depleting on the city and HWFET cycles.

[212] Atkinson Engine Peak Efficiency is based on 2017 Prius peak efficiency scaled up to 41 percent. Autonomie Model Documentation at 138. See ANL—All Assumptions_Summary_NPRM_022021.xlsx, ANL—Summary of Main Component Performance Assumptions_NPRM_022021.xlsx, Argonne Autonomie Model Documentation_NPRM.pdf and ANL—Data Dictionary_NPRM_022021.XLSX, which can be found in the rulemaking docket (NHTSA–2023–0022) by filtering for Supporting & Related Material.

[213] See CAFE Analysis Autonomie Documentation, chapter titled ''Electric Machine Peak Efficiency Scaling.''

[214] Burress et al. (2008); Olszewski (2011).

[215] Rho Motion, EV Battery subscriptions, available at: *https://rhomotion.com/* (accessed: Sept. 10, 2025); BNEF, Electric Vehicle Outlook 4Q 2023: Growth Ahead, Last revised: Jan. 4, 2024, available at: *https://about.bnef.com/insights/clean-transport/electrified-transport-market-outlook-4q-2023-growth-ahead/* (accessed: Sept. 10, 2025); Benchmark Mineral Intelligence, Cathode, Anode, and Gigafactories subscriptions, available at: *https://benchmarkminerals.com/* (accessed: Sept. 10, 2025); International Energy Agency, Global EV Outlook 2022: Securing Supplies For an Electric Future, International Energy Agency (2022) available at: *https://iea.blob.core.windows.net/assets/ad8fb04c-4f75-42fc-973a-6e54c8a4449a/GlobalElectricVehicleOutlook2022.pdf* (accessed: Sept. 10, 2025).

[216] Hummel, P. et al., UBS Evidence Lab Electric Car Teardown—Disruption Ahead? UBS: Zurich, Switzerland (2017), available at: *https://neo.ubs.com/shared/d1ZTxnvF2k* (accessed: Sept. 10, 2025); A2Mac1: Automotive Benchmarking, (proprietary data), available at: *https://portal.a2mac1.com/* (accessed: Sept. 10, 2025).

discussions [217] to determine common battery pack chemistries for each modeled hybrid technology. The CAFE Analysis Autonomie Documentation chapter titled ''Battery Performance and Cost Model—BatPaC Examples From Existing Vehicles in the Market'' includes more detail about the reports referenced for this analysis.[218] For mild hybrids, NHTSA uses the lithium iron phosphate (LFP)–G [219] chemistry because power and energy requirements for mild hybrids are very low, the charge and discharge cycles (or need for increased battery cycle life) are high, and the battery raw materials are much less expensive than a nickel manganese cobalt (NMC)-based cell chemistry. NHTSA uses NMC622–G [220] for all other hybrid vehicle technology base (MY 2022) battery pack cost calculations. NHTSA believes that, based on available data,[221] NMC622 is more representative for the MY 2022 base year battery costs than LFP, and any additional cost reductions from manufacturers switching to LFP chemistry-based battery packs in years beyond 2022 are accounted for in the battery cost learning effects. The learning effects estimate potential cost savings for *future* battery advancements (a learning rate applied to the battery pack DMC); this proposed rule includes a dynamic NMC/LFP cathode mix over each future model year (for PHEVs). The battery chemistry that NHTSA uses is intended to represent reasonably what is used in the MY 2022 U.S. fleet, which is the DMC base year for the BatPaC calculations.[222]

NHTSA also looks at vehicle sales volumes for MY 2022 to determine a reasonable base production volume assumption.[223] In practice, a single battery plant can produce packs using different cell chemistries with different power and energy specifications, as well as battery pack constructions with varying battery pack designs—different cell interconnectivities (to alter overall pack power end energy) and thermal management strategies—for the same base chemistry. However, in BatPaC, a battery plant is assumed to manufacture and assemble a specific battery pack design, and all cost estimates are based on one single battery plant manufacturing only that specific battery pack. For example, if a manufacturer has more than one PHEV in its vehicle lineup and each uses a specific battery pack design, a BatPaC user would include manufacturing volume assumptions for each design separately to represent each plant producing each specific battery pack. NHTSA has examined battery pack designs for vehicles sold in MY 2022 to determine a reasonable manufacturing plant production volume assumption. NHTSA considers each assembly line designed for a specific battery pack and for a specific PHEV as an individual battery plant. Since battery technologies and production are still evolving, it is likely to be some time before battery cells can be treated as commodities where the specific numbers of cells are used for varying battery pack applications and all other metrics remain the same.

Similar to previous rulemakings, NHTSA uses sales as a starting point to analyze potential base modeled battery manufacturing plant production volume assumptions. Since actual production data for specific battery manufacturing plants are extremely hard to obtain and the battery cell manufacturer is not always the battery pack manufacturer,[224] NHTSA calculates an average production volume per manufacturer metric to approximate hybrid vehicle production volumes for this analysis. This metric is calculated by taking an average of all of one hybrid vehicle type (for example, all PHEVs) battery energies reported in a vehicle manufacturer's pre-MY 2022 reports [225] and dividing by the averaged sales-weighted energy per-vehicle; the resulting volume is then rounded to the nearest 5,000. Manufacturers are not required to report gross battery pack sizes for the pre-model year or mid-model year compliance reports, so NHTSA estimates pack size for each vehicle based on proprietary data and publicly available data, like a manufacturer's published or announced specifications. This process is repeated for all hybrid vehicle technologies. NHTSA believes this provided a reasonable base year plant production volume—especially in the absence of actual production data—since the compliance report data from manufacturers already includes accurate related data, such as vehicle model and estimated sales information metrics.[226] The final battery manufacturing plant production volume assumptions for different hybrid technologies are as follows: mild hybrid and strong hybrids are manufactured assuming 200,000 packs and PHEVs are manufactured assuming 20,000 packs.

As mentioned above, the BatPaC Lookup Tables provide $/kWh battery pack costs based on vehicle power and energy requirements. As the total cost of a battery pack increases the higher the power/energy requirements, the cost per kWh decreases. This represents the cost of hardware that is needed in all battery packs but is deferred across more kW/kWh in larger packs, which reduces the per kW/kWh cost. Table 3–78 in Draft TSD Chapter 3.3.5 shows an example of the BatPaC-based lookup tables for SHEVPS technology classes.

Note that the values in the table discussed above should *not* be considered the total battery $/kWh costs that are used for vehicles in the analysis in future model years. As detailed below, battery costs are also projected to decrease over time as manufacturers improve production processes, shift battery chemistries, and make other technological advancements. In addition, select modeled tax credits further reduce the estimated costs; additional discussion of those tax credits is located throughout this preamble, Draft TSD Chapter 2.3, and PRIA Chapters 8 and 9.

The CAFE Analysis Autonomie Documentation details other specific assumptions that Argonne used to simulate battery packs and their associated base year costs for the full-vehicle simulation modeling, including updates to the battery management unit

[217] See Docket Submission of Ex Parte Meetings Prior to Publication of the Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027–2032 and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030–2035 Notice of Proposed Rulemaking memorandum, which can be found in the rulemaking docket (NHTSA–2023–0022) by filtering for Supporting & Related Material.

[218] CAFE Analysis Autonomie Documentation chapter titled ''Battery Performance and Cost Model—BatPac Examples From Existing Vehicles in the Market.''

[219] Lithium iron phosphate ($LiFePO_4$) cathode and graphite anode.

[220] Lithium nickel manganese cobalt oxide ($LiNiMnCoO_2$) cathode and graphite anode.

[221] Rho Motion, EV Battery subscriptions, available at: *https://rhomotion.com/* (accessed: Sept. 10, 2025); International Energy Agency, Global EV Outlook 2023, International Energy Agency (2023), available at *https://www.iea.org/reports/global-ev-outlook-2023* (accessed: Sept. 10, 2025).

[222] For this analysis, 2021$ costs have been updated to 2024$; this is not reflected directly in the base Battery Cost csv file, however, as this conversion was performed external to the file itself.

[223] See Chapter 2.2.1.1 of the Draft TSD for more information on data NHTSA uses for sales volumes.

[224] Zhou, Y. et al., Lithium-Ion Battery Supply Chain for E-Drive Vehicles in the United States: 2010–2020, ANL/ESD–21/3, Argonne, IL: Argonne National Laboratory (2021), available at: *https://publications.anl.gov/anlpubs/2021/04/167369.pdf* (accessed: Sept. 10, 2025); Gohlke, D. et al., Quantification of Commercially Planned Battery Component Supply in North America Through 2035, Final Report, ANL–24/14, ANL: Alexandria, VA (2024), available at: *https://publications.anl.gov/anlpubs/2024/03/187735.pdf* (accessed: Sept. 10, 2025).

[225] 49 CFR 537.7.

[226] NHTSA uses publicly available range and pack size information and linked the information to vehicle models.

costs and the range of power and energy requirements used to bound the lookup tables.[227] CAFE Analysis Autonomie Documentation and Chapter 3.3 of the Draft TSD provide further information about how NHTSA used BatPaC to estimate base year battery costs. The full range of BatPaC-generated battery DMCs is in the file ANL—Summary of Main Component Performance Assumptions_NPRM_2206.[228] Note again that these charts represent the DMC using a dollar per kW/kWh metric; battery absolute costs used in the analysis by technology key can be found in the CAFE Model Battery Costs File.

The DOE and Argonne have developed battery cost correlation equations from BatPaC for use in the 2024 CAFE final rule analysis—cost equations that continue to be used in this analysis.[229] These cost equations—developed for use through MY 2035—are tailored for different vehicle segments,[230] different levels of hybridization,[231] and anticipated plant production volumes.[232] These equations represent cost improvements achieved from advanced manufacturing, pack design, and cell design with current and anticipated future battery chemistries,[233] design parameters, forecasted market prices, and vehicle technology penetration. Argonne's Cost Analysis and Projections for U.S.-Manufactured Automotive Lithium-ion Batteries report contains a detailed discussion of the inputs and assumptions used to generate these cost equations.[234]

While batteries and relative battery components are the biggest cost drivers of hybridization, non-battery hybridization components, such as electric motors, power electronics, and wiring harnesses, also add to the total cost required to electrify a vehicle. Different levels of hybrid vehicles have variants of non-battery hybridization components and configurations to accommodate different vehicle classes and applications with respective designs. For instance, some SHEVs may be engineered with only one electric motor, while other SHEVs may be engineered with two or even three electric motors within their powertrains to provide AWD functionality. In addition, some hybrid vehicle types still include conventional powertrain components, like an ICE and transmission.

For all hybrid vehicle powertrain types, NHTSA groups non-battery hybridization components into four major categories: electric motors, power electronics (generally including the DC–DC converter, inverter, and power distribution module), charging components (charger, charging cable, and high-voltage cables), and thermal management systems. NHTSA further groups the components into those composing the electric traction drive system, and all other components. Though each manufacturer's ETDS and power electronics vary between the same hybrid vehicle types and between different hybrid vehicle types, NHTSA considers the ETDS for this analysis to be composed of the electric motor and inverter, power electronics, and thermal system.

When researching costs for different non-battery hybridization components, NHTSA finds that different reports vary in components considered and cost breakdown. This is not surprising, as vehicle manufacturers use different non-battery hybridization components in different vehicle systems, or even in the same vehicle type, depending on the application. In order of the component categories discussed above, NHTSA examines cost teardown studies discussed in Draft TSD Chapter 3.3.5 on Table 3–82. Using the best available estimate for each component from the different reports captures components in most manufacturers' systems but not all; NHTSA believes, however, that this is a reasonable metric and approach for this analysis, given the non-standardization of hybrid powertrain designs and subsequent component specifications. Other sources NHTSA uses for non-battery hybridization component costs include an EPA-sponsored FEV teardown of a 2013 Chevrolet Malibu ECO with eAssist for some BISG component costs,[235] which were validated against a 2019 Dodge Ram eTorque system's publicly available retail price,[236] and the 2015 NAS report.[237] Broadly, the total BISG system cost, including the battery, fairly matches these other cost estimates. NHTSA is not making any changes to hybrid vehicle costs for this proposed rule, outside of transitioning to 2024$.

For the non-battery electrification component learning curves, NHTSA uses cost information from Argonne's 2016 Assessment of Vehicle Sizing, Energy Consumption, and Cost Through Large-Scale Simulation of Advanced Vehicle Technologies report.[238] The report provides estimated cost projections from the 2010 lab year to the 2045 lab year for individual vehicle components.[239] NHTSA considers the component costs used in EVs and determines the learning curve by evaluating the year over year cost change for those components. Argonne published a 2020 and a 2022 version of the same report; however, those versions did not include a discussion of the high- and low-cost estimates for the same components.[240] The learning estimates generated using the 2016 report align in the middle of the high and low cost estimates from the Argonne reports, and therefore NHTSA continues to apply the learning curve estimates based on the 2016 report. There are many sources that NHTSA could have picked to develop learning

[227] CAFE Analysis Autonomie Documentation chapter titled ''Battery Performance and Cost Model—Use of BatPac in Autonomie for FRM runs.''

[228] The DMCs in the Argonne file are in 2021$ (from the 2024 final rule).

[229] Argonne National Laboratory, Cost Analysis and Projections for U.S.-Manufactured Automotive Lithium-Ion Batteries. ANL/CSE–24/1, (2024), available at: *https://publications.anl.gov/anlpubs/2024/01/187177.pdf* (accessed: Sept. 10, 2025) (hereinafter, ''ANL/CSE–24/1'').

[230] The vehicle classes considered in this project include compact cars, midsize cars, midsize SUVs, and pickup trucks.

[231] The levels of hybridization considered in this project include light-duty micro HEVs, mild HEVs, strong HEVs, and PHEVs.

[232] Production volumes were determined for each vehicle class and type for each model year. See ANL/CSE–24/1 at Equation 1 and Table 13.

[233] Battery cathode chemistries considered in this project include nickel-based materials (NMC622, NMC811, NMC95, and LMNO) as well as lower cost LFP cathodes; varying percentages of silicon content (5%, 15%, and 35%) within a graphite anode were considered, as well.

[234] ANL/CSE–24/1.

[235] FEV, Inc., Light Duty Vehicle Technology Cost Analysis: 2013 Chevrolet Malibu ECO With eAssist BAS Technology Study, FEV P311264, Contract No. EP–C–12–014, WA 1–9 (2014); EPA: Washington, DC (2014), available at: *https://www.regulations.gov/document/EPA-HQ-OAR-2015-0827-0342* (accessed: Sept. 10, 2025).

[236] Colwell, K.C., The 2019 Ram 1500 eTorque Brings Some Hybrid Tech, if Little Performance Gain, to Pickups, Car and Driver, Last revised: Mar. 14, 2019, available at: *https://www.caranddriver.com/reviews/a22815325/2019-ram-1500-etorque-hybrid-pickup-drive* (accessed: Sept. 10, 2025).

[237] 2015 NAS Report, at p. 305.

[238] Moawad, A. et al., Assessment of Vehicle Sizing, Energy Consumption and Cost Through Large Scale Simulation of Advanced Vehicle Technologies, ANL/ESD–15/28 (2016), available at: *https://doi.org/10.2172/1245199* (accessed: Sept. 10, 2025).

[239] DOE's lab year equates to 5 years after a model year (*e.g.,* DOE's 2010 lab year equates to MY 2015). ANL/ESD–15/28 at 116.

[240] Islam, E. et al., Energy Consumption and Cost Reduction of Future Light-Duty Vehicles Through Advanced Vehicle Technologies: A Modeling Simulation Study Through 2050, ANL/ESD–19/10, ANL (2020), available at: *https://publications.anl.gov/anlpubs/2020/08/161542.pdf* (accessed: Sept. 10, 2025); Islam, E. et al., A Comprehensive Simulation Study to Evaluate Future Vehicle Energy and Cost Reduction Potential, ANL/ESD–22/6, Alexandria: VA (2022), available at: *https://publications.anl.gov/anlpubs/2023/11/179337.pdf* (accessed: Sept. 10, 2025).

curves for non-battery electrification component costs; however, given the uncertainty surrounding extrapolating costs out to MY 2050, NHTSA believes these learning curves provide a reasonable estimate.

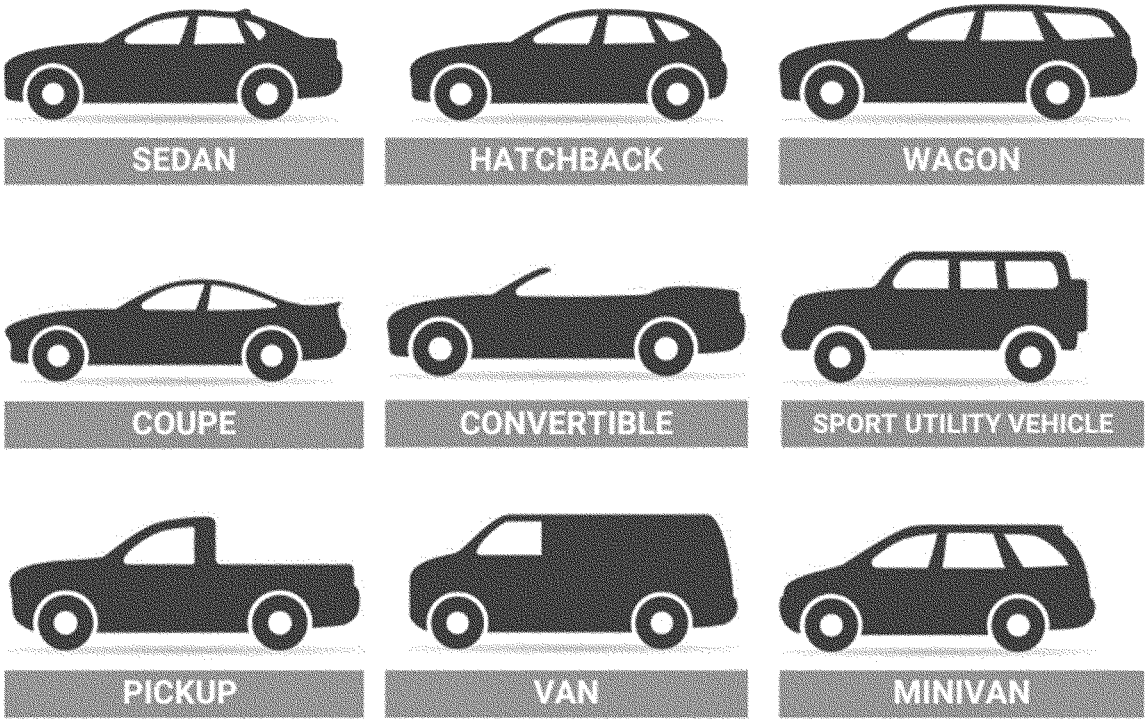
In summary, NHTSA calculates the total hybrid powertrain costs by summing individual component costs, which ensures that all technologies in a hybrid powertrain appropriately contribute to the total system cost. NHTSA combines the costs associated with the ICE (if applicable) and transmission, non-battery hybridization components like the electric machine, and battery pack to create a full-system cost. Chapter 3.3.5.4 of the Draft TSD presents the total costs for each hybrid powertrain option, broken out by the components NHTSA discussed throughout this section. In addition, the section discusses where to find each of the component costs in the CAFE Model's various input files.

4. Road Load Reduction Paths

No car or truck uses energy (whether gas or otherwise) 100 percent efficiently when it is driven down the road. If the energy in a gallon of gas is thought of as a pie, the amount of energy ultimately available from that gallon to propel a car or truck down the road would only be a small slice. Instead, most of the energy is lost due to thermal and frictional losses in the engine and drivetrain and drag from ancillary systems (*e.g.,* the air conditioner, alternator generator, or various pumps). The rest is lost to what engineers call road loads. For the most part, road loads include wind resistance (or aerodynamics), drag in the braking system, and rolling resistance from the tires. At low speeds, aerodynamic losses are very small, but as speeds increase these losses rapidly become dramatically higher than any other road load. Drag from the brakes in most cars is practically negligible. Tire rolling resistance losses can be significant: at low speeds rolling resistance losses can be more than aerodynamic losses. Whatever energy is left after these road loads is spent on accelerating the vehicle anytime its speed increases. This is where reducing the mass of a vehicle is important to efficiency because the amount of energy to accelerate the vehicle is always directly proportional to a vehicle's mass. All else being equal, reduce a car's mass and better fuel economy is guaranteed. However, at freeway speeds, aerodynamics plays a more dominant role in determining fuel economy than any other road load or vehicle mass.

NHTSA includes three road load reducing technology paths in this analysis: the Mass Reduction Path, Aerodynamic Improvements (AERO) Path, and Low Rolling Resistance Tires (ROLL) Path. For all three paths, NHTSA assigns analysis fleet technologies and identifies adoption features based on the vehicle's body style. The light-duty fleet body styles NHTSA includes in the analysis are convertible, coupe, sedan, hatchback, wagon, SUV, pickup, minivan, and van. Figure II–3 shows the light-duty fleet body styles used in the analysis.

Figure II-3: Light-Duty Fleet Body Styles



As expected, the road load forces described above operate differently based on a vehicle's body style, and the technology adoption features and effectiveness values reflect this. The following sections discuss the three Road Load Reduction Paths.

5. Mass Reduction

MR is a relatively cost-effective means of improving fuel economy, and vehicle manufacturers are expected to apply

various MR technologies to meet fuel economy standards. Vehicle manufacturers can reduce vehicle mass through several different techniques, such as modifying and optimizing vehicle component and system designs, part consolidation, and adopting materials that are conducive to MR (*e.g.,* advanced high strength steel (AHSS), aluminum, magnesium, and plastics, including carbon fiber reinforced plastics).

For this analysis, NHTSA considers five levels of MR technology (MR1–MR5) that include increasing amounts of advanced materials and MR techniques applied to the vehicle's glider.[241] The subsystems that may make up a vehicle glider include the vehicle body, chassis, interior, steering, electrical accessory, brake, and wheels systems. NHTSA accounts for mass changes associated with powertrain changes separately.[242] The agency's estimates of how manufacturers could reach each level of MR technology, and a discussion of advanced materials and MR techniques can be found in Chapter 3.4 of the Draft TSD.

The MR5 technology represents a high level of MR and requires a blend of aluminum and carbon fiber components. Achieving MR5 with aluminum exclusively is unlikely to be achievable by manufacturers during the rulemaking timeframe. While aluminum technology can be a potent MR pathway, it has its limitations. First, aluminum does not have a fatigue endurance limit. That is, with aluminum components there is always some combination of stress and cycles when failure occurs. Automotive design engineering teams will dimension highly stressed cross sections to provide an acceptable number of cycles to failure. But this often comes at mass savings levels that fall short of what would be expected purely based on density specific strength and stiffness properties for aluminum.

Looking at real data, the mostly aluminum (cab and bed are made from aluminum) 2021 Ford F150 achieves less than a 14-percent MR compared to its 2014 all-steel predecessor.[243] This is an especially pertinent comparison because both vehicles have the same footprint within a 2-percent margin and presumably were engineered to similar duty cycles given that they both came from the same manufacturer. Per the agency's regression analysis, the Ford F–150 achieves MR3. As mentioned in the Draft TSD Chapter 3.4, a body in white structure made almost entirely from aluminum is roughly required to get to MR4. It may be possible to achieve MR5 without the use of carbon fiber, but the resultant vehicle would not achieve performance parity with customer expectations in terms of crash safety, noise and vibration levels, and interior content. The discontinued Lotus Elise is an example of an aluminum and fiberglass car that achieved MR5 but represents an extremely niche vehicle application that is unlikely to translate to mainstream, high-volume models. Therefore, it is entirely reasonable to assume that carbon fiber ''hang on'' panels and closures would be necessary to achieve MR5 at performance parity.

In past rules, commenters have noted that the NAS study relies on very little application of carbon fiber technology to achieve their highest level of MR technology. NHTSA notes that the NAS study espouses a maximum level of MR of approximately 14.5 percent using composites (*e.g.,* fiberglass) and carbon fiber technology only in closures structures (*e.g.,* doors, hoods, and decklids) and hang-on panels (*e.g.,* fenders). This is the ''alternative scenario 2'' in the NAS study and is a similar light-weighting technology application strategy to what the analysis roughly associates with MR5, but MR5 requires a 20-percent MR. In this scenario, NHTSA is allotting more MR potential for the same carbon fiber technology application than the NAS study does.

NHTSA assigns MR levels to vehicles in the analysis fleet by using regression analyses that consider a vehicle's body design [244] and body style, in addition to several vehicle design parameters, like footprint, power, bed length (for pickup trucks), and battery pack size (if applicable), among other factors. NHTSA has been improving on the light-duty regression analysis since the 2016 Draft Technical Assessment Report (TAR) and continues to find that it reasonably estimates MR technology levels of vehicles in the analysis fleet. Chapter 3.4 of the Draft TSD contains a full description of the regression analyses used for the analysis fleet and examples of results of the regression analysis for select vehicles.

There are several ways NHTSA ensures that the CAFE Model considers MR technologies in the way that manufacturers might apply them in the real world. Given the degree of commonality among the vehicle models built on a single platform, manufacturers do not have complete freedom to apply unique technologies to each vehicle that shares the same platform. While some technologies (*e.g.,* low rolling resistance tires) are very nearly ''bolt-on'' technologies, others involve substantial changes to the structure and design of the vehicle and therefore often necessarily affect all vehicle models that share that platform. In most cases, MR technologies are applied to platform level components and therefore the same design and components are used on all vehicle models that share the platform. Each vehicle in the analysis fleet is associated with a specific platform family. A platform ''leader'' in the analysis fleet is a vehicle variant of a given platform that has the highest level of MR technology in the analysis fleet. As the Model applies technologies, it ''levels up'' all variants on a platform to the highest level of MR technology on the platform. For example, if a platform leader is already at MR3 in MY 2024, and a ''follower'' starts at MR0 in MY 2024, the follower will get MR3 at its next redesign (unless the leader is redesigned again before that time, and further increases the MR level associated with that platform, then the follower would receive the new MR level).

In addition to leader-follower logic for vehicles that share the same platform, NHTSA also restricts MR5 technology to platforms that represent 80,000 vehicles or fewer. The CAFE Model does not apply MR5 technology to platforms representing high-volume sales, like a Chevrolet Traverse, for example, where hundreds of thousands of units are sold

[241] Note that in the previous analysis associated with the MYs 2024–2026 final rule, there was a sixth level of mass reduction available as a pathway to compliance. For this analysis, this pathway was removed because it relied on extensive use of carbon fiber composite technology to an extent that is only found in purpose-built racing cars and a few hundred road legal sports cars costing hundreds of thousands of dollars. Draft TSD Chapter 3.4 provides additional discussion on the decision to include five mass reduction levels in this analysis.

[242] Glider mass reduction can sometimes enable a smaller engine while maintaining performance neutrality. Smaller engines typically weigh less than bigger ones. NHTSA captures any changes in the resultant fuel savings associated with powertrain mass reduction and downsizing via the Autonomie simulation. Autonomie calculates a hypothetical vehicle's theoretical fuel mileage using a mass reduction to the vehicle curb weight equal to the sum of mass savings to the glider plus the mass savings associated with the downsized powertrain.

[243] Ford, 2021 F–150 Technical Specifications, available at: *https://www.fromtheroad.ford.com/content/dam/fordmediasite/us/en/library/2021/specs/2021-F-150-Technical-Specs.pdf* (accessed: Sept. 10, 2025); Ford, 2014 F–150 Technical Specifications, available at: *https://www.edmunds.com/ford/f-150/2014/features-specs/* (accessed: Sept. 10, 2025).

[244] The body design categories NHTSA uses are 3-box and 2-box pickup trucks. A 3-box has a box in the middle for the passenger compartment, a box in the front for the engine and a box in the rear for the luggage compartment. A 2-box has a box in front for the engine and then the passenger and luggage box are combined into a single box.

per year. NHTSA uses the combination of the leader-follower logic and 80,000-unit threshold to make the simulation of MR technologies more realistic. This is because NHTSA assumes that MR5 would require carbon fiber technology.[245] There is high global demand from a variety of industries for a limited supply of carbon fibers; specifically, aerospace, military/defense, and industrial applications demand most of the carbon fiber currently produced. Today, only about 10 percent of the global dry carbon fiber supply is allocated to the automotive industry, limiting the global supply base to supporting approximately 70,000 vehicles.[246] In addition, the production process for carbon fiber components is significantly different than for traditional vehicle materials. NHTSA uses this adoption feature as a proxy for stranded capital (*i.e.,* when manufacturers amortize research, development, and tooling expenses over many years) from leaving the traditional processes and to represent the significant paradigm change to tooling and equipment that would be required to support molding carbon fiber panels. There are no other adoption features for MR in the analysis.

In the Autonomie simulations, MR technology is simulated as a percentage of mass removed from the specific subsystems that make up the glider. The mass of subsystems that make up the vehicle's glider is different for every technology class, based on glider weight data from the A2Mac1 database [247] and two NHTSA-sponsored studies that examined light-weighting a passenger car and light truck. NHTSA accounts for MR from powertrain improvements separately from glider MR. Autonomie considers several components for powertrain MR, including engine downsizing and fuel tank, exhaust systems, and cooling system light-weighting.[248] With regard to the light-duty vehicle fleet, the 2015 NAS report suggested an engine downsizing opportunity exists when the glider mass is light-weighted by at least 10 percent. The 2015 NAS report also suggested that 10-percent light-weighting of the glider mass alone would boost fuel economy by 3 percent and any engine downsizing following the 10-percent glider MR would provide an additional 3-percent increase in fuel economy.[249] The NHTSA light-weighting studies applied engine downsizing (for some vehicle types but not all) when the glider weight was reduced by 10 percent. Accordingly, the analysis limits engine resizing to several specific incremental technology steps; important for this discussion, engines in the analysis are resized only when MR of 10 percent or greater is applied to the glider mass or when one powertrain architecture replaces another architecture. A summary of how the different MR technology levels improve fuel consumption is shown in Draft TSD Chapter 3.4.4.

NHTSA's MR costs are based on two NHTSA light-weighting studies—the teardown of a MY 2011 Honda Accord and a MY 2014 Chevrolet Silverado pickup truck [250]—and the 2021 NAS report.[251] The costs for MR1–MR4 rely on the light-weighting studies, while the cost of MR5 references the carbon fiber costs provided in the 2021 NAS report. Unlike the other technologies in this analysis that have a fixed technology cost (for example, it costs about $3,000 to add an AT10L3 transmission to a light-duty SUV or pickup truck in MY 2027), the cost of MR is calculated on a dollar per pound saved basis based on a vehicle's starting weight. Put another way, for a given vehicle platform, an initial mass is assigned using the aforementioned regression model. The amount of mass to reach each of the five levels of MR is calculated by the CAFE Model based on this number and then multiplied by the dollar per pound saved figure for each of the five MR levels. The dollar per pound saved figure increases at a nearly linear rate going from MR0 to MR4. However, this figure increases steeply going from MR4 to MR5 because the technology cost to realize the associated mass savings level is an order of magnitude larger. This dramatic increase is reflected by all three studies NHTSA relied on for MR costing, and NHTSA believes that it reasonably represents what manufacturers would expect to pay for using increasing amounts of carbon fiber on their vehicles.

Like past analyses, NHTSA considers several options for MR technology costs. The agency has determined that the NHTSA-sponsored studies accounted for significant factors the agency believes are important to include in this analysis, including materials considerations (material type and gauge, while considering real-world constraints such as manufacturing and assembly methods and complexity), safety (including the Insurance Institute for Highway Safety's (IIHS) small overlap tests), and functional performance (including towing and payload capacity and noise, vibration, and harshness (NVH)), and gradeability in the pickup truck study.[252]

First, NHTSA limits application of MR5 in the analysis to represent the limited volume of available dry carbon fiber and the resultant high costs of the raw materials. This constraint is described above and in more detail in Draft TSD Chapter 3. The CAFE Model assumes that there is not enough carbon fiber readily available to support vehicle platforms with more than 80,000 vehicles sold per year. NHTSA believes this volume constraint does more to limit the application of MR5 technology in the analysis than does its high price. Even if a lower price is used, the dominant constraint would still be volume. Second, NHTSA does not believe that a lower price would prove to be a competitive pathway to compliance with exotic materials technology compared to other less expensive technologies with higher effectiveness. The MR5 effectiveness as applied to vehicles in this analysis considers the total effect of reducing that level of mass from the vehicle, from the vehicle's starting MR level. As an example, while the cost of going from MR0 or MR1 to MR5 may be slightly overstated (but still limited in total application by the volume cap), the cost of going from MR4 to MR5 is not. NHTSA continues to consider the balance of carbon fiber and other

[245] See the Final TSD for CAFE standards for MYs 2024–2026 and Chapter 3.4 of the Draft TSD accompanying this rulemaking for more information about carbon fiber.

[246] Sloan, J., Carbon Fiber Suppliers Gear Up for Next Generation Growth, Last revised: Feb. 11, 2020, available at: *https://www.compositesworld.com/articles/carbon-fiber-suppliers-gear-up-for-next-gen-growth* (accessed: Sept. 10, 2025).

[247] A2Mac1: Automotive Benchmarking, available at: *https://portal.a2mac1.com/* (accessed: Sept. 10, 2025). The A2Mac1 database tool is widely used by industry and academia to determine the bill of materials (a list of the raw materials, sub-assemblies, parts, and quantities needed to manufacture an end-product) and mass of each component in the vehicle system.

[248] Though NHTSA does not account for mass reduction in transmissions, NHTSA does reflect design improvements as part of mass reduction when going from, for example, an older AT6 to a newer AT8 that has similar if not lower mass.

[249] 2015 NAS Report

[250] Singh, H., Mass Reduction for Light-Duty Vehicles for Model Years 2017–2025, Final Report, DOT HS 811 666 (2012), available at: *https://static.nhtsa.gov/nhtsa/downloads/CAFE/2017-25_Final/811666.pdf* (accessed: Sept. 10, 2025); Singh, H. et al., Mass Reduction for Light-Duty Vehicles for Model Years 2017–2025, Report No. DOT HS 812 487, NHTSA: Washington, DC (2018), available at: *https://downloads.regulations.gov/NHTSA-2021-0053-0011/attachment_5.pdf* (accessed: Sept. 10, 2025).

[251] This analysis applied the cost estimates per pound derived from passenger cars to all passenger car segments, and the cost estimates per pound derived from full-size pickup trucks to all light-duty truck and SUV segments. The cost estimates per pound for carbon fiber (MR5) were the same for all segments.

[252] Draft TSD Chapter 7.3 has additional detail on this analysis.

advanced materials for MR to meet MR5 levels and may update that value in future rules.

6. Aerodynamic Improvements

The energy required for a vehicle to overcome wind resistance, or more formally what is known as aerodynamic drag, ranges from minimal drag at low speeds to extremely significant drag at highway speeds.[253] Reducing a vehicle's aerodynamic drag is, therefore, an effective way to reduce the vehicle's fuel consumption. Aerodynamic drag is characterized as proportional to the frontal area (A) of the vehicle and a factor called the coefficient of drag (C_d). The coefficient of drag (C_d) is a dimensionless value that represents a moving object's resistance against air, which depends on the shape of the object and flow conditions. The frontal area (A) is the cross-sectional area of the vehicle as viewed from the front. Aerodynamic drag of a vehicle is often expressed as the product of the two values, C_dA, which is also known as the drag area of a vehicle. The force imposed by aerodynamic drag increases with the square of vehicle velocity, accounting for the largest contribution to road loads at higher speeds.[254]

Manufacturers can reduce aerodynamic drag either by reducing the drag coefficient or reducing vehicle frontal area, which can be achieved by passive or active aerodynamic technologies. Passive aerodynamics refers to aerodynamic attributes that are inherent to the shape and size of the vehicle. Passive attributes can include the shape of the hood, the angle of the windscreen, or even overall vehicle ride height. Active aerodynamics refers to technologies that variably deploy in response to driving conditions. Examples of active aerodynamic technologies are grille shutters, active air dams, and active ride height adjustment. Manufacturers may employ both passive and active aerodynamic technologies to improve aerodynamic drag values.

There are four levels of aerodynamic improvement (over AERO0, the first level) available in the analysis (AERO5, AERO10, AERO15, AERO20). Refer to Figure II–3 for a visual of each body style considered in the analysis. Each AERO level is associated with 5-, 10-, 15-, or 20-percent aerodynamic drag improvement values over a reference value computed for each vehicle body style. These levels, or bins, respectively correspond to the level of aerodynamic drag reduction over the reference value (*e.g.,* ''AERO5'' corresponds to the 5-percent aerodynamic drag improvement value over the reference value). While each level of aerodynamic drag improvement is technology agnostic—that is, manufacturers can ultimately choose how to reach each level by using whatever technologies work for the vehicle—NHTSA estimates a pathway to each technology level based on data from a National Research Council of Canada-sponsored wind tunnel testing program. The program included an extensive review of production vehicles utilizing aerodynamic drag improvement technologies and of industry comments.[255] NHTSA's example pathways for achieving each level of aerodynamic drag improvement are discussed in Chapter 3.5 of the Draft TSD.

NHTSA assigns aerodynamic drag reduction technology levels in the analysis fleets based on vehicle body styles.[256] NHTSA computes an average coefficient of drag based on vehicle body styles, using coefficient of drag data from the MY 2015 analysis fleet. Different body styles offer different utility and have varying levels of form drag. This analysis considers both frontal area and body style as unchangeable utility factors affecting aerodynamic forces; therefore, the analysis assumes all reductions in aerodynamic drag forces come from improvements in the drag coefficient. Then NHTSA uses drag coefficients for each vehicle in the analysis fleet to establish an initial aerodynamic technology level for each vehicle. NHTSA compares the vehicle's drag coefficient to the calculated drag coefficient by body style mentioned above to assign initial levels of aerodynamic drag reduction technology to vehicles in the analysis fleets. NHTSA can find most vehicles' drag coefficients in manufacturers' publicly available specification sheets; however, in cases where this information cannot be found, NHTSA uses engineering judgment to assign the initial technology level.

NHTSA looks at vehicle body style and vehicle HP to determine which types of vehicles can adopt different aerodynamic technology levels. For this analysis, AERO15 and AERO20 cannot be applied to minivans, and AERO20 cannot be applied to convertibles, pickup trucks, and wagons. NHTSA does not allow application of AERO15 and AERO20 technology to vehicles with more than 780 HP. This threshold is informed by information about performance of ICE vehicles. NHTSA recognizes that manufacturers tune aerodynamic features on these vehicles to provide desirable downforce at high speeds and to provide sufficient cooling for the powertrain, rather than reducing drag, resulting in middling drag coefficients despite advanced aerodynamic features. Therefore, manufacturers may have limited ability to improve aerodynamic drag coefficients for high performance ICE vehicles without reducing HP. This threshold for performance vehicles only limits the application of aerodynamic technologies on 2,518 units of sales volume in the analysis fleet.[257]

The aerodynamic technology effectiveness values that show the potential fuel consumption improvement from AERO0 technology are found and discussed in Chapter 3.5.4 of the Draft TSD. For example, the AERO20 values represent the range of potential FCIVs that could be achieved through the replacement of AERO0 technology with AERO20 technology for every technology key that is not restricted from using AERO20. NHTSA uses the change in fuel consumption values between entire technology keys and not the individual technology effectiveness values. Using the change between whole technology keys captures the complementary or non-complementary interactions among technologies.

NHTSA has carried forward the established AERO technology costs previously used in the 2020 final rule, the MYs 2024–2026 standards analysis,[258] and the 2024 rulemaking and has updated those costs to the dollar-year used in this analysis. For light-duty AERO improvements, the cost to achieve AERO5 is relatively low, as manufacturers can make most of the improvements through body styling changes. The cost to achieve AERO10 is higher than AERO5, due to the addition

[253] 2015 NAS Report, at p. 207.

[254] See, *e.g.,* Pannone, G., Technical Analysis of Vehicle Load Reduction Potential for Advanced Clean Cars, Final Report (2015), available at: *https://ww2.arb.ca.gov/sites/default/files/2020-04/13_313_ac.pdf* (accessed: Sept. 10, 2025). The graph on p. 20 shows how the aerodynamic force becomes the dominant load force at higher speeds.

[255] Larose, G. et al., Evaluation of the Aerodynamics of Drag Reduction Technologies for Light-Duty Vehicles: A Comprehensive Wind Tunnel Study, *SAE International Journal of Passenger Cars—Mechanical Systems,* Vol. 9(2): pp. 772–84 (2016), available at: *https://doi.org/10.4271/2016-01-1613* (accessed: Sept. 10, 2025).

[256] These assignments do not necessarily match the body styles that manufacturers use for marketing purposes. Instead, NHTSA makes these assignments based on engineering judgment and the categories used in the modeling, considering how this affects a vehicle's AERO and vehicle technology class assignments.

[257] See the Market Data Input File.

[258] Note the FRIA accompanying the 2020 final rule, Chapter VI.C.5.e.

of several passive aerodynamic technologies, and consecutively the cost to achieve AERO15 and AERO20 is much higher than AERO10 due to use of both passive and active aerodynamic technologies. The cost estimates are based on CBI submitted by the automotive industry in advance of the 2018 CAFE NPRM and on the agency's assessment of manufacturing costs for specific aerodynamic technologies. The 2018 FRIA contains discussion of the cost estimates.[259] NHTSA has not received additional comments in previous rulemakings from stakeholders regarding the AERO costs since they were established in the 2018 FRIA during the MYs 2024–2026 standards analysis and has continued to use the established costs for this analysis. Draft TSD Chapter 3.5 contains additional discussion of aerodynamic improvement technology costs, and costs for all technology classes across all model years are in the CAFE Model's Technologies Input File.

7. Low Rolling Resistance Tires

Tire rolling resistance burns additional fuel when driving. As a car or truck tire rolls, at the point the tread touches the pavement, the tire flattens out to create what tire engineers call the contact patch. The rubber in the contact patch deforms to mold to the tiny peaks and valleys of the pavement. The interlock between the rubber and these tiny peaks and valleys creates grip. Every time the contact patch leaves the road surface as the tire rotates, it must recover to its original shape, and then as the tire goes all the way around, it must create a new contact patch that molds to a new piece of road surface. However, this molding and repeated re-molding action takes energy. Just like stretching a rubber band requires work, so does deforming the rubber and the tire to form the contact patch. When thinking about the efficiency of driving a car down the road, this means that not all the energy produced by a vehicle's engine can go into propelling the vehicle forward. Instead, some small, but appreciable, amount goes into deforming the tire and creating the contact patch repeatedly. This also explains why tires with low pressure have higher rolling resistance than properly inflated tires. When the tire pressure is low, the tire deforms more to create the contact patch, which is the same as stretching the rubber farther in the analogy above. Larger deformations consume even more energy, which results in worse fuel economy. Low rolling resistance tires have characteristics that reduce frictional losses associated with the energy dissipated mainly in the deformation of the tires under load, thereby improving fuel economy.

NHTSA uses three levels of low rolling resistance tire technology for the light-duty analysis. Each level of low rolling resistance tire technology reduces rolling resistance by 10 percent from an industry-average rolling resistance coefficient (RRC) value of 0.009.[260] RRC data from a NHTSA-sponsored study shows that similar vehicles across the light-duty vehicle categories have been able to achieve similar RRC improvements. Chapter 3.6 of the Draft TSD presents more information on this comparison. Draft TSD Chapter 3.6.1 shows the light-duty low rolling resistance technology options and their associated RRC.

NHTSA has been using ROLL10 and ROLL20 in the last several CAFE Model analyses. NHTSA has only recently included ROLL30 due to lack of widespread commercial adoption of ROLL30 tires in the fleet within the rulemaking timeframe, despite commenters' argument on availability of the technology on current vehicle models and the possibility that there would be additional tire improvements over the next decade.[261] NHTSA has received comments in previous CAFE rules that also reflect the application of ROLL30 by OEMs, though they discourage considering the technology due to high cost and possible wet traction reduction. With increasing use of ROLL30 application by OEMs,[262] and material selection making it possible to design low rolling resistance independent of tire wet grip (discussed in detail in Chapter 3.6 of the Draft TSD), NHTSA considers ROLL30 as a viable future technology during this rulemaking period. NHTSA believes that the tire industry is in the process of moving automotive manufacturers towards higher levels of low rolling resistance technology in the vehicle fleet. NHTSA believes that, at this time, the emerging tire technologies that would achieve 30-percent improvement in rolling resistance, like changing tire profile, stiffening tire walls, employing novel synthetic rubber compounds, or adopting improved tires along with active chassis control, among other technologies, may be available for commercial adoption in the fleet during this rulemaking timeframe.

Assigning low rolling resistance tire technology to the analysis fleet is difficult because RRC data are not part of tire manufacturers' publicly released specifications, and because vehicle manufacturers often offer multiple wheel and tire packages for the same nameplate. Consistent with previous rules, NHTSA uses a combination of CBI, data from a NHTSA-sponsored ROLL study, and assumptions about parts-sharing to assign tire technology in the analysis fleet. A slight majority of vehicles (54.9 percent) in the analysis fleet do not use any ROLL improvement technology, while 13.0 percent of vehicles use ROLL10, and 28.4 percent of vehicles use ROLL20. Only 3.7 percent of vehicles in the analysis fleet use ROLL30.

The CAFE Model can apply ROLL technology at either a vehicle refresh or redesign. NHTSA recognizes that some vehicle manufacturers prefer to use higher RRC tires on some performance cars and SUVs. Since many performance cars have higher torque, to avoid tire slip, OEMs prefer to use higher RRC tires for these vehicles. Like the aerodynamic technology improvements discussed above, NHTSA applies ROLL technology adoption features based on vehicle HP and body style. All vehicles in the light-duty fleet that have below 350 hp can adopt all levels of ROLL technology. Draft TSD Chapter 3.6.3 shows that all light-duty vehicles under 350 hp can adopt ROLL technology, and as vehicle HP increases, fewer vehicles can adopt the highest levels of ROLL

[259] Note the PRIA accompanying the 2018 NPRM, Chapter 6.3.10.1.2.1.2 for a discussion of these cost estimates.

[260] See Technical Analysis of Vehicle Load Reduction by CONTROLTEC for California Air Resources Board (Apr. 29, 2015). NHTSA determined the industry-average baseline RRC using a CONTROLTEC study prepared for the CARB, in addition to considering CBI submitted by vehicle manufacturers prior to the 2018 light-duty NPRM analysis. The RRC values used in this study were a combination of manufacturer information, estimates from coast-down tests for some vehicles, and application of tire RRC values across other vehicles on the same platform. The average RRC from surveying 1,358 vehicle models by the CONTROLTEC study is 0.009. The CONTROLTEC study compared the findings of their survey with values provided by the U.S. Tire Manufacturers Association for original equipment tires. The average RRC from the data provided by the U.S. Tire Manufacturers Association is 0.0092, compared to the average of 0.009 from CONTROLTEC.

[261] See The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, Docket No. NHTSA–2018–0067–11985.

[262] See Evaluation of Rolling Resistance and Wet Grip Performance of OEM Stock Tires Obtained From NCAP Crash Tested Vehicles Phase One and Two, Memo to Docket—Rolling Resistance Phase One and Two; Technical Analysis of Vehicle Load Reduction by CONTROLTEC for California Air Resources Board, Docket No. NHTSA–2021–0053–0010 (Apr. 29, 2015); Evans, L. R. et al., NHTSA Tire Fuel Efficiency Consumer Information Program Development: Phase 2—Effects of Tire Rolling Resistance Levels on Traction, Treadwear, and Vehicle Fuel Economy, Report No. DOT HS 811 154, Docket No NHTSA–2008–0121–0035 (2009).

technology. Draft TSD Chapter 3.6 shows how effective the different levels of ROLL technology are at improving vehicle fuel consumption.

DMCs and learning rates for ROLL10 and ROLL20 are the same as prior analyses [263] but are updated to the dollar-year used in this analysis. In the absence of ROLL30 DMCs from tire manufacturers, vehicle manufacturers, or studies, NHTSA extrapolated the DMCs from ROLL10 and ROLL20 to develop the DMC for ROLL30. NHTSA believes that the added cost of each tire technology accurately represents the price difference that would be experienced by the different fleets. ROLL technology costs are discussed in detail in Chapter 3.6 of the Draft TSD, and ROLL technology costs for all vehicle technology classes can be found in the CAFE Model's Technologies Input File.

8. Simulating Air-Conditioning Efficiency and Off-Cycle Technologies

For this proposal, NHTSA's analysis of the regulatory alternatives removes FCIVs) for AC efficiency and OC technologies starting in MY 2028. NHTSA is making this change to align with its conclusion that technology specific incentives should not be considered when running the compliance simulation that informs its consideration of maximum feasible standards. Instead, NHTSA's analysis for MY 2028 and beyond is based on simulating compliance based on 2-cycle testing. To simulate compliance pathways using the CAFE Model without AC efficiency and OC technologies, NHTSA sets the maximum allowable FCIV to 0g carbon dioxide (CO_2)/mi in the Scenarios Input File. Section VI contains a more detailed discussion of how AC efficiency and OC benefits affect compliance with NHTSA's fuel economy standards.[264]

Under EPA's current procedures for determining fleet average fuel economy for CAFE compliance, manufacturers may generate FCIVs, which improve their fuel economy values. Manufacturers may generate FCIVs for the addition of OC and AC efficiency technologies, which can provide fuel economy benefits in real-world vehicle operation that are not fully captured using the 2-cycle test procedures (*e.g.,* FTP and HFET) used to measure fuel economy.[265] Starting in MY 2027, only automobiles powered by ICEs are eligible to generate FCIVs, and the OC FCIV program is currently being phased out between MYs 2031–2033, with manufacturers no longer being able to generate OC FCIVs for MY 2033 and beyond. OC technologies can include, but are not limited to, thermal control technologies, high-efficiency alternators, and high-efficiency exterior lighting. As an example, manufacturers can generate FCIVs for the addition of thermal control technologies like active seat ventilation and solar reflective surface coating, which help to regulate the temperature within the vehicle's cabin—making it more comfortable for the occupants and reducing the use of low-efficiency heating, ventilation, and air-conditioning (HVAC) systems. AC efficiency technologies are technologies that reduce the operation of or the loads on the compressor, which pressurizes AC refrigerant. The less the compressor operates or the more efficiently it operates, the less load the compressor places on the engine or battery storage system, resulting in better fuel efficiency. AC efficiency technologies can include, but are not limited to, blower motor controls, internal heat exchangers, and improved condensers/evaporators.

Since EPA first proposed allowing manufacturers to earn FCIVs for AC efficiency and OC technologies, NHTSA has not modeled AC efficiency and OC technologies in the CAFE Model like other vehicle technologies, for several reasons. Each time NHTSA adds a technology option to the CAFE Model's technology pathways, the agency increases the number of Autonomie simulations by approximately a hundred thousand. This means that adding just five AC efficiency and five OC technology options would double the agency's Autonomie simulations to around 2 million total simulations. Instead, for applicable model years, the CAFE Model applies predetermined AC efficiency and OC benefits to each manufacturer's fleet after the CAFE Model applies traditional technology pathway options. The CAFE Model attempts to apply pathway technologies and AC efficiency and OC technologies in a way that both minimizes cost and allows the manufacturer to meet a given CAFE standard without over-or under-complying. The predetermined benefits that the CAFE Model applies for AC efficiency and OC technologies are based on manufacturers' MY 2024 mid-model year CBI compliance reports.

NHTSA uses manufacturers' MY 2024 AC efficiency and OC FCIVs they achieved via the ''menu'' as a starting point for each regulatory class, then holds those values constant from MYs 2024–2031 for the No-Action Alternative and through MY 2027 for action alternatives. Unlike previous versions of this analysis, NHTSA does not extrapolate the MY 2024 values to future model years. Instead, the CAFE Model assumes that FCIVs for MY 2027 will be the same as they were for MY 2024. Manufacturers have been able to settle in on a level of AC efficiency and OC technologies that maximize their return on investment (ROI); therefore, NHTSA does not anticipate a significant increase in manufacturers' AC efficiency and OC FCIVs between MYs 2024–2027 for any regulatory category. Additional details about how NHTSA determines AC efficiency and OC technology application rates are discussed Chapter 3.7 of the Draft TSD.

Because the CAFE Model applies AC efficiency and OC technology benefits independent of the technology pathways, NHTSA must account for the costs of those technologies independently, as well. NHTSA generates costs for these technologies on a dollars per gram of CO_2 per mile ($ per g/mi) basis, as AC efficiency and OC technology benefits are applied in the

[263] See Transportation Research Board, Tires and Passenger Vehicle Fuel Economy: Informing Consumers, Improving Performance, Special Report 286 (2006), available at: *https://nap.nationalacademies.org/catalog/11620/tires-and-passenger-vehicle-fuel-economy-informing-consumers-improving-performance* (accessed: Sept. 10, 2025); NHTSA, Corporate Average Fuel Economy for MY 2011 Passenger Cars and Light Trucks, Final Regulatory Impact Analysis (2009), available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/cafe_final_rule_my2011_fria.pdf* (accessed: Sept. 10, 2025); EPA and NHTSA, Joint Technical Support Document: Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards 3–77 (2010), available at: *https://www.federalregister.gov/documents/2010/05/07/2010-8159/light-duty-vehicle-greenhouse-gas-emission-standards-and-corporate-average-fuel-economy-standards* (accessed: Sept. 10, 2025); EPA and NHTSA, Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022–2025 at 5–153 and 154, 5–419, EPA–420–D–16–900 (July 2016), available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/draft-tar-final.pdf* (accessed: Sept. 10, 2025). In brief, the estimates for ROLL10 are based on the incremental $5 value for four tires and a spare tire in the NAS/NRC Special Report and confidential manufacturer comments that provided a wide range of cost estimates. The estimates for ROLL20 are based on incremental interpolated ROLL10 costs for four tires (as NHTSA and EPA believed that ROLL20 technology would not be used for the spare tire) and are seen to be fairly consistent with CBI suggestions by tire suppliers.

[264] Compliance with NHTSA's fuel economy standards is determined in accordance with EPA's calculation procedures at 40 CFR 600.512.

[265] *See* 49 U.S.C 32904(c) (''The Administrator shall measure fuel economy for each model and calculate average fuel economy for a manufacturer under testing and calculation procedures prescribed by the Administrator. . . . [T]he Administrator shall use the same procedures for passenger automobiles the Administrator used for model year 1975 (weighted 55 percent urban cycle and 45 percent highway cycle), or procedures that give comparable results.'').

CAFE Model on a gram per mile basis (as in the regulations). NHTSA updates the AC efficiency and OC technology costs by implementing an updated calculation methodology and converting the DMCs to 2024 dollars. The AC efficiency costs are based on data from EPA's 2010 FRIA and the 2010 and 2012 Joint NHTSA/EPA TSDs.[266] [267] [268] NHTSA has used data from EPA's 2016 Proposed Determination TSD [269] to develop the updated OC costs that were used for the 2022 final rule and now this proposed rule.

For this rulemaking, NHTSA is removing FCIVs from its standard-setting analysis starting with MY 2028, which is the first year in which a removal of FCIVs could go into effect.[270] NHTSA believes that the FCIVs generated under the OC and AC efficiency programs are no longer representative of real-world fuel savings. The values for adding such technologies were estimated from emission-reduction assessments performed on MY 2008 automobiles. As fuel economy has improved in the model years since these assessments were performed, the FCIVs for adding OC technologies have increasingly represented a larger percentage improvement in putative fuel economy values. As a result, the values for FCIVs have become less representative of real-world fuel savings and have created market distortions that undermine EPCA's purposes by incentivizing the addition of technology that does not provide commensurate fuel savings in the real world. NHTSA seeks comment on this determination. Additional details and assumptions used for AC efficiency and OC costs are discussed in Chapter 3.7.2 of the Draft TSD.

[266] EPA, Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards Regulatory Impact Analysis for MYs 2012–2016, Last revised: May 14, 2025, available at: *https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2012-2016-light-duty-vehicle* (accessed: Sept. 10, 2025) (hereinafter, ''Final Rulemaking MYs 2012–2016'').

[267] Final Rulemaking MYs 2012–2016.

[268] EPA, Joint Technical Support Document: Final Rulemaking for 2017–2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA–420–R–12–901, EPA: Washington, DC (2012) available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/joint_final_tsd.pdf* (accessed: Sept. 10, 2025).

[269] EPA, Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation: Technical Support Document, EPA–420–R–16–020 (2016).

[270] 49 U.S.C. 32904(d).

E. Consumer Responses to Manufacturer Compliance Strategies

The prior subsections of Section II have discussed how manufacturers might respond to the proposed standards. While the technology analysis outlined different compliance strategies available to manufacturers, the costs and benefits that would accrue because of the proposed standards are dependent on how consumers respond to manufacturers' compliance decisions. The next few subsections describe how the agency models how consumers may respond to changes in vehicle prices and attributes caused by manufacturers' compliance decisions, as simulated by the CAFE Model.

1. Consumer Responses to Manufacturer Compliance Strategies for 2027–2031

a. Macroeconomic and Consumer Behavior Assumptions

Most of the economic effects simulated within the analysis are influenced by macroeconomic conditions that are outside the agency's influence. For example, fuel prices are determined mainly by global petroleum supply and demand, yet they affect how much fuel efficiency-improving technology U.S. manufacturers would apply to their vehicles, how much more consumers would be willing to pay to purchase models offering higher fuel economy, how much buyers would drive those vehicles, and the value of each gallon of fuel saved from improved fuel efficiency. Constructing these forecasts of the consequences of CAFE standards requires robust projections of demographic and macroeconomic variables that span the full timeframe of the analysis, including real GDP, consumer confidence, U.S. population, and real disposable personal income.

The analysis presented with the proposal employs fuel price projections developed by EIA, an agency within DOE, which collects, analyzes, and disseminates independent and impartial energy information to promote sound policy-making and public understanding of energy. EIA uses its National Energy Modeling System (NEMS) to produce its AEO, which presents projections of future fuel prices (among many other economic and energy-related variables), and these are the source of some inputs to the agency's analysis. The agency's analysis for the proposal uses AEO's 2025 Alternative Transportation Case projections of U.S. population, GDP, disposable personal income, GDP deflator, and fuel prices. NHTSA uses AEO's 2025 Alternative Transportation Case because this case is intended to reflect recent policy directives and therefore provides a more informed analysis of conditions that will affect fuel prices than the reference case (which is tied, in part, to Federal energy policies that are no longer in place), especially in the near-term. The analysis also relies on S&P Global's forecasts of the total number of U.S. households [271] and the University of Michigan's Consumer Sentiment Index from its fall 2024 U.S. Economic Forecast, which EIA also uses to develop the projections it reports in its AEO.

These macroeconomic assumptions are important inputs to the analysis, but they are also uncertain, particularly over the long lifetimes of the vehicles affected by this proposed rule. To reflect the effects of this uncertainty, the agency also uses AEO's Low Oil Price and High Oil Price side cases to analyze the sensitivity of its analysis to alternative fuel price projections. The purpose of the sensitivity analysis, which is discussed in greater detail in Chapter 9 of the PRIA, is to measure the degree to which different assumptions about fuel prices can change simulated outcomes. NHTSA similarly uses low and high economic growth cases from S&P Global's March 2025 forecast as bounding cases for the macroeconomic variables in its analysis.

The agency will consider updating these inputs if newer versions of the data are available prior to conducting the analysis for the final rule. NHTSA seeks comments on these data sources. If commenters feel that there are better alternative sources of the same or similar data, the agency requests commenters to identify their preferred data source and explain why they believe it is more appropriate within the context of this CAFE rulemaking.

The analysis presented for this proposed rulemaking uses a 2024 base year, consistent with the use of vehicle data for MY 2024, and data for that year represents actual observations rather than estimates to the extent possible. Chapter 4.1 of the Draft TSD discusses macroeconomic forecasts and assumptions NHTSA uses in this analysis.

Another key assumption that permeates the agency's analysis is how much consumers are willing to pay for improved fuel economy. The payback period assumption also has important implications for other regulatory analysis results, including the effect of standards on sales and the use of new vehicles, as well as the number and use

[271] NHTSA sourced the data from IHS-Polk. S&P Global purchased IHS Markit and rights to this data in 2022.

of older, used vehicles. The agency has updated its review of the academic literature on willingness to pay as part of its analysis of this proposal, which is discussed in Draft TSD Chapter 4.21 and PRIA Chapter 2.1.2. As noted in previous rulemakings, the range of estimates presented in the literature is wide. Some of the studies conclude that consumers value much of the potential savings in fuel costs from driving higher mpg vehicles, while others conclude that consumers significantly undervalue expected fuel savings. The more recent studies suggest that consumers value somewhere between 24 and the full lifetime value of undiscounted fuel savings, which is also supported by several of the older studies.

Manufacturers have repeatedly informed the agency that they believe that consumers only value between 2 to 3 years of fuel savings when choosing among competing models to purchase,[272] and the plurality of consumers when surveyed about their payback preferences have stated they are willing to pay for technology that repays the upfront cost within 24 months.[273] The agency also performed a retrospective analysis using the CAFE Model with reference fleets created to support prior rules. The agency modeled how the 2020 reference fleet (used for the 2022 final rule), similarly projected forward, compared with the 2022 reference fleet (used in the 2024 final rule), and how the 2022 reference fleet (used for the 2024 final rule) projected forward with different payback assumptions compared with the 2024 reference fleet used in this NPRM. These simulations provided model predictions about the technology penetration rates under different assumptions about the length of the payback period and under different projections of future fuel prices and technology costs. By comparing these to actual penetration rates NHTSA could judge the Model's ability to predict technology adoption under each payback assumption. The payback assumption that most accurately predicted technology adoption is 36 months, followed by 30 months. Both longer and shorter payback periods create a larger divergence.

After weighing the results from the academic literature, previous statements from manufacturers, and the agency's retrospective analysis, NHTSA is using a 36-month payback assumption for the analysis of this proposal. While this estimate represents a longer payback period assumption than was applied in the analysis of the previous three CAFE rules, the agency tentatively believes that the preponderance of the evidence suggests that 36 months is appropriate. NHSTA seeks comments on whether this represents an appropriate representation of consumer willingness to pay higher upfront prices for future fuel savings. Recognizing the consequences of the payback assumption in the agency's regulatory analysis, NHTSA also includes sensitivity cases to examine the impacts of longer and shorter payback periods in Chapter 9 of the PRIA. These concepts are explored more thoroughly in Chapter 4.2.1.1 of the Draft TSD and Chapter 2.1 of the PRIA.

b. Fleet Composition

The composition of the on-road fleet—and how it changes in response to standards—determines many of the costs and benefits of the proposed rule. For example, how much fuel is consumed depends on the number and efficiency of new vehicles sold and how rapidly older, less efficient, less safe vehicles are retired. Reducing the stringency of the CAFE standards would lower the price of new vehicles compared to the No-Action Alternative and would lead to a relative increase in sales of newer, safer vehicles, which in turn would decrease the price of used vehicles leading to the quicker retirement of the oldest, least safe, and less fuel-efficient vehicles on the road.

The analysis accompanying the proposal dynamically simulates changes in the vehicle fleet's size, composition, and usage as manufacturers and consumers respond to regulatory alternatives, fuel prices, and macroeconomic conditions. The analysis of fleet composition is composed of two forces: how sales of new vehicles and their integration into the existing fleet change in response to each regulatory alternative, and how economic and regulatory factors influence the retirement of used vehicles from the fleet (scrappage). NHTSA models sales and scrappage independently.

CAFE standards have been rising every year for nearly two decades. This constant increase in standards has been accompanied by a rise in both the costs of new vehicles and the age of the on-road fleet. The average selling price for new cars and light trucks rose nearly 50 percent between 2012 and 2024 and now approaches $50,000, while U.S. households' average income increased only about half as much over that same period. As the financial burden on households to purchase a new vehicle has increased substantially, recent annual sales of new cars and light trucks have been slightly lower than they were immediately before and after the 2008 recession. Meanwhile, the total number of cars and light trucks in use rose by about 30 million, with the entire increase representing used vehicles, while their average age rose from 10.6 to 12.6 years.[274]

Below are brief descriptions of how the agency models sales and scrappage; for full explanations, readers should refer to Chapter 4.2.1 of the Draft TSD.

(1) Sales

By reducing the regulatory costs of complying with fuel economy standards, the proposal would lead to an increase in new vehicle sales relative to the No-Action Alternative. For the purposes of regulatory evaluation, the relevant metric is the *difference* in the number of new vehicles sold between the baseline and each alternative rather than the absolute number of sales under any alternative. The agency's analysis of the response of new vehicle sales to different stringencies of fuel economy standards includes three components: a forecast of sales based exclusively on macroeconomic factors, which is used to determine the sales quantity for the No-Action Alternative; the assumed price elasticity of new vehicle demand, which interacts with estimated price increases under each alternative to create differences in sales relative to the No-Action Alternative; and a fleet share model that projects differences in the passenger and non-passenger automobile fleet shares under each alternative.

The first component of the sales response model is the nominal total new vehicle sales forecast, which is based on a small set of macroeconomic inputs that together determine the size of the new vehicle market in each future year under the baseline alternative. This statistical model is intended to provide only an initial forecast of light-duty vehicle sales; it does not incorporate the effect of prices on sales and is not intended to be used for analysis of the response to price changes in the new vehicle market. NHTSA's projection oscillates in the early model years

[272] *See, e.g.,* 87 FR 25710, 25856 (May 2, 2022).

[273] Some survey data such as Consumer Reports shows consumers with lower payback periods (around 24 months). However, the methodology employed by surveys like Consumer Reports are less rigorous than the revealed preferences data from the other sources, which is why Circular A–4 directs the agencies to attempt to use studies that rely on revealed preferences when feasible.

[274] Parekh, N., & Campau T., Average Age of Vehicles Hits New Record in 2024, Last revised: May 22, 2024, available at: *https://www.spglobal.com/mobility/en/research-analysis/average-age-vehicles-united-states-2024.html* (accessed: Sept. 10, 2025).

before settling to follow a constant trend in the 2030s. This result is generally consistent with the continued response to sales volatility in the years following the coronavirus disease of 2019 (COVID–19) pandemic and the supply chain challenges immediately thereafter. NHTSA acknowledges that excluding the regulatory costs to comply with the baseline standards has the potential to underestimate the effect of prevailing conditions on vehicle sales; however, given that the macroeconomic assumptions used in this analysis take into account the effects of various regulatory policies and the fact that the relevant metric is the differences created by alternative CAFE stringencies, the agency feels that this approach provides a reasonable starting point. NHTSA will continue to monitor changes in macroeconomic conditions and their effects on new vehicle sales and will update its baseline forecast for use in the final rule analysis as appropriate.

The agency's baseline sales forecast assumes that total new vehicle sales are driven primarily by conditions in the U.S. economy that are outside the influence of the automobile industry. Over time, new vehicle sales have been cyclical—rising when prevailing economic conditions are positive (periods of growth) and falling during periods of economic contraction. While changes to vehicles' designs and prices that occur as consequences of manufacturers' compliance with earlier standards (and with regulations on vehicles' features other than fuel economy) exert some influence on the volume of new vehicle sales, they are far less influential than macroeconomic conditions. The effects of compliance are not large enough to reverse broader cyclical trends in sales; instead, they produce the marginal differences in sales among regulatory alternatives that the agency's sales module is designed to simulate. Increases in new models' prices caused by higher regulatory costs reduce sales below the cyclical trend, and slow fleet turnover, while decreases in prices have the opposite effect.

NHTSA is statutorily barred from considering the fuel economy of dedicated automobiles (*e.g.,* battery electric or hydrogen vehicles) and therefore has removed dedicated automobiles from the sales forecast it uses to analyze the proposed rule. NHTSA uses market penetration rates from the AEO 2025 Alternative Transportation Case to estimate the market share of the gasoline-powered fleet. The agency then applies this market share to the total light-duty forecast produced by the nominal forecast.[275] An independent projection like the AEO 2025 Alternative Transportation Case is a reliable estimate of the future market share for gasoline-powered vehicles.

The second component of the sales response model captures how price changes affect the number of vehicles sold. NHTSA estimates the change in sales from its initial forecast during future years under each regulatory alternative by applying an assumed price elasticity of new vehicle demand to the percent difference in average price between the regulatory alternatives and the No-Action Alternative. This price change does not represent an increase or decrease from the previous model year, but rather the percent difference in the average price of new vehicles between the baseline and each regulatory alternative for that particular model year. The average new vehicle price in the baseline is defined as the observed price in 2024 (the last historical data year before the simulation is run) plus the average regulatory cost associated with the No-Action Alternative for each future model year.[276] The agency also subtracts any tax credits for which a PHEV may qualify from those regulatory costs to simulate sales.[277]

Within the CAFE Model's logic, there is an implicit assumption that new vehicle models within the same regulatory class (*e.g.,* passenger automobiles) are close substitutes for one another, including vehicles with differing powertrains.[278] NHTSA recognizes that different vehicle attributes may alter the perceived value of vehicles. NHTSA implements several guardrails to prevent the CAFE Model from adopting technologies for fuel economy that could adversely affect the utility of vehicles, such as maintaining performance neutrality, including phase-in caps, and defining technology pathways by using engineering judgement. The agency acknowledges that, even with these constraints, it is possible that CAFE standards may influence attributes other than price or fuel economy that are unaccounted for in the agency's sales analysis.

NHTSA has previously invested considerable resources in developing a discrete choice model of the new automobile market that would (1) enable the agency to incorporate the effect of additional vehicle attributes on buyers' choices among competing models; (2) reflect consumers' differing preferences for specific vehicle attributes; and (3) provide the capability to simulate responses, such as strategic pricing strategies by manufacturers intended to alter the mix of models they sell and enable them to comply with new CAFE standards. However, those efforts have not yet produced a satisfactory and operational model.[279] Instead, NHTSA accounts for the possibility of decreased utility of vehicles because of CAFE standards outside of the sales module.

Because the price elasticity that is applied in the Model assumes no perceived change in the quality of the product, and the vehicles produced under different regulatory scenarios have inherently different operating costs, the price metric must account for this difference. The price change to which the elasticity is applied in this analysis represents the residual price difference *between the baseline and each regulatory alternative* after deducting the value of fuel savings over the first 3 years of each model year's lifetime.

The price elasticity is also specified as an input, and for the proposal, the agency assumed a value of –0.4, meaning that a 5-percent increase in the average price of a new vehicle produces a 2-percent decrease in total sales.

[275] NHTSA also considers other approaches, such as assuming the full fleet in future model years would be composed of gasoline-powered vehicles or holding the current market penetration rate for dedicate automobiles constant. Draft TSD Chapter 4.2.1.2 provides more discussion of the selected approach and alternatives considered.

[276] The CAFE Model currently operates as if all costs incurred by the manufacturer as a consequence of meeting regulatory requirements, whether those costs are the cost of additional technology applied to vehicles in order to improve fleetwide fuel economy or civil penalties paid when fleets fail to achieve their standard, are ''passed through'' to buyers of new vehicles in the form of price increases.

[277] For additional details about how NHTSA models tax credits, see Section II.C.5b above.

[278] The CAFE Model does not assign different preferences between technologies, and outside the standard-setting restrictions, the Model will apply technology on a cost-effectiveness basis. Similarly, outside of the sales response to changes in regulatory costs, consumers are assumed to be indifferent to specific technology pathways and will demand the same vehicles despite any changes in technological composition.

[279] NHTSA's experience partly reflects the fact that these models are highly sensitive to their data inputs and estimation procedures, and even versions that fit well when calibrated to data from a single period—usually a cross section of vehicles and shoppers or actual buyers—often produce unreliable forecasts for future periods, which NHTSA's regulatory analyses invariably require. This occurs because they are often unresponsive to relevant shifts in economic conditions or consumer preferences, and also because it is difficult to incorporate factors such as the introduction of new model offerings—particularly those utilizing advances in technology or vehicle design—or shifts in manufacturers' pricing strategies into their representations of choices and forecasts of future sales or market shares. For these reasons, most vehicle choice models have been better suited for analysis of the determinants of historical variation in sales patterns than for forecasting future sales, volumes and market shares of particular categories.

NHTSA has used this same elasticity in prior rulemakings. Estimates of this parameter reported in published literature vary widely,[280] and NHTSA believes that its choice is a reasonable one within this range, but NHTSA also presents sensitivity cases that explore higher and lower elasticities in PRIA Chapter 9. Chapter 4.2.1.2 of the Draft TSD further presents the evidence that NHTSA believes supports its decision. The agency seeks comment on this sales elasticity assumption—including whether NHTSA should consider applying separate short-run and long-run elasticity assumptions in the analysis. If commenters believe that an alternative assumption would be appropriate, NHTSA requests that they provide specific references to estimates in the econometric literature that would support such alternatives.

The third and final component of the sales model is the dynamic fleet share module (DFS). This analysis uses the DFS developed during the previous rulemaking. The baseline fleet share projection is derived from the agency's own compliance data for the 2024 fleet and from the 2025 AEO projections for subsequent model years. These shares are applied to the total industry sales derived in the first stage of the total sales model to estimate sales volumes of car and light truck body styles. NHTSA determines individual model sales using the following sequence: (1) individual manufacturer shares of each regulatory class (either passenger cars or light trucks) are multiplied by total industry sales of vehicles in that regulatory class and then (2) each vehicle within a manufacturer's volume of that regulatory class is assigned the same percentage share of that manufacturer's sales as in MY 2024. This assumes that consumer preferences for particular styles of vehicles are determined in the aggregate (*i.e.,* at the industry level), but that manufacturers' sales shares of those body styles are consistent with their MY 2024 sales. Within a given regulatory class, NHTSA assumes a manufacturer's sales shares of individual models are also constant over time.

This approach also implicitly assumes that manufacturers are currently pricing individual vehicle models within market segments in a way that maximizes their profit. Without more information about each manufacturer's true cost of production, including its fixed and variable components and its target profit margins for its individual vehicle models, there is no basis to assume that strategic shifts within a manufacturer's portfolio will occur in response to standards.

Similar to the second component of the sales module, the DFS applies an elasticity to the change in price between each regulatory alternative and the No-Action Alternative to determine the change in fleet share from its baseline value. NHTSA uses the net regulatory cost differential (costs minus fuel savings) in a logistic model to capture the changes in fleet share between passenger cars and light trucks, with a relative price coefficient of −0.000042. NHTSA selects this methodology and price coefficient based on a review of academic literature.[281] When the total regulatory costs for passenger automobiles of meeting standards minus the value of the resulting fuel savings exceed that of non-passenger automobiles, the market share of non-passenger automobiles will rise relative to passenger automobiles. For example, a $100 net regulatory cost increase in passenger automobiles relative to light trucks would produce around a 0.1-percent shift in market share towards light trucks, assuming the latter initially represent 60 percent of the fleet.

As discussed in preamble Section VI, the agency proposes to modify its regulatory definitions for vehicle classification starting with MY 2028. The agency takes account of this reclassification after it simulates the aggregate sales and dynamic fleet share responses to changes in vehicle prices. NHTSA assigns vehicles both an ''initial'' classification based on how they are classified under the current regulations and a ''revised'' classification for how they would be classified under the proposed regulations. The aggregate sales response is calculated at the fleetwide level, so regulatory classification only affects changes in sales insofar as a reclassified vehicle model incurs a different regulatory cost to comply with the requirements of its new regulatory class. For the dynamic fleet share model, the regulatory costs are borne by a vehicle's ''initial'' classification, so an SUV that is reclassified from the light truck fleet to the passenger car fleet has its regulatory costs for the dynamic fleet share analysis attributed to the light truck fleet throughout the analysis. This method assumes that each individual model's sales shares within the ''initial'' regulatory class remain constant. This may cause the counterintuitive effect of an increase in a vehicle's price, leading to an increase in that vehicle's sales. NHTSA considered applying its existing model to sales shares determined by the ''revised'' classification but decided against this due to the cross-elasticities used in this analysis being estimated based on the current classification system. NHTSA includes several sensitivity cases to explore different approaches, as presented in PRIA Chapter 9. NHTSA seeks comment on this approach and whether it is appropriate to apply the dynamic fleet share's price coefficient to the ''revised'' regulatory classes, and if not, if there is an alternative elasticity or methodology the agency could employ in its analysis.

(2) Scrappage

New and used vehicles can substitute for each other within broad limits. When the price of a good increases, so does the demand for its substitutes, causing the equilibrium price and quantity of substitutes supplied to rise. Because the proposal would lower the price of new vehicles, demand for used vehicles would decrease, causing the equilibrium market price for used vehicles to decrease and simultaneously increasing the rate at which used vehicles are retired. Because used vehicles are not manufactured, their supply only can be increased by keeping more of those that would otherwise be retired in use longer, which corresponds to a reduction in their scrappage or retirement rates. As older vehicles are used longer, the average age of the fleet rises and the safety risk to all road users likewise increases, because older vehicles are less safe than newer ones.

When new vehicles become more expensive, demand for used vehicles increases. Because used vehicles are more valuable in such circumstances, they are scrapped at a lower rate, and just as rising new vehicle prices push some prospective buyers into the used vehicle market, rising prices for used vehicles force some prospective buyers to acquire even older vehicles or models with fewer desired attributes. The effect of fuel economy standards on scrappage is partially dependent on how consumers value future fuel savings; NHTSA assumes consumers values only the first 36 months of fuel savings when making a purchasing decision.

Many competing factors influence the decision to scrap a vehicle, including the cost to maintain and operate it, the

[280] See Jacobsen, M. et al., The Effects of New-Vehicle Price Changes on New- and Used-Vehicle Markets and Scrappage, EPA–420–R–21–019 (2021), available at: *https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=OTAQ&dirEntryId=352754* (accessed: Sept. 10, 2025) (reporting a range of estimates, with a value of approximately –0.4 representing an upper bound of this range). NHTSA selects this point estimate for the central case and explores alternative values in the sensitivity analysis.

[281] NHTSA describes this literature review and the calibrated logit model in more detail in the accompanying docket memo ''Calibrated Estimates for Projecting Light-Duty Fleet Share in the CAFE Model.''

household's demand for vehicle miles traveled (VMT), the cost of alternative means of transportation, and the value that can be attained through reselling or scrapping the vehicle for parts. In theory, a car owner will decide to scrap a vehicle when the value of the vehicle minus the cost to insure, register, maintain, and repair the vehicle is less than its value as scrap material; in other words, when the owner realizes more value from scrapping the vehicle than from continuing to drive it or from selling it. Typically, the owner that scraps the vehicle is not the original owner.

While scrappage decisions are made at the household level, NHTSA is unaware of sufficiently detailed household data to capture scrappage at that level. Instead, NHTSA uses aggregate data measures that capture broader market trends. In addition, the aggregate results are consistent with the rest of the CAFE Model, as the Model does not attempt to project manufacturers' pricing strategies; the Model assumes instead that all regulatory costs to make a particular vehicle compliant are passed on to the purchaser who buys the vehicle.

The dominant source of scrappage is ''engineering scrappage,'' which is largely determined by the age of a vehicle and the durability of the specific model year or vintage it represents. NHTSA uses proprietary vehicle registration data from S&P Global to estimate vehicle age and durability. Other factors affecting owners' decisions to retire used vehicles or retain them in service include fuel economy and new vehicle prices; for historical data on new vehicle transaction prices, NHTSA uses National Automobile Dealers Association (NADA) data.[282] The data consists of the average transaction price of all light-duty vehicles; because the transaction prices are not broken down by body style, the scrappage module may miss unique trends within a particular vehicle body style. The transaction prices reflect the amount consumers paid for new vehicles and exclude any trade-in value credited towards the purchase. This may be relevant particularly for pickup trucks, which have experienced considerable changes in average price as luxury and high-end options entered the market over the past decade. Future versions of the agency's scrappage module may consider incorporating price series that consider the price trends for cars, SUVs and vans, and pickups separately, and NHTSA asks commenters to identify any data or resources that could assist the agency in this pursuit.

Vehicle survival rates, which are determined over time by scrappage, follow a roughly logistic function with age—that is, when a vintage is young, few vehicles in the cohort are scrapped; as they age, more and more of the cohort are retired each year, and the annual rate at which vehicles are scrapped reaches a peak. Scrappage then declines as vehicles enter their later years, as fewer and fewer vehicles in the cohort remain on the road. The analysis uses a logistic function to capture this trend of vehicle scrappage with age. The data shows that the durability of successive model years generally increases over time; put another way, historically, newer vehicles last longer than older vintages. However, this trend is not constant across all vehicle ages—the instantaneous scrappage rate of vehicles is lower generally for more recent vintages up to a certain age, but must increase thereafter so that the final share of vehicles remaining converges to a similar share remaining for historically observed vintages.[283] NHTSA's scrappage model uses fixed effects to capture potential changes in durability across model years and ensures that vehicles approaching the ends of their lives are scrapped in the analysis.

The final source of vehicle scrappage is from cyclical effects, which the Model captures using forecasts of GDP and fuel prices. The macroeconomic conditions variables discussed above are included in the logistic model to capture cyclical effects. Finally, the change in new vehicle prices projected in the Model (technology costs minus 36 months of fuel savings and any tax credits passed through to the consumer) is included, and changes in this variable are the source of differing scrappage rates among regulatory alternatives. NHTSA seeks comment on its scrappage module and asks that commenters with any suggested revisions provide resources with sufficient detail to analyze alternative methodologies.

In addition to the variables included in the scrappage module, NHTSA considers several other potential variables that likely either directly or indirectly influence scrappage in the real world, including maintenance and repair costs, the value of scrapped metal, vehicle characteristics, the quantity of new vehicles purchased, higher interest rates, and unemployment. These variables are excluded from the scrappage module either because of difficulties in obtaining data to measure them accurately or other modeling constraints. Their exclusion from the module is not intended to diminish their importance but rather highlights the practical constraints of modeling intricate decisions like scrappage. NHTSA seeks comments on whether it should include any of these variables and, if so, requests that commenters suggest specific methodologies that would produce robust and unbiased estimates that could be used in a regulatory analysis setting.

NHTSA expects that the proposed reset would accelerate the retirement of older vehicles compared to the No-Action Alternative. Because the proposed standard would reduce the regulatory burden on manufacturers and by extension the price of new vehicles, the demand and price for used vehicles would decrease, which would incentivize households to replace the older vehicles that are costly to maintain with newer, cheaper options—including newer used vehicles.

c. Changes in Vehicle-Miles Traveled

As described in the fleet turnover section, fuel economy standards influence the quantity of new vehicles sold and how quickly older vehicles are retired. Model years of different vintages possess distinguishable characteristics, with newer vehicles typically being more fuel efficient and safer than their older contingents. While the decision itself to buy a new vehicle or retire an older vehicle may confer certain costs and benefits to their owners, most of the effects are realized only through the use of those vehicles. The agency's proposal to lower standards would accelerate fleet turnover compared to the baseline, which would result in more miles being driven in newer, safer vehicles compared to older, less safe vehicles. As a result, fewer miles would be driven in the oldest, least safe vehicles on the road, and the number of fatal accidents would be expected to decrease as well.

Deciphering which vehicles are being driven is just as important as how many miles are being driven. Any shift in miles driven by older vehicles to newer vehicles creates a corresponding shift in societal benefits, which include both safety and environmental benefits. To capture how CAFE standards influence the distribution of miles across the fleet, NHTSA estimates VMT based on the average use of vehicles at different ages, the total number of vehicles in use, and the composition of the fleet by ages.

[282] The data can be obtained from NADA. For reference, the data for MY 2024 may be found at *https://www.nada.org/nada/research-data/nada-data.*

[283] Some possible reasons for why durability may have changed are new automakers entering the market or general changes to manufacturing practices like switching some models from a car chassis to a truck chassis.

These three components—average vehicle usage, new vehicle sales, and older vehicle scrappage—jointly determine total VMT projections for each alternative.

VMT is determined by how much households want to drive and how much they can afford to do so. NHTSA believes that a significant portion of light-duty VMT is unaffected by fuel economy standards. Households have some basic level of travel demand that needs to be met such as driving to work or school, and those households will drive those miles regardless of the imposition that fuel economy standards may impose. NHTSA's perspective is that the total demand for VMT should not vary excessively across alternatives. To prevent large differences from arising among the regulatory alternatives, the agency constrains the aggregate amount of VMT—besides VMT attributable to the ''rebound effect''—across alternatives to be equal with the No-Action Alternative.

In prior rules, the agency used the Federal Highway Administration (FHWA) VMT Forecasting Model to project total VMT in future calendar years and then adjusted alternatives based on fleet composition. NHTSA employed this methodology because it used a reliable, external projection of annual VMT as a starting point. However, since the FHWA model includes miles that will be driven in dedicated automobiles, NHTSA reconsidered for this analysis how to calculate VMT.

The No-Action Alternative's projection of VMT for this proposal uses the simulated projections of the gas-powered fleet produced by the sales and scrappage models and applies it to estimates of VMT per vehicle. Vehicles of different ages and body styles have different costs to own and operate, and usage changes across vehicle ages independent of CAFE standards. To account properly for the average value of consumer and societal costs and benefits associated with vehicle usage under various alternatives, it is necessary to partition miles by age and body type. Using S&P Global odometer data, NHTSA creates ''mileage accumulation schedules'' as an initial estimate of how much a vehicle is expected to drive at each age throughout its life. The mileage accumulation schedules also account for differences in driving habits based on body style. Multiplying the numbers of each vehicle projected to be in the fleet by the per-vehicle VMT estimates from the mileage accumulation schedules creates a forecast of VMT in each calendar year.

The methodology to allocate miles within the regulatory alternatives is similar. NHTSA uses the forecasts of the fleet produced by the sales and scrappage models and multiplies those by mileage accumulation schedules to create a total estimate of VMT. NHTSA then scales the alternative's VMT to match the No-Action Alternative's aggregate VMT, preserving the percentage of VMT driven by each model.

NHTSA seeks comments on whether it should remove the VMT constraint and allow alternatives to have differing levels of VMT. While much of household VMT is likely inelastic, it may be reasonable to assume that fleets with differing sizes, age distributions, and inherent cost of operation may have marginally different annual VMT (even without considering VMT associated with rebound miles). In previous rules, NHTSA elected to continue to constrain VMT across alternatives in part because of the difficulty of determining whether VMT would shift to other modes of transportation and, if so, how to account for the impacts of any such mode shift. NHTSA seeks comments on whether it is appropriate to consider mode shifts if the agency removes the VMT constraints and asks commenters to provide either any data or suggested modeling approaches that could assist the agency.

An example of a portion of household travel that *is* elastic is known as ''rebound'' mileage. The fuel economy rebound effect—a specific example of the well-documented energy efficiency rebound effect for energy-consuming capital goods—refers to motorists who choose to increase vehicle use (as measured by VMT) when fuel economy is improved and, as a result, the cost per mile (CPM) of driving declines. If fuel economy increases, the cost to drive additional miles decreases, resulting in vehicles with better fuel efficiency being driven more. For the proposed rule, reducing the level of fuel economy required by government regulation would reduce the number of miles driven.

NHTSA has employed several different rebound effect estimates through the years. Until recently, the agency had historically used an estimate between 15 and 20 percent. The agency lowered its estimate in the 2022 final rule to 10 percent, a value that was also carried forward in the 2024 final rule. To support this proposal, NHTSA re-reviewed the literature related to the fuel economy rebound effect, which is extensive and covers multiple decades and geographic regions.[284] The totality of evidence, without artificially excluding certain studies based on arbitrary selection criteria, suggests that a plausible range for the rebound effect is 10–50 percent. This range implies that, for example, a 10-percent reduction in vehicles' fuel CPM would lead to an increase of between 1 to 5 percent in the number of miles they are driven annually. The central tendency of this range appears to be at or slightly above its midpoint, which is 30 percent. Considering only those studies that NHTSA believes utilize robust and reliable data, employ identification strategies that are likely to prove effective at isolating the rebound effect, and apply rigorous estimation methods, suggests a range of approximately 10–45 percent, with most of the estimates falling in the 15–30 percent range.

When NHTSA reviewed the literature for both the 2022 and 2024 rules, the agency arrived at a similar result. However, NHTSA chose to use an estimate at the lowest end supportable by the academic literature. NHTSA argued that both economic theory and empirical evidence suggested that the rebound effect was declining over time due to factors such as increasing income (which increases the value of travelers' time), progressively smaller reductions in fuel costs in response to continuing increases in fuel economy, and slower growth in car ownership and the number of license holders. The agency also noted that certain studies with lower estimates of the rebound effect were associated with recently published studies that rely on U.S. data, measure vehicle use using actual odometer readings, control for the potential endogeneity of fuel economy, and—critically—estimate the response of vehicle use to variation in fuel economy itself rather than to fuel cost per distance driven or fuel prices. The agency gave greater weight to these studies, which suggested a rebound effect in the 5–15 percent range.

Consistent with NHTSA's surveys of the latest available data for each successive CAFE analysis, as discussed above, the agency reconsidered for this analysis its prior assumptions about rebound effect trends discussed in the 2022 and 2024 final rules—in particular assumptions about the rebound effect declining over time—and concluded that a rebound estimate of 15 percent is appropriate. In particular, a meta-analysis of 74 recently published studies of the rebound effect noted that ''the magnitude of the rebound effect in

[284] Draft TSD Chapter 4.3.4 provides more information.

road transport can be considered to be, on average, in the area of 20 [percent],'' and that the most likely long-run estimate was about 32 percent [285]—both significantly higher than the agency's prior 10 percent-value and higher than the 15 percent-value employed in this analysis. The agency believes that selecting a rebound estimate that is well-supported by the scientific consensus is more appropriate than speculating about trends that have yet to manifest. NHTSA examines the sensitivity of estimated impacts to values of the rebound effect ranging from 10 to 20 percent to account for the uncertainty surrounding its exact value. NHTSA seeks comments on its approach to accounting for the rebound effect. For a more complete discussion of the rebound literature, refer to Draft TSD Chapter 4.3.4.

In order to calculate total VMT after allowing for the rebound effect, the CAFE Model applies the price elasticity of VMT (taken from the FHWA forecasting model) to the change in fuel cost per mile resulting from higher fuel economy and uses the result to adjust the initial estimate of each model's annual use accordingly. The CAFE Model applies this adjustment after the reallocation step described previously, because that adjustment is intended to ensure that total VMT is identical among alternatives *before* considering the contribution of increased driving due to the rebound effect. Its contribution differs among regulatory alternatives because alternatives requiring higher fuel economy lead to larger reductions in the per-mile fuel cost of driving and thus to larger increases in vehicle use.

To summarize, because the proposed standards would lower the cost of newer vehicles, more of the base household travel demand will be satisfied by safer, newer vehicles, and simultaneously, newer vehicles will have lower fuel economy, leading to fewer miles being driven and resulting in a further reduction in fatalities and fuel expenditures.

Chapter 4.3 of the Draft TSD provides more information on how NHTSA accounts for and models VMT.

[285] Dimitropoulos, A. et al., The Rebound Effect in Road Transport: A Meta-analysis of Empirical Studies, OECD Environment Working Papers, No. 113, OECD Publishing: Paris, France (2016), available at: *https://dx.doi.org/10.1787/8516ab3a-en* (accessed: Sept. 10, 2025).

d. Changes to Fuel Consumption

NHTSA uses the fuel economy, age, and VMT estimates to determine changes in fuel consumption. NHTSA divides the expected vehicle use by the anticipated mpg to calculate the gallons consumed by each simulated vehicle, and when aggregated, the total fuel consumed in each alternative.

F. Simulating Emissions Impacts of Regulatory Alternatives

Changes in fuel consumption because of changes in CAFE standards (and resulting technology application) will result in changes in emissions of various pollutants.[286] Vehicle-related emissions are computed by multiplying vehicle activity (*e.g.,* miles traveled, hours operated, or gallons of fuel burned), population (or number of vehicles), and emission factors. An emission factor is a representative rate that attempts to relate the quantity of a pollutant released to the atmosphere per unit of activity. As in past rules, the CAFE Model generates vehicle activity levels (both miles traveled and fuel consumption), while emission factors have been adapted from models developed and maintained by other Federal agencies.

This section provides a brief overview of how the agency estimates the resulting changes in emissions and associated effects from emissions of those pollutants.[287] In this section, emissions that are generated between the initial point of oil extraction and delivering fuel to vehicles' fuel tanks or energy storage systems are referred to as ''upstream'' emissions, while ''downstream'' emissions refer to those emitted by vehicles' exhaust systems, and also include other emissions generated during vehicle refueling, use, and inactivity (called ''soaking''), including hydrofluorocarbons leaked from vehicles' AC systems.[288] Emissions also include particulate matter released into the atmosphere by brake and tire wear (BTW), as well as evaporation of volatile organic compounds from fuel pumps and vehicles' fuel storage systems during refueling and when parked.

For the proposed rule, the agency updated upstream petroleum emission factors using R&D GREET 2024, a lifecycle emissions model developed by Argonne.[289] As in past analyses, the agency derived emission factors for the following four upstream emission processes for gasoline and diesel: (1) petroleum extraction; (2) petroleum transportation and storage; (3) petroleum refining; and (4) fuel transportation, storage, and distribution (TS&D). A detailed description of how the agency used R&D GREET 2024 to generate upstream emission factors appears in Chapter 5 of the Draft TSD. In this proposal, NHTSA uses a simplified parameterized economic model for estimating the response of domestic fuel production to changes in U.S. fuel consumption, as such responses also affect upstream emissions estimates related to the rule. Using this model, NHTSA estimates that 20 percent of the reduction in fuel consumption will be translated into reductions in domestic fuel production.

The agency estimated downstream emission factors for gasoline and diesel fuels for the majority of pollutants using EPA's MOVES5 model, a regulatory highway emissions inventory model developed by that agency's National Vehicle and Fuel Emissions Laboratory.[290] [291]

[286] The various pollutants include carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NO_X), sulfur oxides (SO_X), particulate matter with a diameter of 2.5-micron (μm) or less ($PM_{2.5}$), carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O).

[287] While NHTSA considers the impacts of this rulemaking on the levels of various pollutant emissions, the main analysis does not include a monetization of any changes in levels of carbon dioxide, methane, and nitrous oxide emissions. (An analysis using the domestic-only valuation of those emissions is included in a sensitivity case). Monetized changes in criteria pollutant emissions are discussed in the preamble Section II.G and Chapter 6.2.2 of the Draft TSD.

[288] Emissions from HFC leakage from air conditioner systems are not captured in the CAFE Model analysis due to limitations in the pollutants modelled by MOVES5.

[289] Argonne National Laboratory, The Research and Development Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (R&D GREET) Model 2024, Last revised: Jan. 2025, available at: *https://greet.anl.gov/* (accessed: Sept. 10, 2025).

[290] EPA, Motor Vehicle Emission Simulator: MOVES5, Office of Transportation and Air Quality, Last revised: Aug. 26, 2025, available at: *https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves* (accessed: Sept. 10, 2025).

[291] The one exception is that downstream CO_2 emission factors were generated based on the carbon content and mass density per unit of each specific type of fuel assuming each fuel's entire carbon content is converted to CO_2 emissions during combustion.

Currently, the MOVES5 methodology for projecting future emission inventories includes estimated effects from Federal emissions standards for light-duty vehicles, including EPA's CO_2 standards for MYs 2024–2026 and MYs 2027–2031. NHTSA conducted this analysis prior to EPA publishing its proposal to rescind its action titled ''Endangerment and Cause or Contribute Finding for Greenhouse Gases Under Section 202(a) of the Clean Air Act'' (Endangerment Finding) and all resulting greenhouse gas emissions standards for light-, medium-, and heavy-duty vehicles and engines [292] and is exploring options to update the relevant emission factors consistent with EPA's latest methodology for the final rule. For purposes of this proposal, NHTSA believes the existing model provides a reasonable basis for estimating emission inventories in response to the policy options analyzed but requests comments on this assumption.

Another update to the analysis that NHTSA is exploring is the methodology for applying downstream emission factors to vehicle classes within the CAFE Model. MOVES regulatory classes no longer directly map to the CAFE Model vehicle classes beginning in MY 2028, at which time NHTSA is proposing to subject vehicles to the amended vehicle classification definitions. Adjusting the downstream emission factors requires an understanding of the implications of reclassification on mapping regulatory and vehicles classes between MOVES and the CAFE Model. It is NHTSA's expectation that any modification of downstream emission factors will result in only minor changes in the magnitude of the relative differences among alternatives. Draft TSD Chapter 5.3 contains additional detail about how the agency generated the downstream emission factors used in this analysis, and Section VI presents additional information about NHTSA's proposals for vehicle reclassification beginning in MY 2028.

As with downstream emission factors, the agency generated BTW emission factors using the latest version of EPA's MOVES5 model.[293] NHTSA believes that compared to previous versions of MOVES, MOVES5's updated assumptions about brake pad composition and vehicle weights to estimate brake wear emissions that vary by model year, regulatory class, and fuel type present reasonable estimates for use in the agency's regulatory analysis. For further reading on BTW assumptions and how the agency employed those assumptions in the CAFE Model, please refer to Draft TSD Chapter 5.3.3.4. NHTSA seeks comments on this methodology.

The CAFE Model computes select health impacts resulting from localized population exposure to $PM_{2.5}$ and its precursor pollutants that are measured by the number of instances predicted to result from exposure to each ton of relevant pollutant.[294] As in past CAFE analyses, NHTSA relied on publicly available scientific literature to estimate $PM_{2.5}$-related effects for each upstream and downstream emissions source [295] and employed certain assumptions to determine the most reasonable approach to incorporate estimates from literature into the Model.[296] NHTSA includes additional discussion of the agency's approach to estimating these effects in Chapter 5.4 of the Draft TSD.

G. Simulating Economic Impacts of Regulatory Alternatives

The following sections describe NHTSA's approach for measuring the economic costs and benefits that would result from amending previously established CAFE standards. OMB Circular A–4 states that benefits and costs reported in regulatory analyses must be defined and measured consistently with economic theory and also should reflect how alternative regulations are anticipated to change the behavior of producers and consumers from a baseline scenario without the regulation.[297] Fuel economy standards affect vehicle manufacturers, buyers of new vehicles, owners of used vehicles, and suppliers of fuel, all of whom respond in complex ways to the standards that DOT establishes for future model years. NHTSA's accounting framework for the economic costs and benefits of CAFE standards was developed for a scenario in which standards are being set for cars and light trucks produced during future model years, for which no standards currently exist. Under this framework, NHTSA assumes hypothetical baseline standards for those future years to be identical to those in the last model year for which the agency previously established standards. Costs of alternative standards considered for future model years are measured relative to those for meeting the baseline standards, while benefits for each alternative are savings or other gains to buyers and users of new cars and light trucks or the general public, again measured in reference to the baseline alternative.

Most of the agency's rulemakings have established standards for future model years that are above their hypothetical baseline level, so the costs of meeting them have consisted primarily of manufacturers' outlays to increase the fuel economy of their car and light truck models to meet those higher standards, while benefits have consisted primarily of fuel savings for buyers and subsequent owners of models offering higher fuel economy. In rulemakings, such as this one, where the agency is proposing to *reduce* previously established standards for future model years due to updated economic, market, and technological realities, manufacturers' costs will be reduced compared to those for meeting the previous standards, while new cars and light trucks will consume more fuel

[292] Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards; Proposed Rule, 90 FR 36288 (2025), available at: *https://www.federalregister.gov/documents/2025/08/01/2025-14572/reconsideration-of-2009-endangerment-finding-and-greenhouse-gas-vehicle-standards* (accessed: Sept. 10, 2025).

[293] EPA, Brake and Tire Wear Emissions from Onroad Vehicles in MOVES5, EPA: Washington, DC, pp. 1–69 (2024), available at: *https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P101CTUW.pdf* (accessed: Sept. 10, 2025).

[294] As the health incidences for the different source sectors are all based on the emission of 1 ton of the same pollutants, NO_X, SO_X, and directly emitted $PM_{2.5}$, differences in the incidence per ton values arise from differences in the geographic distribution of each pollutant's emissions, which in turn affects the number of people exposed to the estimated concentrations of each pollutant.

[295] EPA, Estimating the Benefit per Ton of Reducing $PM_{2.5}$ Precursors from 17 Sectors, EPA: Washington, DC, pp. 1–108 (2018), available at: *https://19january2017snapshot.epa.gov/benmap/estimating-benefit-ton-reducing-pm25-precursors-17-sectors_.html* (accessed: Sept. 10, 2025); Fann, N. et al., Assessing Human Health $PM_{2.5}$ and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025, *Environmental Science & Technology,* Vol. 52(15): pp. 8095–103 (2018), available at: *https://doi.org/10.1021/acs.est.8b02050* (accessed: Sept. 10, 2025) (hereinafter, ''Fann et al.''); Wolfe, P. et al., Monetized Health Benefits Attributable to Mobile Source Emission Reductions Across the United States in 2025, *The Science of the Total Environment,* Vol. 650(Pt 2): pp. 2490–98 (2019), available at: *https://doi.org/10.1016/j.scitotenv.2018.09.273* (accessed: Sept. 10, 2025) (hereinafter, ''Wolfe et al.''). Health incidence per ton values corresponding to this paper were sent by EPA staff.

[296] Some CAFE Model upstream emissions components do not correspond to any single EPA source sector identified in available literature, so NHTSA determined the most reasonable approach was to use a weighted average of different source sectors to generate those values. NHTSA is also aware that EPA in 2023 updated its estimated benefits for reducing $PM_{2.5}$ from several sources, but those do not include mobile sources (which include the vehicles subject to CAFE standards). NHTSA has thus retained the $PM_{2.5}$ incidence per ton values from the previous CAFE analysis for consistency with the current mobile source emissions estimates.

[297] Office of Management and Budget, Circular A–4 (Sept. 17, 2003), available at: *https://www.whitehouse.gov/wp-content/uploads/2025/08/CircularA-4.pdf* (accessed Sept. 10, 2025).

than if those previous standards remained in place.

Thus, the estimated costs of meeting the revised standards are reported as negative values—representing regulatory cost savings—while vehicle buyers' increased costs for fuel are similarly reported as negative benefits. When the agency has historically raised CAFE standards, it has assumed that manufacturers' costs to increase fuel economy would be passed on to buyers as increased purchase prices for new models, and the analysis supporting this proposed rule assumes that reduced costs to manufacturers for meeting less demanding CAFE standards will be reflected in lower prices for new cars and light trucks.

NHTSA's approach to estimating the economic impacts of regulatory alternatives it considers in this rulemaking, including the assumptions it relies upon and the methodologies it employs, is discussed in detail in Chapter 6 of the Draft TSD and throughout the PRIA (particularly Chapter 5). The safety implications of the proposed rule, including monetary measures of those impacts, are covered in Section II.H below.

Regulatory analysis needs to express costs and benefits that occur at different future times in comparable terms, which is done by discounting each future year's impacts to their present values. Following guidance presented in OMB Circular A–4 (2003), NHTSA presents the current values of all economic impacts quantified in its regulatory analysis discounting using the recommended rates of 3 and 7 percent.

The categories of economic costs and benefits resulting from NHTSA's proposed amendment to its previously established CAFE standards are described in Chapter 5 of the PRIA (see in particular Table 5–1). Monetary values of those estimates are presented in Chapter 8 (for the central analysis) and Chapter 9 (showing the results of various sensitivity analyses around key parameters and assumptions) of the accompanying PRIA.

Table II–8 below lists the economic benefits and costs analyzed in conjunction with this proposal and identifies where to find explanations of how they were estimated. The organization of the table shows how individual elements of the analysis are grouped together to produce NHTSA's estimates of each alternative's private and external costs and benefits.[298] Private benefits and costs are those borne by vehicle manufacturers and by users of new cars and light trucks, including their initial purchasers and subsequent owners. External costs and benefits result indirectly from producing and consuming fuel and are borne by the public rather than just those who purchase and use vehicles. Social costs and benefits are the sum of their private and external components.

[298] Changes in tax revenues are a transfer and not an economic externality as traditionally defined, but NHTSA groups tax revenue changes together with other external costs because fuel taxes fund government activities affecting society as a whole rather than only consumers or manufacturers.

Table II-8: Benefits and Costs Resulting from NHTSA's Regulatory Action[299]

Entry	Section of Preamble Discussion	Chapter of Draft TSD Modeling Explanation	Chapter of PRIA Discussion
Private Costs			
Technology Costs	II.G.1.a(1)	Chapter 6.1	Chapter 7.1.1
Consumer Surplus Loss	II.G.1.a(2)	Chapter 6.1.2	Chapter 7.1.4
Maintenance and Repair Costs	II.G.3	-	Chapter 7.1.1
Sacrifice in Other Vehicle Attributes	II.G.1	Chapter 6.1.3	Chapters 7.1.1
Safety Costs Internalized by Drivers	II.H.3	Chapter 7.5	Chapters 7.1.5, 8.5.5
Subtotal—Internal Costs or Cost Savings			
External Costs			
Congestion and Noise Costs From Rebound-Effect Driving	II.G.2.a(1)	Chapter 6.2.3	Chapter 7.2.2, 8.4.2
Loss in Fuel Tax Revenue	II.G.2.a(2)	Chapters 6.1.4, 6.2	Chapter 7.3.1
Safety Costs Not Internalized by Drivers	II.H.1 and II.H.2	Chapter 7	Chapters 7.1.5, 8.5.5
Subtotal—External Costs or Cost Savings			
Total Costs or Cost Savings			
Private Benefits			
Fuel Cost Savings[300]	II.G.1.b(1)	Chapter 6.1.4	Chapter 7.3.1
Refueling Frequency	II.G.1.b(2)	Chapter 6.1.5	Chapter 8.4.2
Benefits From Additional Driving	II.G.1.b(3)	Chapter 6.1.6	Chapter 7.2.1
Subtotal—Private Benefits			
External Benefits			
CO_2, methane (CH_4), and N_20 Emissions	II.G.2.b(1)	Chapter 6.2.1	Chapter 8.5.1
Health Outcomes	II.G.2.b(2)	Chapter 6.2.2	Chapter 8.4.1
Petroleum Market Security	II.G.2.b(3)	Chapter 6.2.4	Chapter 7.3.2

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Subtotal—External Benefits			Sum of above entries
Social Benefits			Sum of private and external benefits
Net Private Benefits		Private Benefits – Private Costs	
Net External Benefits		External Costs – External Benefits	
Net Social Benefits		Social Benefits – Social Costs	

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The remainder of this section briefly describes the key economic impacts of the proposed amendment and explains how they are categorized within the PRIA (with the exception of safety costs, which as noted earlier are covered in Section II.H).

1. Private Costs and Benefits

Manufacturers' efforts to meet CAFE standards consist primarily of adding new technology to their car and light truck models, and together with any necessary design or engineering modifications, this increases their production costs. NHTSA assumes manufacturers pass these costs on to buyers of models that offer higher fuel economy by raising their selling prices.[301] While the agency incorporates the effects of available tax credits in its analysis, these credits simply transfer revenue from taxpayers to vehicle buyers and have no net effect on the benefits or costs of the proposed rule. Estimates of technology costs reported throughout this proposed rule should be interpreted as excluding the value of tax credits unless otherwise noted.

Resetting prevailing CAFE standards would reduce the cost of technology that manufacturers would need to add to their car and light truck models in order to comply with CAFE standards, and NHTSA assumes that this reduction in regulatory costs would be passed through to vehicle buyers in the form of lower prices. Relaxing standards would reduce the regulatory burden on manufacturers and enable them to produce models that offer combinations of fuel economy, other features, and prices that align more closely with consumer demand, resulting in higher vehicle sales compared to the No-Action Alternative. The CAFE reset would improve consumer welfare for consumers who are able to purchase vehicles at lower prices, and their collective welfare gain is measured by the increase in consumer surplus from higher sales of new cars and light trucks. Consumer surplus represents the value a good or service provides to consumers (the maximum they would have been willing to pay for it) over and above its market price, and OMB guidance states that it should be accounted for in regulatory analysis.[302] Resetting previous standards will keep would-be purchasers from being priced out of the new vehicle market as manufacturers raise prices to recover their costs for applying more technology to meet higher standards, so buyers' consumer surplus will increase as sales rise rather than decline as it would have with the higher fuel economy standards in the No-Action Alternative. Section II.C.2.f of this preamble and Chapter 2.4 of the Draft TSD provide more details.

Generally, NHTSA's CAFE rulemaking analyses include estimates of benefits to consumers from improving fuel economy, measured by the resulting reduction in vehicles' fuel costs. However, while improved fuel economy reduces vehicles' fuel cost throughout their lifetimes, new car buyers and subsequent owners do not appear to value those savings fully. If they did, manufacturers would presumably offer the levels of fuel economy that buyers demand, and market-determined fuel economy levels would balance the costs of improving it against the private benefits from saving fuel. To the extent regulating fuel economy does not improve the welfare of vehicle owners, regulation can only be justified if it produces additional benefits that are not experienced by buyers themselves. As discussed in II.E, NHTSA assumes that consumers are only willing to pay for fuel economy improvements that repay the higher prices of models offering those improvements within 36 months.

In past rulemakings, the agency has described its assumption that buyers will forgo purchasing vehicles with higher fuel economy, even when they appear to offer future savings exceeding their price premiums, as an example of what is often termed an ''energy paradox'' or ''energy-efficiency gap.'' Although there has been extensive debate about whether and why such a gap might arise, NHTSA has recently justified stricter standards partly by assuming that potential car and light truck buyers act shortsightedly when they refuse to purchase models whose lower fuel costs would more than repay their higher purchase prices. This rationale is fundamentally different from the agency's traditional justification that fuel economy standards are necessary to remedy some ''externality''—whereby buyers' choices cause economic harm to others—that arises from producing and consuming fuel.

Without clear evidence of such ''myopia,'' continuing to raise CAFE standards distorts the market by constraining manufacturers to provide levels of fuel economy above those consumers demand, causing manufacturers to raise prices to recover their higher costs for producing those vehicles or to sacrifice improvements in their models' other features. Instead, the agency increasingly believes a more likely explanation for buyers' reluctance to purchase higher mpg models is that their unsatisfactory combinations of price and other features offset the attraction of lower fuel costs, and recent

[299] This table presents the societal costs and benefits. Costs and benefits that affect only the consumer analysis, such as sales taxes, insurance costs, and reallocated VMT, are intentionally omitted from this table. Chapters 8.2.3 and 8.3.3 of the PRIA describe consumer-specific costs and benefits.

[300] Since taxes are transfers from consumers to governments, a portion of the Savings in Retail Fuel Costs includes taxes avoided. The Loss in Fuel Tax Revenue is completely offset within the Savings in Retail Fuel Costs.

[301] While NHTSA recognizes that some manufacturers may defray their regulatory costs for meeting increased fuel economy standards through more complex pricing strategies, the agency lacks sufficient insight into manufacturers' pricing strategies to analyze such alternative approaches.

[302] OMB's Circular A–4 explains that the ''net reduction in the total surplus (consumer plus producer) is a real cost to society,'' and recommends that changes in consumer or producer surplus should be monetized ''when they are significant.''

research supports this interpretation.[303] Chapter 6.1.3 of the Draft TSD provides further detailed review of this research. NHTSA has acknowledged this potential ''opportunity cost'' of raising fuel economy standards in its recent rules but has attempted to estimate its magnitude only as one of a large number of sensitivity analyses. The agency has justified this decision by claiming there is uncertainty in the literature over the degree to which requiring higher fuel economy will lead manufacturers to delay or forgo improvements to their models' features and how consumers would react. NHTSA has also cited data from EPA's Fuel Economy Trends Report showing that HP and acceleration have not decreased even when fuel economy standards were rising. However, these arguments did not consider the possibility that manufacturers could have offered *further improvements* in their models' other features or lower prices without continuing pressure to increase fuel economy.

NHTSA includes an estimate of the extent to which relaxing standards will reduce the opportunity cost of meeting previously established standards in its primary analysis of this proposed rule. The agency assumes that this cost must be sufficient to account for buyers' apparent unwillingness to purchase models whose higher fuel economy would repay their higher purchase prices. NHTSA estimates the opportunity cost as the value of fuel savings consumers are unwilling to pay for voluntarily that accrues between years 4 and 10 of a vehicle's life.[304] In practice, manufacturers will respond to lower standards by adjusting the technologies they add to vehicles as well as by altering the tuning of these technologies and mix of vehicles in their production fleets, with the goal of increasing profits. For individual vehicle models this could result in a pure cost reduction, an improvement in other vehicle features, or a combination of the two.[305] At the vehicle level, NHTSA's estimates of changes in costs and other vehicle attributes could be over- or under-estimates. However, at the aggregate level it is reasonable to assume, as NHTSA does, that there is likely to be a combination of lower technology costs and a reduction in the implicit opportunity cost relative to the No-Action Alternative. Chapter 6.1.3 of the Draft TSD includes a detailed description of the agency's method for developing this measure, including its assumptions about manufacturers' anticipated response; the agency seeks comments on its approach as well as suggestions for improving it.

Resetting previously established CAFE standards will permit lower fuel economy for some new cars and light trucks, thus increasing their fuel consumption and raising their owners' fuel costs accordingly. The difference between fuel consumption in the No-Action Alternative and in each regulatory alternative represents that alternative's effect on total fuel use, and the cost of this additional consumption is estimated using forecasts of retail fuel prices. The agency's assumptions about future fuel prices are discussed in detail in Chapter 4.1.2 of the Draft TSD.

Lowering existing standards will lead to relatively shorter driving ranges of models that achieve lower fuel economy in the action alternatives, requiring their users to refuel more frequently than under the No-Action Alternative. Drivers (and passengers) of future new cars and light trucks will economize on refueling stops as fuel economy increases over time under each regulatory alternative. However, their savings will be more modest than under the No-Action Alternative, so it appears as an incremental increase in the frequency of refueling stops in the analysis. NHTSA estimates the cost of more frequent fill-ups by calculating the amount of time it takes to locate a retail outlet, refuel one's vehicle, and pay, accounting for the typical number of passengers traveling with the driver, and multiplying by DOT's recommended value of travel time. For a full description of the agency's methodology, refer to Chapter 6.1.5 of the Draft TSD. The agency seeks comment on whether, and the extent to which, a reasonable manufacturer may simply install a larger fuel tank—potentially eliminating any refueling time savings.

Under the regulatory alternatives, new car and light truck models that achieve lower fuel economy would be driven slightly less than in the No-Action Alternative, as their higher fuel cost reduces the fuel economy rebound effect described in preamble Section II.E.1.c. Again, the proposed rule would continue to raise fuel economy standards but at a slower rate than under the No-Action Alternative. For example, while vehicle use would continue to increase under each regulatory alternative, it would increase more slowly than under the No-Action Alternative. Additional driving enables buyers of new cars and light trucks to travel more frequently or reach more desirable destinations, but because vehicle use would grow more slowly, these benefits would be more modest when CAFE standards are reset.[306]

In addition to the private costs and benefits described above, Table II–8 includes maintenance and repair cost savings as a line item without an associated dollar value; the agency expects the proposed reset of CAFE standards to reduce technology requirements for meeting the new standards and thus to lower buyers' costs to repair and maintain new vehicles. However, the agency does not currently possess robust data to quantify maintenance and repair costs in the analysis. NHTSA requests comments on whether the agency should include estimates of repair and maintenance costs—and that interested commenters provide sufficiently robust data to support an informed analysis.

NHTSA also is aware that alternative approaches based on revealed preference have been used to estimate the implicit compliance cost of similar vehicle regulations.[307] Observed

[303] For example, Leard et al. (2023) finds that consumers value performance improvements at three times the rate at which they value improvements in fuel economy and that forgone improvements in performance from recent changes in CAFE standards have essentially offset consumer welfare improvements from the fully valued savings in fuel costs. Klier and Linn (2016) find that if performance trade-offs resulted from a hypothetical 10-percent increase in regulatory stringency, U.S. consumers would value the resulting fuel economy gains at levels approximately 65–85-percent greater than their willingness to pay for any associated forgone horsepower. Reynaert (2020) finds that the European Union's emission standards caused manufacturers to choose between fuel economy and performance, and that the standards were ultimately not welfare improving. In addition to forgoing technological improvements that would improve performance, economists have also modeled manufacturers trading off performance for fuel economy at a fixed level of technology in order to reduce compliance costs (Whitefoot et al. 2017).

[304] As explained in Chapter 6.1.3 of the Draft TSD, consumers value the first 10 years of discounted fuel savings but are unwilling to pay for more than 3 years, because the value of fuel savings during years 4 through 10 is offset by the cost of sacrifices in improvements to vehicles' other attributes.

[305] As explained in Draft TSD Chapter 2.3.5, NHTSA attempts to maintain performance neutrality when a technology is applied to a vehicle so that the change is only applied to improving fuel economy.

[306] NHTSA does not estimate benefits associated with reallocating travel among vehicles of different ages, because there is no associated change in total VMT until the rebound effect is introduced. Chapter 6.1.5 of the Draft TSD explains NHTSA's methodology for reallocating travel and discusses whether any benefits would result as well as how they would be measured. NHTSA seeks comment on its methodology for calculating the benefits from reallocated mileage, as well as on whether it is reasonable to assume that reduced sales of new vehicles leads to a transfer of some travel to older models and any welfare implications of such a transfer.

[307] EPA, Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards, Draft Regulatory Impact Analysis, Appendix B

behavior also shows that consumers prefer vehicles with fuel economy technologies added only if fuel savings exceed the technology costs within a fairly short period, despite the fact that estimated lifetime fuel costs are conspicuously printed on the Monroney window sticker. Analyses that rely on revealed preferences may better capture consumer preferences and the potential costs imposed by regulations than an engineering-based approach. NHTSA has included an alternative analysis of the benefits and costs of the proposed rule in Appendix II applying a revealed preference approach and seeks comment on the assumptions, methodology and data sources used in this analysis.

2. External Costs and Benefits

In general, NHTSA's CAFE rulemakings set standards for which there are no existing standards and require manufacturers to improve fuel economy. Higher fuel economy standards increase vehicle use via the rebound effect and contribute to increased traffic congestion and highway noise. These impacts are largely felt by other road users (and nearby residents) rather than the drivers generating additional mileage. Conversely, resetting previous CAFE standards will reduce fuel economy levels compared to the No-Action Alternative, and the resulting reduction in travel will lower the external costs that congestion and noise impose on others. NHTSA estimates these impacts by updating per-mile congestion and noise costs from increased automobile and light truck use originally reported in FHWA's 1997 Highway Cost Allocation Study to account for changes in congestion levels, travelers' value of time, and inflation, an approach it also used for the 2020, 2022, and 2024 final rules.

Part of the change in new car and light truck buyers' costs for fuel represents changes in tax revenue received by Federal, state, and some local government agencies. Any variation in the fuel tax burden on drivers is exactly offset by changes in tax revenues, so this transfer does not affect net benefits from changing CAFE standards. However, NHTSA estimates those offsetting changes in drivers' fuel tax payments and tax revenue received by government agencies to highlight this transfer and show its potential impact on government finances.

Fuel production, distribution, and use generate emissions of certain ''criteria'' or regulated pollutants, and the population's exposure to these pollutants causes adverse effects on public health. Raising or lowering CAFE standards affects these emissions by changing the volume of fuel produced and consumed, and NHTSA estimates these changes in emissions and their economic consequences for public health. The CAFE Model estimates monetized health effects associated with population exposure to fine particulate matter, which is emitted directly by refineries and vehicles and also formed in the atmosphere via physical and chemical reactions involving other regulated pollutants emitted by refining and using fuel.[308] Chapter 5 of the Draft TSD accompanying this proposed rule includes a detailed description of the Model's procedures for calculating emissions of these pollutants and assessing their consequences for public health.

NHTSA does not include monetized estimates of changes in so-called greenhouse gas (GHG) emissions in the central analysis.[309] There are significant uncertainties related to the monetization of GHGs that include, but are not limited to: the magnitude of the change in climate due to a change in GHG emissions; the relationship between changes in the climate and the economy and, therefore, the resulting economic impacts; future economic and population growth, which are important for estimating vulnerability, willingness to pay to avoid impacts, and the ability to adapt to future changes; future technological advancements that would reduce vulnerability and impacts; the share of impacts from GHG emissions that affect citizens and residents of the United States; and the appropriate discount rates to use when discounting in an intergenerational context.

Due to the many uncertainties related to monetizing impacts of changes in GHG emissions, NHTSA does not monetize these impacts in the central analysis. Monetizing these impacts could potentially result in flawed decision-making due to overreliance on highly uncertain values. To confirm that NHTSA's exclusion of this value does not bias the cost-benefit analysis that informs NHTSA's determination of maximum feasible standards, and in accord with the decision in *Center for Biological Diversity* v. *NHTSA,*[310] NHTSA has included a sensitivity case in PRIA Chapter 9 using the domestic-only monetization of the GHG estimate that was previously used in the 2020 final rule.

Resetting CAFE standards would increase domestic consumption of gasoline compared to the regulatory baseline, producing a corresponding increase in the Nation's demand for crude petroleum. The U.S. accounts for a significant share of global oil consumption, so the resulting increase in global petroleum demand will exert some upward pressure on worldwide prices, but the financial consequences of higher prices are transfers that do not affect economic welfare. Unlike in decades past, when the U.S. was heavily dependent upon foreign petroleum and therefore broadly exposed to price shocks attributable to supply disruption, the U.S. is now an established net exporter of petroleum. Accordingly, while domestic petroleum production does not completely insulate the U.S. from international disruptions in petroleum generation, any transfer from global consumers to petroleum producers becomes a financial benefit to the U.S. economy.

Higher U.S. petroleum consumption increases all domestic consumers' exposure to the risks of potential rapid increases in oil prices and interruptions in petroleum imports, although rising domestic production cushions the latter's effect. Individual petroleum users are unlikely to consider the effect of their own consumption on such economy-wide risks, so they may unwittingly impose costs on others that increase with domestic petroleum use. NHTSA includes this effect as a cost of the proposed standards, and Chapter 6.2.4.4 of the Draft TSD explains how the agency estimates its magnitude.

Some analysts assert that raising or lowering petroleum imports may also influence U.S. military spending, but most careful studies conclude that

(2025), available at: *https://www.epa.gov/system/files/documents/2025-07/420d25003.pdf* (accessed: Sept. 10, 2025).

[308] As discussed in Section II.F above, although other criteria pollutants are currently regulated, only impacts from these three pollutants are calculated since they are emitted regularly by refineries and motor vehicles, cause the most severe effects on human health, and have been the subject of extensive research to quantify and monetize their health impacts. NHTSA's regulatory analysis does not attempt to quantify the adverse health effects of air toxics, which are emitted during fuel production and use, or ozone, which is formed in the atmosphere by emissions of regulated pollutants.

[309] E.O. 14154, Unleashing American Energy (Jan. 20, 2025), available at: *https://www.govinfo.gov/content/pkg/DCPD-202500121/pdf/DCPD-202500121.pdf* (accessed: Sept. 10, 2025); Office of Information and Regulatory Affairs, Guidance Implementing Section 6 of Executive Order 14154, ''Unleashing American Energy,'' M–25–27 (May 5, 2025), available at: *https://www.whitehouse.gov/wp-content/uploads/2025/02/M-25-27-Guidance-Implementing-Section-6-of-Executive-Order-14154-Entitled-Unleashing-American-Energy.pdf* (accessed: Sept. 10, 2025).

[310] *Ctr. for Biological Diversity* v. *Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198 (9th Cir. 2008).

changes in petroleum use on the scale likely to result from changing CAFE standards are unlikely to affect military activity. Thus, as Chapter 6.2.4.5 of the Draft TSD explains in detail, NHTSA does not consider the potential impact of changing CAFE standards on military spending.

NHTSA is also monitoring the availability of critical minerals used in electrified powertrains and whether any shortage of such materials could emerge as an additional energy security concern. While nearly all electricity in the United States is generated through the conversion of domestic energy sources and thus its supply does not raise security concerns, EVs (as well as hybrids and plug-in hybrids) also require batteries to store and deliver that electricity. Currently, the most common EV battery chemistries include relatively scarce materials (compared to other automotive parts) which are sourced, in large part, from foreign adversaries or potentially insecure or unstable overseas sites. While all mined materials (including those in vehicles powered by ICEs) can pose environmental challenges during extraction and conversion to usable material, this is particularly true with minerals used in battery production. Known supplies of some of these critical minerals are also highly concentrated in a few countries and therefore face similar market power concerns to petroleum products.

NHTSA is restricted from considering the fuel economy of alternative fuel sources in determining CAFE standards, so the agency only considers the gasoline powered fleet in simulating compliance with fuel economy regulatory alternatives and determining their effects. While the cost of critical minerals may affect the cost to supply both plug-in and non-plug-in hybrids that require larger batteries, this would apply primarily to manufacturers whose voluntary compliance strategy emphasizes hybridization. NHTSA does not include costs or benefits related to these emerging energy security considerations in its analysis for its proposal because, as noted above, pursuant to its statutory authority to set CAFE standards, NHTSA cannot consider alternative fueled vehicles when setting standards.

The analysis considers the direct labor effects that the proposed standards would have across the automotive sector. The effects include: (1) dealership labor related to new light-duty sales; (2) assembly labor for new vehicles, engines, and transmissions; and (3) labor for developing and producing technologies that improve fuel economy but exclude any broader implications of fuel economy standards for economy-wide employment. NHTSA has used this approach in several recent rulemakings but has not highlighted its results because of its limited scope and the uncertainty introduced by rapidly changing labor inputs for vehicle assembly and technology development. NHTSA seeks comment on alternative approaches to the labor analysis that the agency could consider, including approaches that could supplement the agency's current approach or succeed it in future rulemakings. Chapter 6.2.5 of the Draft TSD describes the current process NHTSA uses to estimate labor impacts in additional detail.

H. Simulating Safety Effects of Regulatory Alternatives

Fuel economy standards have the potential to lead manufacturers to alter the vehicles they produce in ways that may have unintended consequences for motor vehicle safety. The analysis accompanying the proposal includes a comprehensive measure of safety impacts from three sources:

- Changes in Vehicle Mass

NHTSA calculates the safety impact of changes in vehicle mass made to reduce fuel consumption to comply with the standards. Statistical analysis of historical crash data indicates reducing mass in heavier vehicles generally improves safety for occupants in lighter vehicles and other road users such as pedestrians and cyclists, while reducing mass in lighter vehicles generally reduces safety.

- Impacts of Vehicle Prices on Fleet Turnover

Vehicles have become safer over time through a combination of new safety regulations and voluntary safety improvements. NHTSA expects this trend to continue as emerging technologies, such as advanced driver assistance systems, are incorporated into new vehicles. Safety improvements will continue regardless of changes in the standards. Vehicle technologies added to comply with increased fuel economy standards increase vehicle prices, slowing the acquisition of newer vehicles and retirement of older ones.

The standards also influence the composition of the new light-duty sales mix. As the safety of light trucks, SUVs, and passenger cars is affected by technologies that manufacturers employ to meet the standards differently—particularly MR—fleets with different compositions of body styles have varying safety risks. Therefore, changing the share of each type of light-duty vehicle in the projected future fleet impacts safety outcomes.

- Changes in Safety Associated With ''Rebound Effect'' Driving

The ''rebound effect'' predicts consumers will drive more when the cost of driving declines. More stringent standards reduce vehicle operating costs, and in response, some consumers may choose to drive more. Additional driving increases exposure to risks associated with motor vehicle travel, and this added exposure translates into higher fatalities and injuries. Slowing vehicle turnover results in an older fleet on average. As a result, this slowing turnover exacerbates the safety costs of additional driving resulting from the ''rebound effect.''

Resetting the CAFE standards as proposed would improve safety overall. Setting less stringent standards would accelerate fleet turnover, limit the amount of rebound driving, and reduce the need to apply MR across the fleet.

The contributions of the three factors described above generate the differences in safety outcomes among regulatory alternatives. NHTSA's analysis makes extensive efforts to allocate the differences in safety outcomes between the three factors. Fatalities expected during future years under each alternative are projected by deriving a fleetwide fatality rate (fatalities per VMT) that incorporates the effects of differences in each of the three factors from the reference baseline and then multiplying it by that alternative's expected VMT. Fatalities are converted into a societal cost by multiplying estimated fatalities by the DOT-recommended value of a statistical life (VSL), supplemented by additional economic costs not considered in VSL measurements. Traffic injuries and property damage are also modeled directly using the same process and valued using costs specific to each injury severity level.

All three factors influence predicted fatalities, but only two of them—changes in vehicle mass and in the composition of the light-duty fleet in response to changes in vehicle prices—impose increased risks on drivers and passengers not compensated for by accompanying benefits. In contrast, increased driving associated with the rebound effect is a consumer choice that reveals the benefits of additional travel. Consumers who choose to drive more have decided that the utility of additional driving exceeds the additional costs for doing so, including the crash risk that they perceive additional driving involves. As discussed in Chapter 7 of the Draft TSD,

the benefits of rebound driving are accounted for by offsetting a portion of the added safety costs.

NHTSA's analysis considers the safety impact to both vehicle occupants and non-occupants, such as pedestrians and cyclists. The agency categorizes safety outcomes through three measures of light-duty vehicle safety: fatalities occurring in crashes, serious injuries, and the amount of property damage incurred in crashes with no injuries. Counts of fatalities among occupants of automobiles and non-occupants are obtained from NHTSA's Fatal Accident Reporting System for 1975–2022. Estimates of the number of serious injuries to drivers and passengers of light-duty vehicles are tabulated from NHTSA's General Estimates System (GES) for 1990–2015, and from its Crash Report Sampling System (CRSS) for 2016–2021. Both GES and CRSS include annual samples of motor vehicle crashes occurring throughout the United States. Weights for different types of crashes were used to expand the samples of each type to estimates of the total number of crashes occurring during each year. Finally, estimates of the number of automobiles involved in property damage-only crashes each year were also developed using CRSS.

NHTSA does not anticipate, and does not model, any changes in safety from the proposed changes in vehicle classification. A vehicle's safety performance is unrelated to its CAFE vehicle classification; instead, the safety risk is dependent on its physical attributes, the safety technologies incorporated, and how the vehicle is used.

1. Mass Reduction Impacts

Vehicle MR can be one of the more cost-effective means of improving efficiency, particularly for makes and models built with less high-strength steel or aluminum closures or low-mass components. Manufacturers have stated that they would continue to reduce mass of some of their models to meet more stringent standards (such as those currently in place), and therefore, this expectation is incorporated into the modeling analysis supporting the proposal. Safety trade-offs associated with MR have occurred in the past, particularly before standards were attribute-based, because manufacturers chose, in response to standards, to build smaller and lighter vehicles; these smaller, lighter vehicles did not fare as well in crashes as larger, heavier vehicles, on average. Although NHTSA now uses attribute-based standards, in part to reduce or eliminate the incentive to downsize vehicles to comply with the standards, NHTSA is mindful of the possibility of related safety trade-offs. For this reason, NHTSA accounts for how the application of MR to meet standards affects the safety of a specific vehicle given changes in GVWR.

For this proposed rule, the agency employed the modeling technique, developed in the 2016 Puckett and Kindelberger report, to analyze the updated crash and exposure data by examining the cross sections of the societal fatality rate per billion VMT by mass and footprint, while controlling for driver age, gender, and other factors, in separate logistic regressions for five vehicle groups and nine crash types. NHTSA utilized the relationships between weight and safety from this analysis, expressed as percentage increases in fatalities per 100-pound weight reduction (which is how MR is applied in the technology analysis; see Section II.D.2.e), to examine the weight impacts applied in this analysis. The effects of MR on safety were estimated relative to (incremental to) the regulatory baseline in the analysis, across all vehicles for MY 2024 and beyond. The analysis of MR includes two opposing impacts.

Research has consistently shown that MR affects ''lighter'' and ''heavier'' vehicles differently across crash types. The 2016 Puckett and Kindelberger report found MR concentrated among the heaviest vehicles is likely to have a beneficial effect on overall societal fatalities, while MR concentrated among the lightest vehicles is likely to have a detrimental effect on occupant fatalities but a slight benefit to pedestrians and cyclists. This represents a relationship between the dispersion of mass across vehicles in the fleet and societal fatalities: decreasing dispersion is associated with a decrease in fatalities. For collisions with large mass disparities, MR in heavier vehicles would be more beneficial to the occupants of lighter vehicles than it would be harmful to the occupants of the heavier vehicles. MR in lighter vehicles is more harmful to the occupants of lighter vehicles than it is beneficial to the occupants of the heavier vehicles.

To capture the differing effect on lighter and heavier vehicles accurately, NHTSA splits vehicles into lighter and heavier vehicle classifications in the analysis. However, this poses a challenge to creating statistically meaningful results. There is limited relevant crash data to use for the analysis. Each partition of the data reduces the number of observations per-vehicle classification and crash type and thus reduces the statistical robustness of the results. The methodology employed by NHTSA was designed to balance these competing forces as a trade-off to capture the impact of mass-reduction across vehicle CWs and crash types while preserving the potential to identify robust estimates.

While the mass-size-safety coefficients employed in the analysis are not statistically significant at the 95th-percent confidence level, multiple coefficients are significant at the 85th-percent confidence level, and, to NHTSA's best knowledge, represent the most robust and accurate representation of the safety impact of MR. It is essential for NHTSA, as a safety agency, to consider potential safety impacts of its regulations using the best available estimates. As the agency believes that the point estimates still represent the best available data, NHTSA continues to include a measurement of mass-safety impacts in its analysis.

While the agency does not attempt to model safety impacts on a vehicle model-level basis, resetting the standards as proposed would lessen the need to apply MR broadly across the fleet and would allow manufacturers to incorporate MR more tactfully within its fleet. In addition, the agency's proposed vehicle reclassification could incentivize manufacturers to apply MR to larger vehicles, which would provide other road users tangible safety benefits.

A more detailed description of the mass-safety analysis can be found in Chapter 7.3 of the Draft TSD.

2. Sales/Scrappage Impacts

As described in Section II.E.1.b, resetting CAFE standards would have important safety consequences because of the resulting acceleration in fleet turnover. Less stringent standards would allow manufacturers to sell more vehicles demanded by consumers at cheaper prices, which would increase the rate at which newer vehicles, and their associated safety improvements, enter the on-road population. The sales response also influences the mix of vehicles on the road based on the relative net price increases caused by CAFE standards. Setting less stringent standards also removes distortionary effects, pushing consumers into less preferred body styles, which may have different intrinsic safety risks. Similarly, as the price of new vehicles decreases, the fleet turnover compared to the baseline increases, meaning more newer, safer vehicles would replace older, less safe vehicles on the road. These effects would reduce the safety risk not only for both the occupants of newer vehicles but also for other road users who benefit from newer vehicles

equipped with advanced driving assistance systems.

Any effect of sales and scrappage on fleet composition will affect the distribution of both ages and model years present in the on-road light-duty fleet. Because each of these vintages carries with it inherent rates of fatal crashes, and newer vintages are generally safer than older ones, changing that distribution will change the safety performance of the fleet, affecting the total number of on-road fatalities under each regulatory alternative. Similarly, the dynamic fleet share model captures the changes in the light-duty fleet's composition of cars and light trucks. As cars and trucks have different fatality rates, differences in fleet composition across the alternatives will affect fatalities.

At the highest level, NHTSA calculates the impact of the sales and scrappage effects by multiplying the VMT of a vehicle by the fatality risk of that vehicle. For this analysis, NHTSA uses the distribution of miles calculated in Chapter 4.3 of the Draft TSD. The fatality risk measures the likelihood that a vehicle will be involved in a fatal accident per mile driven. NHTSA calculates the fatality risk of a vehicle based on the vehicle's model year, age, and style, while controlling factors that are independent of the intrinsic nature of the vehicle, such as behavioral characteristics. Using this same approach, NHTSA designed separate models for fatalities, non-fatal injuries, and property damaged vehicles.

The vehicle fatality risk described above captures the historical evolution of automotive safety. Given that modern technologies are proliferating faster than ever and offer greater safety benefits than traditional safety improvements through crash avoidance, NHTSA augmented the fatality risk projections with knowledge about forthcoming safety improvements. NHTSA applied estimates of the market uptake and improving effectiveness of crash avoidance technologies to estimate their effect on the fleetwide fatality rate, including incorporating both the direct effect of those technologies on the crash involvement rates of new vehicles equipped with them, as well as the ''spillover'' effect of those technologies on improving the safety of occupants of vehicles that are not equipped with these technologies.

NHTSA's approach to measuring these impacts first derives effectiveness rates for these advanced crash avoidance technologies from safety technology literature. NHTSA then applies these effectiveness rates to specific crash target populations for which the crash avoidance technology is designed to mitigate, which are then adjusted to reflect the current pace of adoption of the technology, including any public commitment by manufacturers to install these technologies or recent regulatory actions. These technologies include Forward Collision Warning (FCW), Automatic Emergency Braking (AEB), Lane Departure Warning (LDW), Lane Keep Assist (LKA), Blind Spot Detection (BSD), Lane Change Assist (LCA), and Pedestrian Automatic Emergency Braking (PAEB). The products of these factors produce a fatality rate reduction percentage that is applied to the fatality rate trend model discussed above, which projects both vehicle and non-vehicle safety trends. The combined model produces a projection of impacts of changes in vehicle safety technology as well as behavioral and infrastructural trends. A much more detailed discussion of the methods and inputs used to make these projections of safety impacts from advanced technologies is provided in Chapter 7 of the Draft TSD.

3. Rebound Effect Impacts

The additional VMT demanded due to the rebound effect is accompanied by more exposure to risk. However, rebound miles are not imposed on consumers by regulation, but rather are a freely chosen activity resulting from reduced vehicle operational costs. As such, NHTSA has long believed that a large portion of the safety risks associated with additional driving are offset by the benefits drivers gain from added driving. The level of risk internalized by drivers is uncertain. This analysis assumes that drivers internalize 90 percent of this risk, which mostly offsets the societal impact of added fatalities from this voluntary consumer choice. However, by resetting the standards, NHTSA would expect fewer rebound miles and therefore fewer crashes, injuries, and fatalities. Additional discussion of internalized risk is contained in Chapter 7.5 of the Draft TSD. NHTSA seeks comment on this assumption. In particular, the agency asks commenters for any evidence that could be used to bolster a higher or lower estimate of how much consumers internalize the risk of driving an additional mile.

4. Value of Safety Impacts

Fatalities, nonfatal injuries, and property damage crashes are valued as a societal cost within the CAFE Model's cost and benefit accounting. Their value is based on the comprehensive value of a fatality, which includes lost quality of life and is quantified in the VSL, as well as economic costs related to medical and emergency care, insurance administrative costs, legal costs, and other economic impacts not captured in the VSL. These values were first derived from data in Blincoe et al. (2015), updated in Blincoe et al. (2023), adjusted to 2024 dollars, and updated to reflect DOT guidance on the VSL.[311]

Nonfatal injury costs, which differ by severity, were weighted according to the relative incidence of injuries across the Abbreviated Injury Scale (AIS). To determine this incidence, NHTSA applied a KABCO/MAIS translator to CRSS KABCO based injury counts from 2017–2019. This produced the MAIS-based injury profile. This profile was used to weight nonfatal injury unit costs derived from Blincoe et al. (2023), adjusted to 2024 price and income levels and updated consistently with DOT guidance on the VSL. Property-damaged vehicle costs were also taken from Blincoe et al. (2023) and adjusted to 2024 economics.

For the analysis, NHTSA assigns a societal value of $14.1 million for each fatality, $338,000 for each nonfatal injury, and $9,700 for each property damaged vehicle. As discussed in the previous section, NHTSA discounts 90 percent of the safety costs associated with the rebound effect. The remaining 10 percent of those safety costs are not considered to be internalized by drivers and appear as a cost of the standards that influence net benefits. Similarly, the effects on safety attributable to changes in mass and fleet turnover are not offset by additional benefits since manufacturers are responsible for deciding how to design and price vehicles. However, 90 percent of these costs are also treated as private costs since they are borne by owners of vehicles rather than society more broadly. The safety costs not internalized by drivers are equal to 10 percent of the sum of the mass-safety effects, fleet turnover effects, and rebound-related fatality and non-fatal injuries, plus the cost of any property damage.

III. Regulatory Alternatives Considered in This NPRM

A. General Basis for Alternatives Considered

NHTSA considers regulatory alternatives in rulemaking analyses as a way of evaluating the comparative

[311] DOT, Departmental Guidance on Valuation of a Statistical Life in Economic Analysis, Last revised: Apr. 28, 2025, available at: *https://www.transportation.gov/office-policy/transportation-policy/revised-departmental-guidance-on-valuation-of-a-statistical-life-in-economic-analysis* (accessed: Sept. 10, 2025).

effects of different potential ways of accomplishing its desired goal, which in this case is to fulfill the statutory mandate to set maximum feasible standards. E.O. 12866 and E.O. 13563, as well as OMB Circular A–4, encourage agencies to evaluate regulatory alternatives in their rulemaking analyses.

For this proposal, NHTSA developed separate alternatives for two distinct periods of time (MYs 2022–2026 and MYs 2027–2031) and two distinct fleets (passenger cars (PC) and light trucks (LT)). Alternatives analysis begins with a ''No-Action'' Alternative, typically described as what would occur in the absence of any regulatory action by the agency—in other words, the baseline.[312] Accordingly, NHTSA developed 16 total alternatives: a No-Action and three action alternatives for passenger cars for MYs 2022–2026; a No-Action and three action alternatives for light trucks for MYs 2022–2026; a No-Action and three action alternatives for passenger cars for MYs 2027–2031; and a No-Action and three action alternatives for light trucks for MYs 2027–2031. The proposed standards may, in places, be referred to as the ''Preferred Alternative(s),'' but NHTSA intends ''proposed standards'' and ''Preferred Alternative(s)'' to be used interchangeably for purposes of this document. While the agency tentatively believes the Preferred Alternative(s) represent the maximum feasible fuel economy standards for each model year under consideration when viewed in context of the proposed structural changes (*i.e.,* reclassification, elimination of FCIVs, and elimination of credit trading) and in light of statutory constraints (*i.e.,* not considering dedicated vehicles, non-petroleum performance of dual fueled vehicles, or the availability of regulatory credits), NHTSA requests comment on each alternative analyzed.

Each action alternative sets fuel economy stringency levels for each model year that can be defined in terms of percentage changes in stringency from one model year to the next, which may be different for passenger cars and light trucks.[313] Although the stringency levels can be defined in terms of percentage changes in stringency from one model year to the next for ease of understanding, pursuant to the statute they are actually defined as coefficients that define the following mathematical functions that relate fuel economy to footprint levels.

For passenger cars, NHTSA is defining final fuel economy targets as shown in Equation III–1.

Equation III–1: Passenger Car Fuel Economy Footprint Target Curve

$$TARGET_{FE} = \frac{1}{MIN\left[MAX\left(c \times FOOTPRINT + d, \frac{1}{a}\right), \frac{1}{b}\right]}$$

Where:

$TARGET_{FE}$ is the fuel economy target (in mpg) applicable to a specific vehicle model type with a unique footprint combination, and

a is a maximum fuel economy target (in mpg),

b is a minimum fuel economy target (in mpg),

c is the slope (in gallons per mile per square foot, or gpm per square foot), of a line relating fuel consumption (the inverse of fuel economy) to footprint, and

d is an intercept (in gpm) of the same line.

Here, MIN and MAX are functions that take the minimum and maximum values, respectively, of the set of included values. For example, MIN[40, 35] = 35 and MAX(40, 25) = 40, such that MIN[MAX(40, 25), 35] = 35.

The resulting functional form is depicted in graphs displaying the passenger car target function in each model year for each regulatory alternative in Sections III.B.1 and III.B.3 below.

For light trucks, NHTSA is defining fuel economy targets as shown in Equation III–2.

Equation III–2: Light Truck Fuel Economy Footprint Target Curve

$$TARGET_{FE} = \frac{1}{MIN\left[MAX\left(c \times FOOTPRINT + d, \frac{1}{a}\right), \frac{1}{b}\right]}$$

[312] Office of Management and Budget, Circular A–4 (Sept. 17, 2003), available at: *https://www.whitehouse.gov/wp-content/uploads/2025/08/CircularA-4.pdf* (accessed Sept. 10, 2025), General Issues, 2. Developing a Baseline.

[313] Note that the percentage changes from 1 year to the next are applied to the footprint functions that define the standards, rather than to an average or summary mpg value corresponding to a given footprint function. The PC and LT target curve function coefficients are defined in Equation III–1 and Equation III–2, respectively. See Draft TSD Chapter 1.2.1 for a complete discussion of the footprint curve functions and how they are calculated.

Where:

$TARGET_{FE}$ is the fuel economy target (in mpg) applicable to a specific vehicle model type with a unique footprint combination, and

a, b, c, and d are as for passenger cars, but taking values specific to light trucks.

The exception to defining action alternatives in terms of yearly stringency changes occurs in the transition from MYs 2027–2028, where NHTSA is proposing to change the regulatory classifications for non-passenger automobiles. Because NHTSA is using a different set of initial footprint curve parameters (*i.e.,* slope, intercept, and cutpoints) for each fleet starting in MY 2028, the change in stringency from MYs 2027–2028 cannot be defined using multiplication by a common factor. Instead, NHTSA first applied a year-over-year stringency adjustment to each proposed alternative for each regulatory class ''m'' in MY 2027 to generate initial target function parameters for MY 2028 shown in Equation III–3.

Equation III–3: Scaling Equations for Initial MY 2028 Target Function Parameters

$$a^{m}_{2028,0} = \frac{1}{k_1} \times a^{m}_{2027}$$

$$b^{m}_{2028,0} = \frac{1}{k_1} \times b^{m}_{2027}$$

$$c^{m}_{2028,0} = k_1 \times c^{m}_{2027}$$

$$d^{m}_{2028,0} = k_1 \times d^{m}_{2027}$$

$$k_1 = 1\text{-}\Delta_{2028}$$

Here ''Δ_{2028}'' equals the percentage year-to-year change in stringency from MYs 2027–2028 in a given alternative. The agency then uses Equation III–4 to determine the MY 2028 predicted average standard for each regulatory class without reclassification. To calculate the average standard, the agency uses the total number of automobiles in each class in the MY 2024 fleet data.

Equation III–4: Determination of MY 2028 Class Average Standards Under No Reclassification

$$\mathrm{STANDARD}^{m,0}_{2028} = \frac{\boldsymbol{n_{m,0}}}{\sum_{j=1}^{\boldsymbol{n_{m,0}}} \frac{\mathbf{1}}{\boldsymbol{TARGET_j^{2028,0}}}}$$

$$TARGET_j^{2028,0} \frac{1}{\mathrm{MIN}\left[\mathrm{MAX}\left(\mathrm{c}_{2028,0} \times \mathrm{FOOTPRINT}_j + d_{2028,0}, \frac{1}{a_{2028,0}}\right), \frac{1}{b_{2028,0}}\right]}$$

Here ''$\eta_{m,0}$'' equals the total number of automobiles produced in class ''m'' according to the classifications based on existing regulations.

NHTSA then performed an analogous calculation using Equation III–5 to determine the predicted average standard for each regulatory class under the proposed reclassification condition. The alternative classification and the initial parameter estimates are described in Chapter 1 of the Draft TSD. To calculate the average standard, the agency uses the MY 2024 fleet data with the new reclassification criteria applied in each class.

Equation III–5: Determination of MY 2028 Class Average Stringencies Under Alternative Classification using Alternative Parameter Estimates

$$\mathbf{STANDARD}^{\boldsymbol{m,A}}_{\mathbf{2028}} = \frac{\boldsymbol{n_{m,A}}}{\sum_{j=1}^{\boldsymbol{n_{C,A}}} \frac{\mathbf{1}}{\boldsymbol{TARGET_j^{2028,A}}}}$$

$$TARGET_j^{2028,A} \frac{1}{\mathrm{MIN}\left[\mathrm{MAX}\left(\mathrm{c}_{2028,A} \times \mathrm{FOOTPRINT}_j + d_{2028,A}, \frac{1}{a_{2028,A}}\right), \frac{1}{b_{2028,A}}\right]}$$

Here ''$\eta_{m,A}$'' equals the total number of automobiles produced in class ''m'' according to the proposed reclassification.

The class averages are used to generate a ratio, which is used as a scaling factor to generate the final target function coefficients in each alternative as shown in Equation III–6:

Equation III–6: Scaling Equations for Final MY 2028 Target Function Parameters

$$a_{2028}^{m}=\frac{1}{k_2}\times a_{2028,A}^{m}$$

$$b_{2028}^{m}=\frac{1}{k_2}\times b_{2028,A}^{m}$$

$$c_{2028}^{m}=k_2\times c_{2028,A}^{m}$$

$$d_{2028}^{m}=k_2\times d_{2028,A}^{m}$$

$$k_2=\frac{\mathrm{STANDARD}_{2028}^{m,\mathrm{A}}}{\mathrm{STANDARD}_{2028}^{m,0}}$$

This process ensures that a change in target function shape preserves the year-to-year change in stringency ''Δ_{2028}'' for the class.

For this proposal, NHTSA applies individual rates of change to the passenger car and the light truck fleet standards in different model years in some of the action alternatives. In the Preferred Alternative, the respective standards for both fleets change at the same rate starting in MY 2028. However, the two remaining action alternatives evaluated for this proposal have passenger car fleet rates-of-change in fuel economy that differ from the rates-of-change in fuel economy for the light truck fleet in MY 2028. NHTSA has discretion to set CAFE standards that increase at different rates for passenger cars and light trucks, because NHTSA, by law, must set maximum feasible CAFE standards separately for passenger cars and light trucks.

1. MYs 2022–2026

NHTSA's analysis resets the passenger and non-passenger automobile fuel economy target functions in 2022 and increases them through 2026 at levels consistent with the available data for that timeframe and the context for those years, as discussed in more detail in Section V. Unlike past rules that set CAFE standards, in which the last model year for which standards are currently set serves as the base year for describing the regulatory alternatives considered in terms of annual percentage increases in standards, NHTSA analyzed reset standards for this proposed rule using MY 2022 as the base year, consistent with the Secretary's memorandum titled ''Fixing the CAFE Program'' (Jan. 28, 2025).[314] NHTSA considered several potential approaches for analyzing regulatory alternatives for that model year within a reasonable range of feasible average fuel economy standards.

The agency relied in large part on the observed capabilities of the gasoline- and diesel-powered vehicle fleets over the model years covered by the standards. While NHTSA always examines manufacturer capabilities (also referred to as ''achieved'' fuel economy values for each manufacturer's fleet in each model year) relative to the proposed standards as part of its evaluation of maximum feasible standards, this analysis is unique in that the data-based projections that NHTSA would generally rely on to estimate manufacturer behavior are not necessary because, by definition, there cannot be projections for MYs 2022–2025 (and likely for MY 2026, by which time a final rule will be issued), but only observed data. That said, as discussed in Section V, NHTSA believes the appropriate qualitative context exists for giving meaning to the section 32902(f) factors related to manufacturer compliance for model years that have already passed or are currently underway.

NHTSA defined a potential standards range using the mean fit curve and the mean fit curve minus one standard deviation,[315] and then selected three levels of standards that the agency believed represented reasonable low-, medium-, and high-level resetting functions for the MY 2022 passenger car and light truck fleets, respectively. These three functions represent different ways that NHTSA could consider the available data for MY 2022, accounting for the removal of section 32902(h) technologies and compliance credits, and consistent with the agency's balancing of the four factors as described in more detail in Section V. The lowest level function for MY 2022 that NHTSA considered for this proposal represents standards that weigh economic practicability most heavily by recognizing that the prior standards for that model year were not only infeasible for the gasoline- and diesel-powered vehicle fleets (from the perspective of manufacturers reasonably being able to apply technology during the rulemaking timeframe), but also that the fleet-average performance has been below the fleet-average standards for several years and that a low-level standard represents an opportunity for vehicle manufacturers to comply with a standard that influences their obligations to improve fleet fuel economy without distorting typical design cycles or technology application in a manner inconsistent with NHTSA's statutory authority.[316] Under these standards, about 80 percent of passenger cars and light trucks would have met or exceeded their target function values for MY 2022.

On the opposite end, the high-level function considered for MY 2022 represents a balancing that still weighs economic practicability, but recognizes that some manufacturers have been able to apply technology that improves the fuel economy levels of their gasoline- and diesel-powered fleets at a cadence that, if applicable to the rest of the fleet had the model year not already passed, would have pushed the fleet to higher average fuel economy levels, thereby saving more fuel and placing more weight on energy conservation. That said, the fact that a large number of manufacturers' gasoline- and diesel-based fleets cannot comply with that standard—some by a significant amount—is evidence that such a standard is beyond maximum feasible for the gasoline- and diesel-powered passenger and non-passenger automobile fleets for MY 2022. Under these standards, about 30 percent of passenger cars and 50 percent of light trucks, by sales volume, failed to meet their target function values for MY 2022.

The MY 2022 mid-level functions that NHTSA is proposing as the Preferred Alternative for passenger and non-passenger automobiles reflect a standard that the agency tentatively concludes is maximum feasible, based on the exclusion of factors prohibited from consideration by section 32902(h) and a subsequent balancing of the section 32902(f) factors considering the real-world context for this action. The mid-level functions represent NHTSA's consideration of the actual, measured gasoline- and diesel-based fleet average

[314] See DOT, Memorandum: Fixing the CAFE Program (2025), available at: *https://www.transportation.gov/briefing-room/memorandum-fixing-cafe-program* (accessed: Sept. 10, 2025).

[315] Mean fit level here refers to standards developed based on the relationship between fuel consumption and footprint using ordinary least-squares without any further adjustment. NHTSA examined fleetwide compliance and found that around half of the vehicles produced in the MY 2022 fleet complied with these standards. For the mean fit minus standard deviation, NHTSA reasoned that focusing on the central mass of the distribution of vehicles' fuel economy values would seem to be a good indicator that the proposed level was technologically feasible and economically practicable.

[316] See ''Resetting the Corporate Average Fuel Economy Program,'' 90 FR 24518 (June 11, 2025).

fuel economy performance and represents standards at a level that the agency believes is technologically feasible and economically practicable for the entire MY 2022 fleet. NHTSA believes the mid-level function represents a balancing pursuant to section 32902(f) that recognizes the prior standards were set at levels aimed to induce changes in technology application and automobile designs beyond what the market could bear, and in doing so, considered vehicle technologies and manufacturers' use of compliance credits in a manner prohibited by section 32902(h). The failure by a significant number of manufacturers' fleets to meet these standards is evidence that they exceeded the maximum feasible standards for the model year. At the same time, the mid-level standard recognizes that compliance actions by several manufacturers may be evidence that additional fleet fuel economy improvements could have been feasible, subject to the concept expressed at the time of EPCA's passage, that NHTSA's standards should not impose impossible burdens on the automotive industry or unduly limit consumer choice as to capacity and performance of motor vehicles.

Some manufacturers have chosen to respond to prior standards—which NHTSA has determined were set in contravention of EPCA's prohibition against consideration of EVs or plug-in hybrids using the battery to facilitate propulsion—by producing electric and plug-in hybrid vehicles and applying or acquiring credits generated by such vehicles to achieve compliance. That said, the mid-level functions for MY 2022 represent NHTSA's best judgment in establishing maximum feasible standards, recognizing that inclusion of section 32902(h) factors in prior rulemakings has pushed standards beyond maximum feasible levels. The agency has tentatively concluded that the proposed standard for MY 2022 provides the most reasonable weighting of the section 32902(f) factors as an appropriate reformed starting point upon which to base increases in the stringency of standards for subsequent model years. Under these proposed standards, about 75 percent of passenger cars and 70 percent of light trucks, by sales volume, would have met or exceeded their target function values for MY 2022—but 25 percent of passenger cars and 30 percent of light trucks would have failed to do so.

For MYs 2023–2026, NHTSA considered a range of standards based on the low-, mid-, and high-range functions all increasing at the same rate—a relatively modest rate of 0.5 percent per year—from each alternative's MY 2022 starting point. This is a different approach than NHTSA has taken in previous standard-setting actions, but it is an approach that better effectuates NHTSA's reset of the CAFE standards to maximum feasible levels beginning in MY 2022. In reaching this tentative conclusion, NHTSA examined both real-world data and input on the capabilities of manufacturers' gasoline- and diesel-powered fleets to improve consistently over time. Critically, this was done while excluding consideration of prohibited technology and policy factors for the first time since alternative fueled vehicles have worked their way into the light-duty fleet in appreciable numbers.

Using data from EPA's 2024 Automotive Trends Report, the latest report available at the time this NPRM was drafted, NHTSA analyzed recent yearly improvements in ICE efficiency using data categorized by engine package.[317] That data shows that since MY 2010, gasoline- and diesel-powered vehicle fuel consumption has improved on average by 1 percent per year. In some years, fuel consumption improved by as much as 5.7 percent from the prior year; however, in some years prior to 2020, fuel consumption increased over the prior year by only 1.2 percent. From MYs 2020–2023, fuel consumption only improved by an average of 0.7 percent per year. Correspondingly, Auto Innovators (formerly known as the Alliance of Automobile Manufacturers, or the Alliance, for short) commented on NHTSA's 2023 NPRM that ''[b]etween 2012 and 2022, the average 2-cycle fuel consumption (gal/mile) of non-EVs improved at an average annual rate of 1.3 [percent] (passenger cars) and 2.0 [percent] (light trucks).'' [318] In addition, based on the data used for this analysis,[319] the change in fuel economy for gasoline- and diesel-powered vehicles from MYs 2022–2024 was a total of 2 percent, or an average of 1 percent per year.

NHTSA is proposing the 0.5 percent rate of increase for MYs 2023–2026 in part because the agency believes that higher rates of increase were driven by standards set by NHTSA or other agencies that either unlawfully considered prohibited statutory factors or exceeded statutory authority. In addition, to the extent that prior unrealistically high standards induced technology application that was either not ready or not attractive to the market, the proposed stringency rates afford automakers the opportunity to determine the most economically practicable and technologically feasible paths forward for their individual product mixes, while still ensuring that the gasoline- and diesel-fueled vehicle fleet sees real-world improvements in fuel economy.

While fuel-economy-improving technologies applicable to the gasoline- and diesel-powered vehicle fleet certainly exist, much of that technology has been applied to vehicles over the past 15 years—a period of rapidly increasing fuel economy standards. With a baseline fleet inclusive of EVs and plug-in hybrids using battery propulsion, manufacturers seeking to comply with standards solely using gasoline- and diesel-based powertrain efficiency improvements, cannot continually add additional technology to gasoline- and diesel-fueled vehicles at a reasonable cost. Table III–1 shows that as basic naturally aspirated engine technology penetration rates decreased sharply, there was a concurrent increase in rates of advanced powertrain technology, including the addition of mild and strong hybrid technology. As discussed in Section II above, it is unreasonable to assume that all technologies can be applied to all vehicle types, depending on vehicle functionality and capability, and technology that increases fuel economy at more than incremental levels on vehicles where it could feasibly be applied is available only at significant cost. NHTSA anticipates that the proposed rates of annual increase would allow technology penetration rates to propagate across the fleet in a cost-effective manner.

[317] EPA, Explore the Automotive Trends Data (2025), available at: *https://www.epa.gov/automotive-trends/explore-automotive-trends-data* (accessed: Sept. 10, 2025).

[318] See Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027–2032 and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030–2035, Docket No. NHTSA–2023–0022–60652, at p. 7. The Alliance cited S&P Global Mobility research that was subsequently provided to NHTSA for review.

[319] Comparison of the MY 2022 mid-model year data set and the MY 2024 mid-model year data set, as discussed in Section II.

Table III-1: Technology Penetration Differences in MY 2022 and MY 2024[320]

Powertrain Technology	MY 2022	MY 2024
Basic Naturally Aspirated	37.9%	22.0%
Turbo Engines	36.0%	46.3%
Advanced Cylinder Deactivation	3.5%	4.3%
High Compression Ratio	18.1%	23.4%
Other Advanced Engines	4.5%	4.0%
Mild Hybrids	59.8%	67.2%
Strong Hybrids	7.3%	10.4%
Plug-in Hybrids	1.8%	2.9%

While the rate of increase for all MYs 2023–2026 alternatives is the same, the actual level of standards required by each regulatory alternative is different based on the differing MY 2022 reset points. Accordingly, NHTSA has presented a range of stringency options to allow the agency to analyze or select an alternative in its final rule from any stringency level within that range. The range of alternatives represents different ways that the agency could balance the section 32902(f) factors for MYs 2022–2026. Specifically, NHTSA considers both the unique contextual situation applicable to those model years [321] and technologically feasible and economically practicable rates of per-year increases for the gasoline- and diesel-powered fleets. NHTSA seeks comment on these alternatives for MYs 2022–2026, in addition to any other regulatory alternatives that the agency should consider for these model years.

2. MYs 2027–2031

Consistent with NHTSA's approach for MYs 2022–2026, the agency endeavored to reset future model years' standards at levels that reflect the technological and economic capabilities of the gasoline- and diesel-powered vehicle fleets, but also in a manner that reflects how proposed compliance provisions (discussed in more detail in Section VI) would impact manufacturers' ability to comply. NHTSA performed an analysis, similar to its analysis of feasible per-year rates of stringency increase for gasoline- or diesel-powered vehicle improvements for MYs 2022–2026 discussed above, to establish a range of regulatory alternatives that encompassed the ways the agency believes manufacturers could improve their fleet fuel economies year-over-year.

The agency began by using MY 2024 market data as a starting point for characterizing the technology and compliance levels of the vehicle fleet, and then relied on the CAFE Model to simulate the fleet's expected evolution under the current regulatory fleet classifications in future years in the No-Action Alternative and using the proposed alternative classification regulations starting in MY 2028 in the action alternatives. NHTSA's proposed action alternatives are consistent with footprint curves estimated using the current classification for MY 2027, and consistent with footprint curves estimated using the alternative classification for MY 2028 onward.

NHTSA developed alternatives to produce class average target function values that reflected different rates of growth from MYs 2022–2028, with MY 2027 acting as a ''bridge'' year between MYs 2026–2028, when NHTSA proposes to use updated regulatory classification definitions. Class average target functions were computed by taking the production-weighted harmonic mean of the target function values for vehicles in each class as shown in Equation III–4. To produce estimates of the class average target function values in MY 2022 and MY 2026, NHTSA used the MY 2022 fleet under current classification regulations and the proposed standards in each year. This produced a value for each fleet in MY 2022 and MY 2026. For MY 2027, NHTSA used the MY 2024 fleet under the pre-existing classification regulations and using the relevant proposed standards for each alternative. This produced a value for each class in each alternative. For MY 2028, NHTSA used the MY 2024 fleet under the proposed reclassification regulations and using the relevant proposed standards for each alternative. This once again produced a value for each class in each alternative. NHTSA followed this approach to determine class averages using standard coefficients, classifications, and fleets consistent with how the underlying footprint curves were estimated for each model year.

For Alternative 1, NHTSA set the 2028 standards such that the class average target function values were equal to those computed for 2022 using this approach. For MY 2027, standards for Alternative 1 were set such that the class average equaled the midpoint between class averages calculated for MY 2026 and those proposed for MY 2028. In this way MY 2027 acts as a link between the 2026 standards, which were developed using the MY 2022 fleet and initial classification, and the proposed MY 2028 standards, which were developed using the MY 2024 fleet and the proposed reclassification.

NHTSA used a similar approach to develop Alternative 3. For Alternative 3, NHTSA set standards in MY 2028 such that the class average target function values were equal to those obtained by applying a 1.5-percent annual increase to the MY 2022 standards. NHTSA then used the same approach as in Alternative 1 to determine the midpoint of the average target function values in MY 2026 and MY 2028 and set standards that would achieve that level of stringency based on the MY 2024 fleet and the initial classification. NHTSA estimated the 1.5-percent annual increases as an upper bound for Alternative 3 stringency based on the agency's assessment, using the EPA Automotive Trends report of gasoline- and diesel-powered vehicle fuel

[320] Some vehicles will have multiple powertrain technologies, such as pairing a turbo engine with a mild hybrid stop/start technology. This will result in the technology penetration rates adding up to more than 100 percent.

[321] NHTSA is proposing to reset standards for these model years, which have passed or for which manufacturers have already determined their fleets, or such determination is well underway, because NHTSA determined that in establishing the prior standards, the agency impermissibly considered electric vehicles in its analysis.

economy values and additional stakeholder feedback.

For Alternative 2, NHTSA proposed MY 2027 standards such that the class average target function values were equal to those obtained by applying a 0.5-percent annual growth rate to the MY 2022 standards. For MY 2028, NHTSA determined the class average target function values by applying a 0.25-percent adjustment to the class averages for 2027. While both years' standards were determined using these growth rates, the rate of change year to year between the coefficients does not exactly equal these factors due to the change in fleet and classification used to compute these averages. NHTSA estimated that these were appropriate mid-range annual increases based on the agency's assessment of feasible annual increases for gasoline- and diesel-powered vehicle fleet and because manufacturers would likely require time in MY 2028 and beyond to recalibrate production decisions based on the combination of reset stringency levels and vehicle classification updates.

For MYs 2029–2031, NHTSA applied simple year over year percentage increases to its proposed 2028 standards. For Alternative 1 and Alternative 2, NHTSA used a rate of 0.25 percent per year, while for Alternative 3, NHTSA used a rate of 1 percent per year. Alternative 3's higher rate of increase supposes that manufacturers could respond to standards that increase more rapidly in the later years, while for the other alternatives 0.25 percent was chosen to illustrate how manufacturers would be able to adjust compliance to a more moderate rate of increase following the adjustment to reclassification mentioned above and described in more detail in Section VI.

The projected levels of fuel economy under each of the three regulatory alternatives for MYs 2027–2031 continually push manufacturers to improve real-world fuel economy, and even the least stringent option would exceed fuel efficiency merely driven by market demand.[322] NHTSA treated market demand for fuel-economy improvements as a floor for determining action alternatives in MY 2027 and MY 2028 by rescaling its estimated coefficients using the approach outlined in Equation III–3 through Equation III–6 such that they produced standards achievable for manufacturers when only market demanded technology was applied. Any standard less stringent than this floor would not be projected to change manufacturers' technology adoption decisions from those they would make in the absence of standards. In accordance with the purpose of the statutory scheme to increase fleet fuel economy of gasoline- and diesel-powered vehicles, NHTSA chose alternatives lying above this floor.

NHTSA recognizes that the process for creating regulatory alternatives for this proposal is different in some ways from how the agency has created regulatory alternatives in past rules; however, the process used was necessary to effectuate a reset to bring the CAFE program into compliance with the law and require a significant reclassification of the passenger car and light truck fleets to reflect better the intent of the CAFE program established by Congress. Previously, NHTSA evaluated regulatory alternatives based on varying levels of stringency increases from the last year of the previously established standards. Since NHTSA considered the fuel efficiency of EVs in establishing those previous standards, in contravention of the law, a stringency increase from the last year of those standards is on its face higher than the maximum feasible standards NHTSA could establish if only considering gasoline- and diesel-fueled vehicles. In fact, as discussed in more detail in Section V, NHTSA is proposing to set standards that are, on their face, lower in MY 2022 than MY 2021 in part because actual compliance data clearly demonstrated that manufacturers were unable to achieve the MY 2022 standards with their gasoline- and diesel-powered vehicle fleets. Additional information on how NHTSA's development of these regulatory alternatives comports with the agency's requirements to set maximum feasible standards is discussed in Section V. Like for MYs 2022–2026, the alternatives considered for MYs 2027–2031 include a range of stringency options to allow the agency to analyze or select an alternative in its final rule from any stringency level within that range. NHTSA seeks comment on the range of alternatives presented, in addition to any other alternatives that the agency should consider.

3. Minimum Domestic Passenger Car Standard Analysis Update

EPCA, as amended by EISA, requires that any manufacturer's domestically manufactured passenger car fleet must meet the greater of either 27.5 mpg on average or 92 percent of the average fuel economy projected by the Secretary for the combined domestic and non-domestic passenger automobile fleets manufactured for sale in the United States by all manufacturers in the model year. Along with calculating each regulatory alternative, NHTSA must calculate a minimum standard for domestically manufactured passenger automobiles in accordance with 49 U.S.C. 32902(b)(4)(B). Since the 2020 final rule, NHTSA has calculated the ''minimum domestic passenger car standard'' (MDPCS) using an offset to account for the fact that the agency's model cannot predict any shift in vehicle designs (as opposed to technology application) that manufacturers might make in response to CAFE standards. Additional information about the origin of the MDPCS and the related offset calculation can be found in Section V.

NHTSA reviewed the analysis it uses to calculate the MDPCS offset, which accounts for differences between the passenger car standards the agency forecasts in its rulemaking analyses and the actual passenger car standards EPA calculates for CAFE final compliance in accordance with 49 U.S.C. 32904(a). In support of its 2020 final rule, NHTSA used forecasted data from its 2009, 2010, and 2012 final rule analyses and actual CAFE final compliance data for MYs 2011–2018 to develop the initial MDPCS offset of 1.9 percent. NHTSA developed the original offset value for use in its 2020 final rule; however, the agency continued to use that same offset value in its 2022 and 2024 final rules without updating the underlying analysis. In addition to promulgating two final rules since it developed the initial MDPCS offset, NHTSA has also collected five additional model years of final compliance data—with two of those model years having been verified by EPA in accordance with 49 U.S.C. 32904(a). For this rulemaking, NHTSA updated the analysis to add new data sources and refine the methodology used to calculate the value of the offset.

NHTSA supplemented the original analysis with additional data, such as estimated passenger car standards from subsequent rulemaking analyses and calculated passenger car standards from newer CAFE final compliance data. NHTSA began with the Market Data Input File containing the MY 2017

[322] As discussed in more detail in Section II, NHTSA's assumptions about market-driven fuel economy improvements in the absence of regulatory requirements involve manufacturer application of technology that pays for itself within 36 months. NHTSA makes this assumption based on manufacturer statements over successive CAFE rulemakings and also believes that this assumption is supported by the relevant literature. NHTSA has not attempted to quantify manufacturer behavior in the absence of standards other than this payback assumption but is interested in comments on any other assumptions of manufacturer behavior in the absence of standards that the agency should consider.

baseline fleet, which the agency used in the 2020 final rule analysis, covering MYs 2021–2026. The agency then identified and removed all the model types of dedicated AFVs from the Market Data Input File, consistent with the section 32902(h) prohibition on considering the fuel economy of dedicated and dual-fueled vehicles when setting maximum feasible standards. Next, NHTSA ran the 2020 final rule version of the CAFE Model with the modified Market Data Input File to produce an analysis devoid of dedicated AFVs. The agency then extracted the passenger car standard from the resulting Compliance Output Report for MYs 2017–2050.

Next, NHTSA added the following CAFE final compliance data for additional model years to the analysis: MYs 2012–2021, which have been verified by EPA in accordance with 49 U.S.C. 32904(a), and MYs 2022–2023, which have yet to be verified. As a proxy for individual model types of dedicated AFVs, NHTSA identified and removed the manufacturers that produce only dedicated AFVs from the compliance data and calculated the passenger car standard for MYs 2012–2023.[323]

Next, NHTSA modified the methodology it uses to calculate the offset. In the original offset analysis, NHTSA included comparisons between actual passenger car standards calculated from final model year compliance data to passenger car standards projected in proposed rules, in addition to those projected in final rules. For CAFE compliance, manufacturers are required to meet only those standards estimated and published in final rules, not those estimated and published in proposed rules. Consequently, including comparisons to proposed rules may skew the results from the offset analysis. NHTSA included comparisons to passenger car standards forecasted only in final rules in the updated analysis.

NHTSA compared the MDPCSs estimated from CAFE Model outputs from MYs 2017–2050 to the MDPCSs calculated from actual compliance data from MYs 2012–2023 and calculated the relative change (in percent) between them for each model year. NHTSA then calculated the offset by taking the average of the relative changes in MDPCS for MYs 2017–2023, which are those model years where the CAFE Model outputs (excluding all individual model types of dedicated AFVs) overlapped with CAFE compliance data that excluded manufacturers that produced only dedicated AFVs. The updated MDPCS offset analysis shows that the passenger car standards projected with the MY 2017 baseline fleet and the 2020 final rule version of the CAFE Model were more stringent than the actual passenger car standards calculated for CAFE final compliance by an average of 0.7 percent, less than half of the offset calculated previously.

The MYs 2027–2031 proposed MDPCSs presented in this Table III–2 include the 0.7-percent offset. NHTSA believes that the basis for the offset, which is based on the agency's inability to project the precise mix of vehicles sold in the future, is inapplicable to the proposed MYs 2022–2026 standards because those standards incorporate the most up-to-date data available to the agency for vehicle sales volume and footprint sizes in MY 2022. The agency's proposed MDPCSs for MYs 2027–2031 include this offset to ensure that the standard is sufficiently reflective of industry capabilities while still considering the original intent behind the MDPCS.

The proposed MDPCS for each model year is as follows:

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Table III-2: Minimum Domestic Passenger Car Standard (mpg)

2022	2023	2024	2025	2026	2027*	2028*	2029*	2030*	2031*
33.1	33.1	33.5	33.7	33.9	33.8	33.9	34.0	34.0	34.1

*Includes 0.7-percent offset

B. Regulatory Alternatives Considered

The regulatory alternatives considered by the agency in this proposed rule are presented in Table III–3 as percentage changes in stringency over the preceding model year. In the sections that follow, NHTSA presents the literal coefficients that define the standards curves in each model year for each alternative that corresponds to these percentage rates.

[323] Because NHTSA does not receive final model year data in the same format from EPA as manufacturers submit their pre-model year data and final model year data to the agency, NHTSA cannot simply remove Excel rows with dedicated vehicles as the agency did to create its MY 2022 and MY 2024 Market Data Input Files. For purposes of this analysis, NHTSA believes that final model year data are the appropriate source to use.

Table III-3: Regulatory Alternatives Under Consideration for MYs 2022-2031 Passenger Cars and Light Trucks

Name of Alternative	Passenger Car Stringency Changes	Light Truck Stringency Changes
No-Action Alternative	1.5% for MY 2023 8% per year for MYs 2024-2025 10% for MY 2026 2% per year for MYs 2027-2031	1.5% for MY 2023 8% per year for MYs 2024-2025 10% for MY 2026 0% per year for MYs 2027-2028 2% per year for MYs 2029-2031
Alternative 1	80% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.1% for MY 2027 0.3% for MY 2028** 0.25% per year for MYs 2029-2031	80% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.8% for MY 2027 0.6% for MY 2028** 0.25% per year for MYs 2029-2031
Alternative 2 (Preferred)	75% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.35% for MY 2027 0.25% for MY 2028** 0.25% per year for MYs 2029-2031	70% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.7% for MY 2027 0.25% for MY 2028** 0.25% per year for MYs 2029-2031
Alternative 3	70% compliance share* MY 2022 0.50% per year for MYs 2023-2026 1.4% for MY 2027 1.5% for MY 2028** 1% per year for MYs 2029-2031	50% compliance share* MY 2022 0.50% per year for MYs 2023-2026 0.4% for MY 2027 0.2% for MY 2028** 1% per year for MYs 2029-2031
* Compliance shares were determined based on the production-weighted share of vehicles that met or exceeded their target function value for each regulatory alternative in MY 2022. ** Stringency change reflects the growth rate in class average standard value from MYs 2027-2028.		

The following subchapters define the regulatory alternatives (including the No-Action Alternative) by time period and provide details on how NHTSA developed them.

1. No-Action Alternatives for Passenger Cars and Light Trucks

a. No-Action Alternative for MYs 2022–2026 Amendment

The analysis of the No-Action Alternative assumes that the following CAFE standards remain in place: the CAFE standards for MYs 2022–2023 that were finalized in the 2020 final rule,[324] and the CAFE standards for MYs 2024–2026 that were finalized in the 2022 final rule.[325] The analysis also applies the statutory limitations in 49 U.S.C. 32902(h) in all model years in the analysis; specifically, the fuel economy of dedicated automobiles is not considered, dual-fueled automobiles are considered only when operated on gasoline or diesel fuel, and the trading, transferring, or availability of credits is not considered.

The No-Action Alternative standards for the existing MYs 2022–2026 passenger car and light truck fleets are defined by the following coefficients:

Table III-4: Passenger Car CAFE Target Function Coefficients for the No-Action Alternative for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	50.24	51.00	55.44	60.26	66.95
b (mpg)	37.59	38.16	41.48	45.08	50.09
c (gpm per s.f)	0.00044662	0.00043992	0.00040473	0.00037235	0.00033512
d (gpm)	0.00159413	0.00157022	0.00144460	0.00132903	0.00119613

[324] 85 FR 24174 (Apr. 30, 2020).

[325] 87 FR 25710 (May 2, 2022).

Table III-5: Light Truck CAFE Target Function Coefficients for the No-Action Alternative for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	40.31	40.93	44.48	48.35	53.73
b (mpg)	26.02	26.42	26.74	29.07	32.3
c (gpm per s.f)	0.00049869	0.00049121	0.00045191	0.00041576	0.00037418
d (gpm)	0.00436016	0.00429476	0.00395118	0.00363509	0.00327158

These equations are represented graphically below, where the x-axis represents vehicle footprint and the y-axis represents fuel economy.

Figure III-1: No-Action Alternative, Passenger Car Fuel Economy, Target Curves for the MYs 2022-2026 Amendment

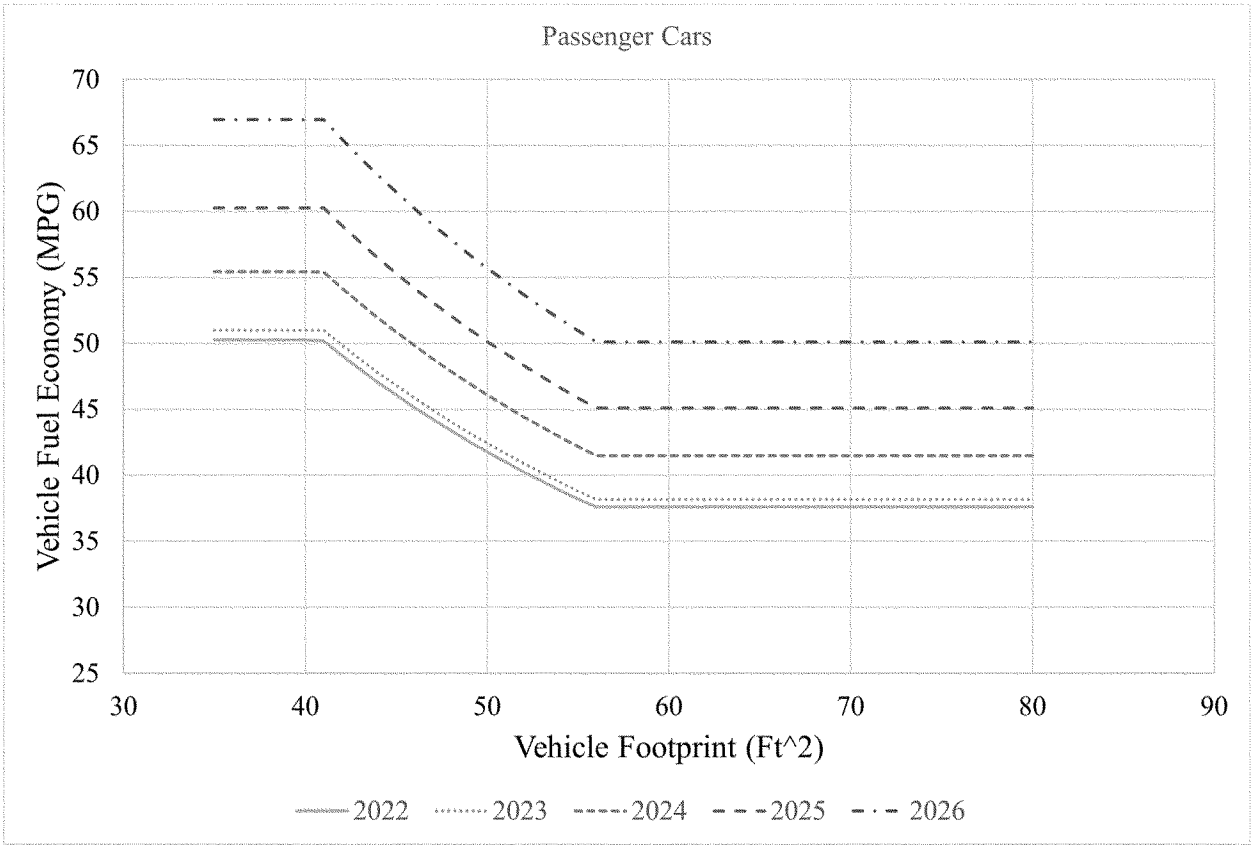
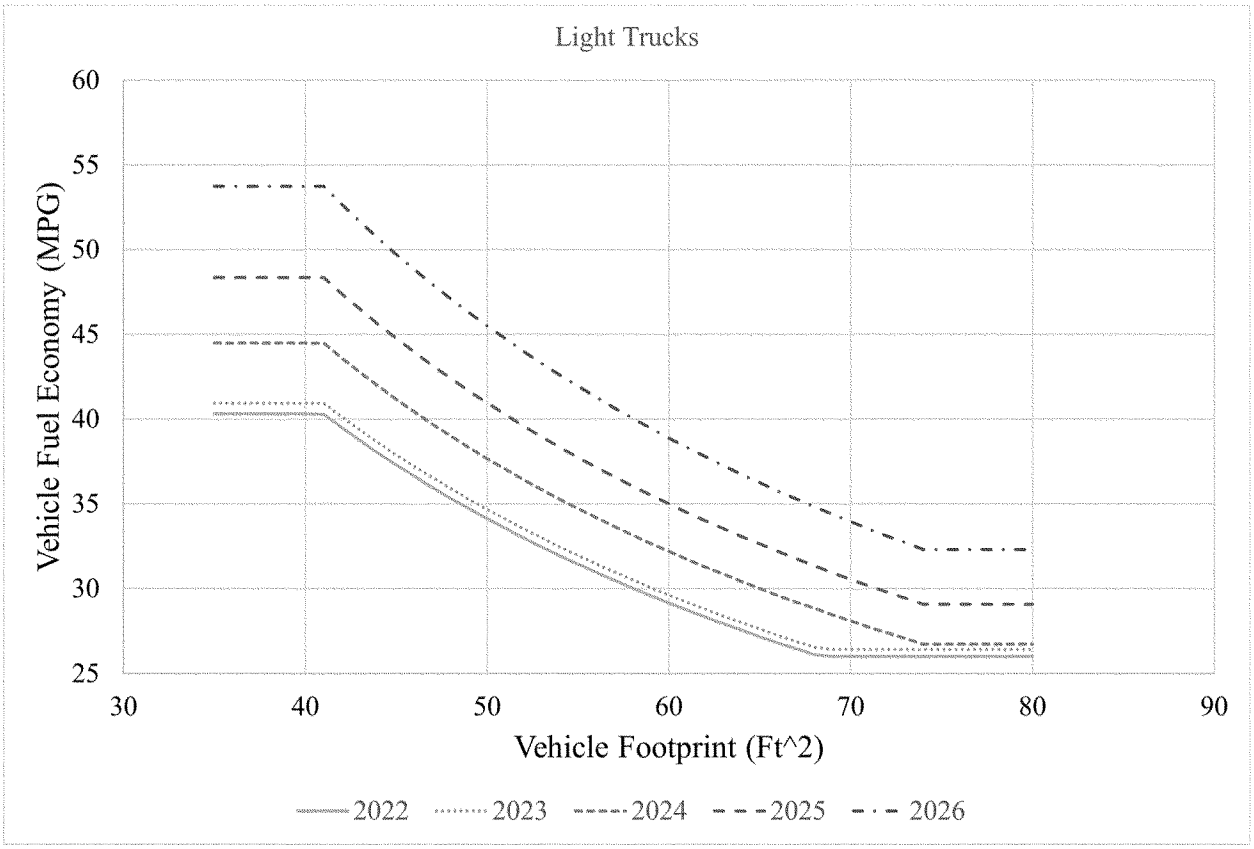


Figure III-2: No-Action Alternative, Light Truck Fuel Economy, Target Curves for the MYs 2022-2026 Amendment



For the No-Action Alternative for MYs 2022–2026, the MDPCS is applied as it was established in the 2020 and 2022 final rules, including the offset originally calculated in those rules to account for recent projection errors as part of estimating the total passenger car fleet fuel economy standard.

Table III-6: No-Action Alternative – MDPCS (MPG) for the MYs 2022-2026 Amendment

2022	2023	2024	2025	2026
40.6	41.1	44.3	48.1	53.5

b. No-Action Alternative for MYs 2027–2031 Amendment

The analysis of the No-Action Alternative assumes the following CAFE standards remain in place: the CAFE standards for MYs 2024–2026 that were finalized in the 2022 final rule [326] and the CAFE standards for MYs 2027–2031 that were finalized in the 2024 final rule.[327] The analysis also applies the statutory limitations in 49 U.S.C. 32902(h) in all model years in the analysis; specifically, the fuel economy of dedicated automobiles is not considered, dual-fueled automobiles are considered only as operated on gasoline or diesel fuel, and the trading, transferring, or availability of credits is not considered.

The No-Action Alternative standards for the existing MYs 2027–2031 passenger car and light truck fleets are defined by the following coefficients, which (for the purposes of this analysis) are assumed to persist without change in subsequent model years:

[326] 87 FR 25710 (May 2, 2022).

[327] 89 FR 52540 (June 24, 2024).

Table III-7: Passenger Car CAFE Target Function Coefficients for the No-Action Alternative for the MYs 2027-2031 Amendment

	2027	2028	2029	2030	2031
a (mpg)	68.32	69.71	71.14	72.59	74.07
b (mpg)	51.12	52.16	53.22	54.31	55.42
c (gpm per s.f)	0.00032841	0.00032184	0.00031541	0.00030910	0.00030292
d (gpm)	0.00117220	0.00114876	0.00112579	0.00110327	0.00108120

Table III-8: Light Truck CAFE Target Function Coefficients for the No-Action Alternative for the MYs 2027-2031 Amendment

	2027	2028	2029	2030	2031
a (mpg)	53.73	53.73	54.82	55.94	57.08
b (mpg)	32.30	32.30	32.96	33.63	34.32
c (gpm per s.f)	0.00037418	0.00037418	0.00036670	0.00035936	0.00035218
d (gpm)	0.00327158	0.00327158	0.00320615	0.00314202	0.00307918

These equations are represented graphically below:

These equations are represented graphically below:

Figure III-3: No-Action Alternative, Passenger Car Fuel Economy, Target Curves for the MYs 2027-2031 Amendment

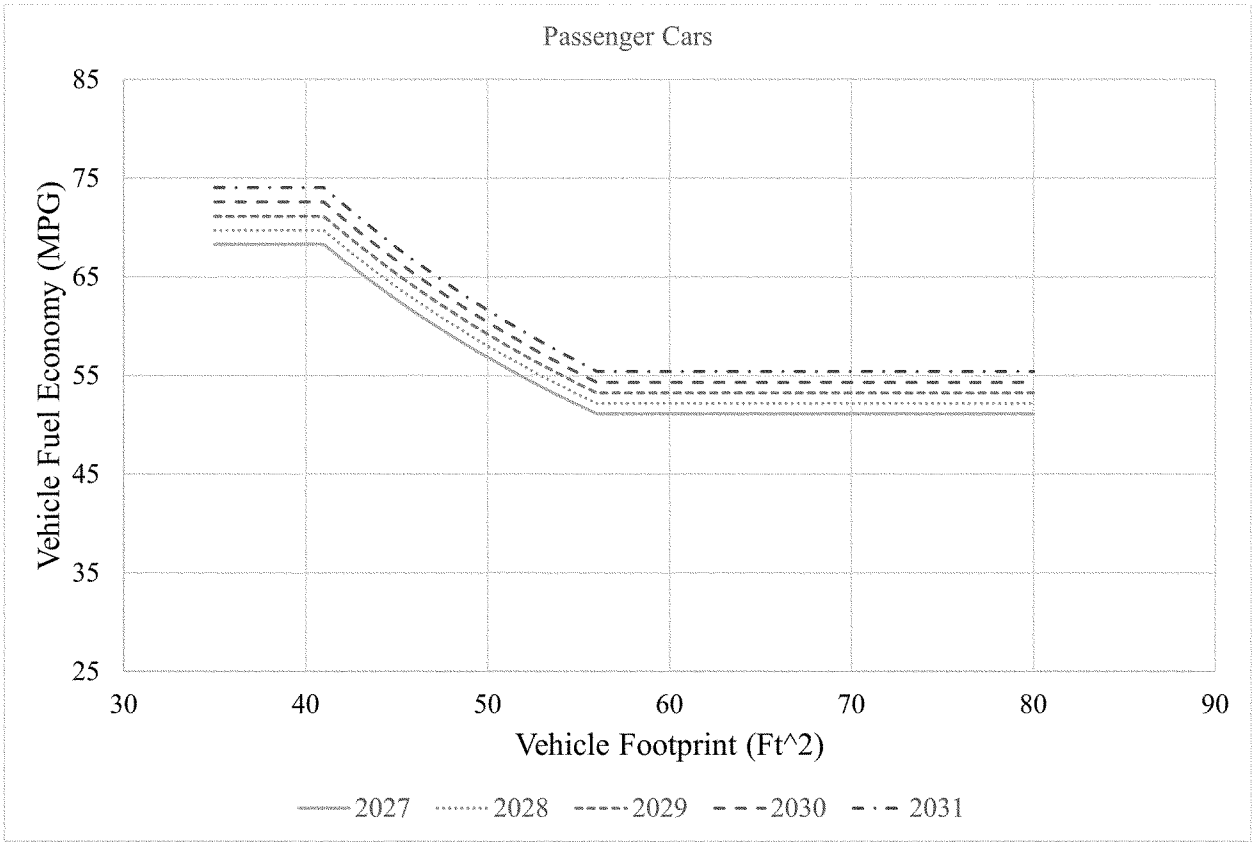
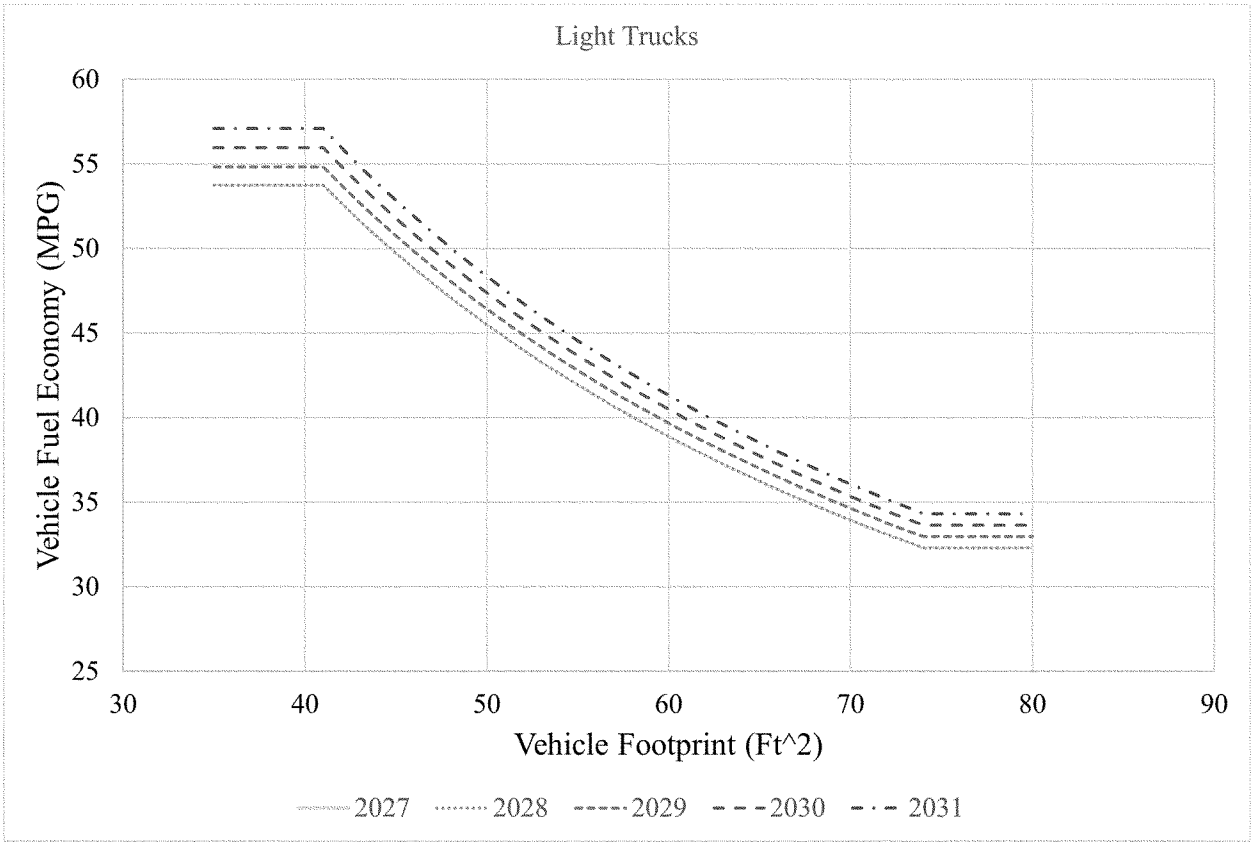


Figure III-4: No-Action Alternative, Light Truck Fuel Economy, Target Curves for the MYs 2027-2031 Amendment[328]



For the No-Action Alternative for MYs 2027–2031, the MDPCS is applied as it was established in the 2024 final rule.

Table III-9: No-Action Alternative – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2027-2031 Amendment

2027	2028	2029	2030	2031
54.2	55.5	56.4	57.5	58.7

2. Action Alternatives for Passenger Cars and Light Trucks

In addition to the No-Action Alternative, NHTSA has considered three action alternatives for passenger cars and light trucks. These action alternatives are specified below and demonstrate different possible approaches to balancing the statutory factors applicable for setting fuel economy standards for passenger cars and light trucks, as discussed in more detail in Section V.

a. Action Alternatives for MYs 2022–2026 Amendment

(1) Alternative 1

Alternative 1 begins with a MY 2022 set of target function parameters with which 80 percent of the passenger car fleet complied in MY 2022, and with which 80 percent of light trucks complied in MY 2022. From there, Alternative 1 would increase CAFE stringency by 0.5 percent per year for MYs 2022–2026 for passenger cars and light trucks.

[328] The light truck CAFE target function coefficients established in the 2024 final rule are identical for MY 2027 and MY 2028. As a result, the MY 2027 and MY 2028 lines overlap with each other.

Table III-10: Passenger Car CAFE Target Function Coefficients for Alternative 1 for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	37.10	37.28	37.47	37.66	37.85
b (mpg)	31.62	31.78	31.94	32.10	32.26
c (gpm per s.f)	0.00042463	0.00042251	0.00042041	0.00041832	0.00041624
d (gpm)	0.00869688	0.00865362	0.00861056	0.00856772	0.00852510

Table III-11: Light Truck CAFE Target Function Coefficients for Alternative 1 for the MYs 2022-2026

	2022	2023	2024	2025	2026
a (mpg)	33.96	34.12	34.30	34.47	34.64
b (mpg)	19.78	19.88	19.98	20.08	20.18
c (gpm per s.f)	0.00065929	0.00065601	0.00065275	0.00064950	0.00064627
d (gpm)	0.00176047	0.00175171	0.00174300	0.00173432	0.00172570

These equations are represented graphically below:

Figure III-5: Alternative 1, Passenger Car Fuel Economy, Target Curves for the MYs 2022-2026 Amendment

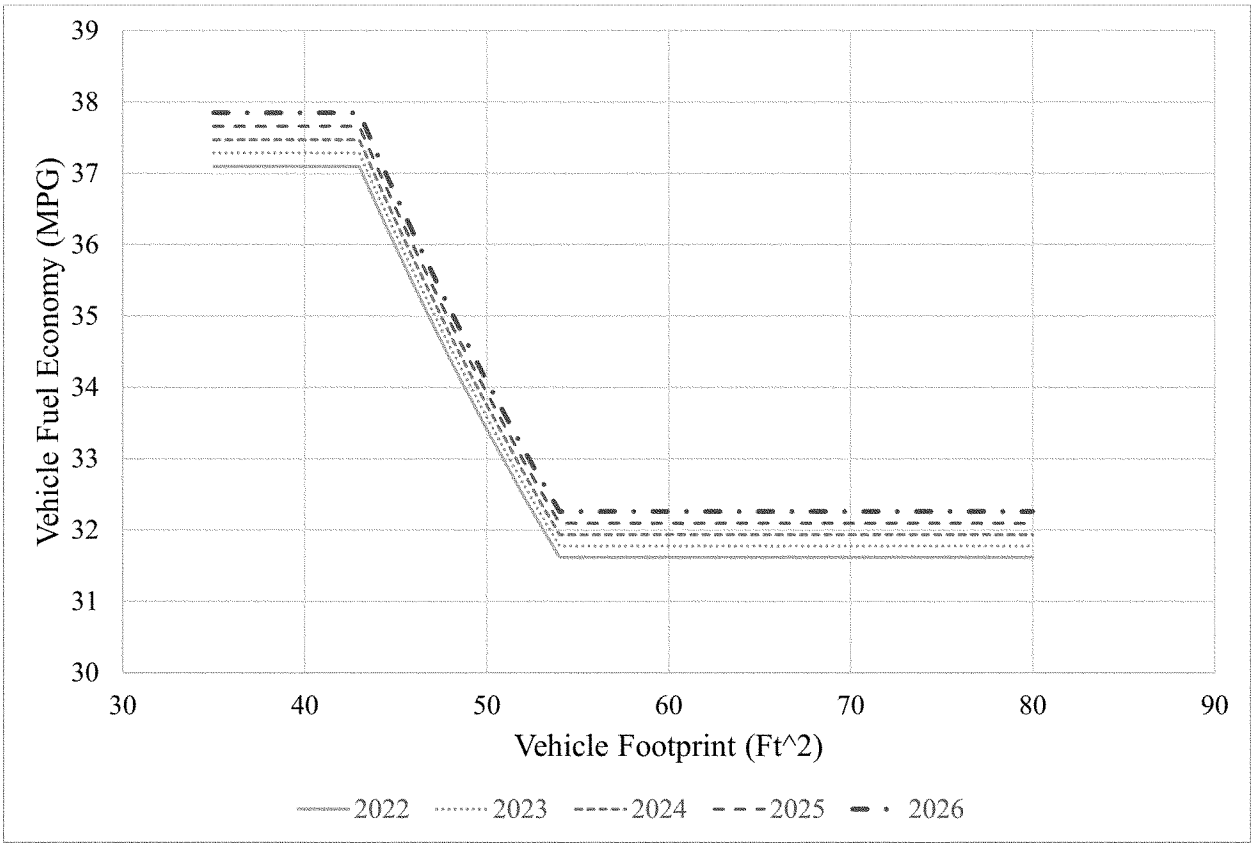
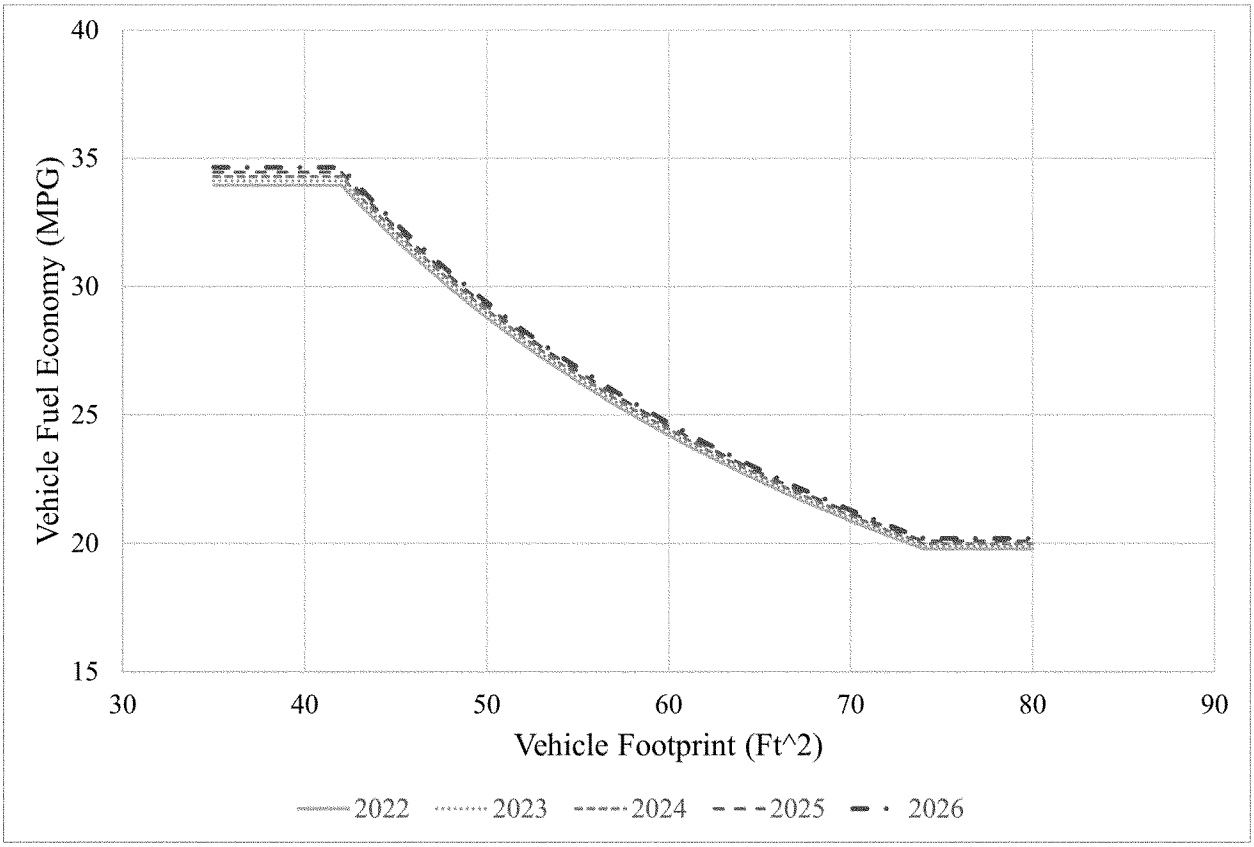


Figure III-6: Alternative 1, Light Truck Fuel Economy, Target Curves for the MYs 2022-2026 Amendment



Under this alternative, the MDPCS is as follows:

Table III-12: Alternative 1 – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2022-2026 Amendment

2022	2023	2024	2025	2026
32.2	32.2	32.6	32.8	33.0

(2) Alternative 2—Preferred Alternative

The Preferred Alternative begins with a MY 2022 set of target function parameters with which 75 percent of the passenger car fleet complied in MY 2022, and with which 70 percent of light trucks complied in MY 2022. From there, the Preferred Alternative would increase CAFE stringency by 0.5 percent per year for MYs 2022–2026 for passenger cars and light trucks.

Table III-13: Passenger Car CAFE Target Function Coefficients for Alternative 2 for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	38.14	38.33	38.52	38.71	38.91
b (mpg)	32.51	32.67	32.83	33.00	33.16
c (gpm per s.f)	0.00041302	0.00041097	0.00040892	0.00040689	0.00040487
d (gpm)	0.00845926	0.00841718	0.00837530	0.00833363	0.00829217

Table III-14: Light Truck CAFE Target Function Coefficients for Alternative 2 for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	34.89	35.06	35.24	35.41	35.59
b (mpg)	20.33	20.43	20.53	20.63	20.74
c (gpm per s.f)	0.00064166	0.00063847	0.00063529	0.00063213	0.00062899
d (gpm)	0.00171340	0.00170487	0.00169639	0.00168795	0.00167955

These equations are represented graphically below:

Figure III-7: Alternative 2, Passenger Car Fuel Economy, Target Curves for the MYs 2022-2026 Amendment

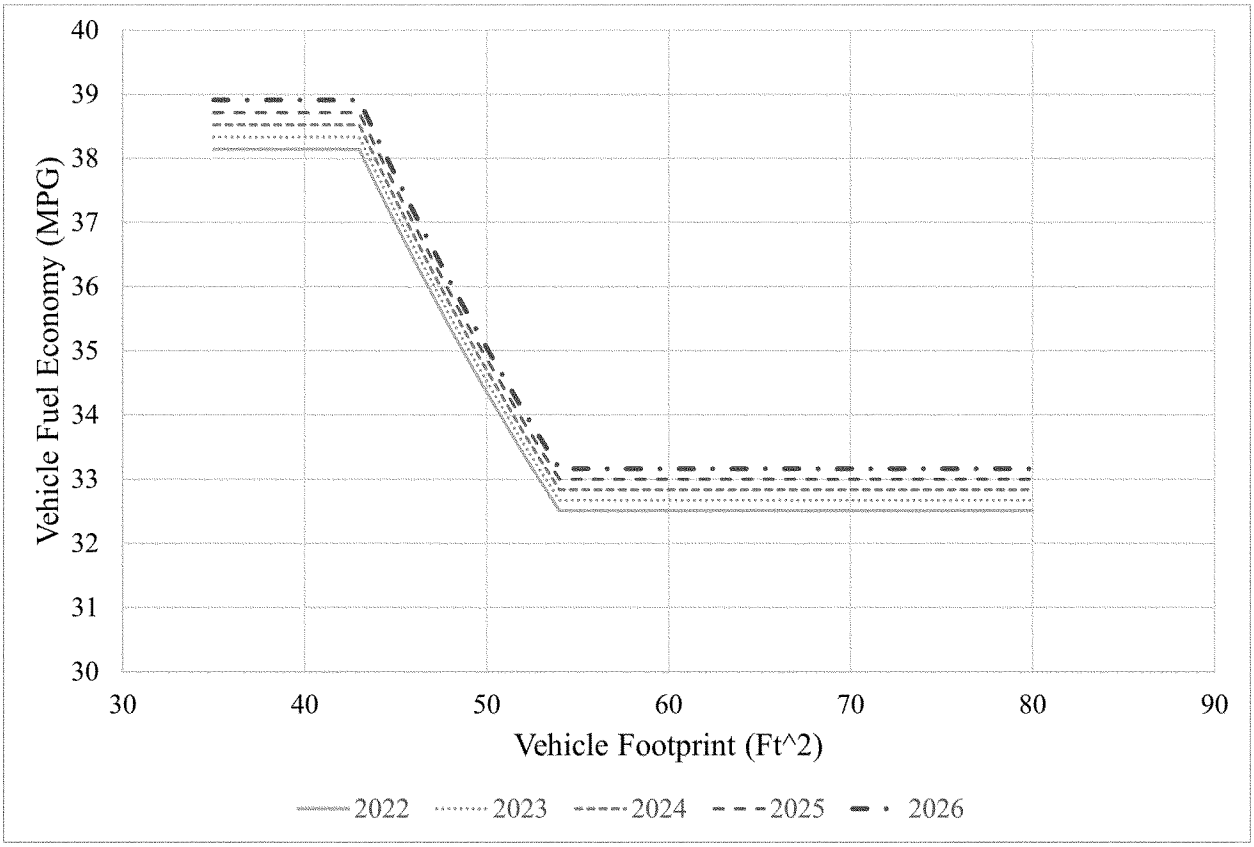
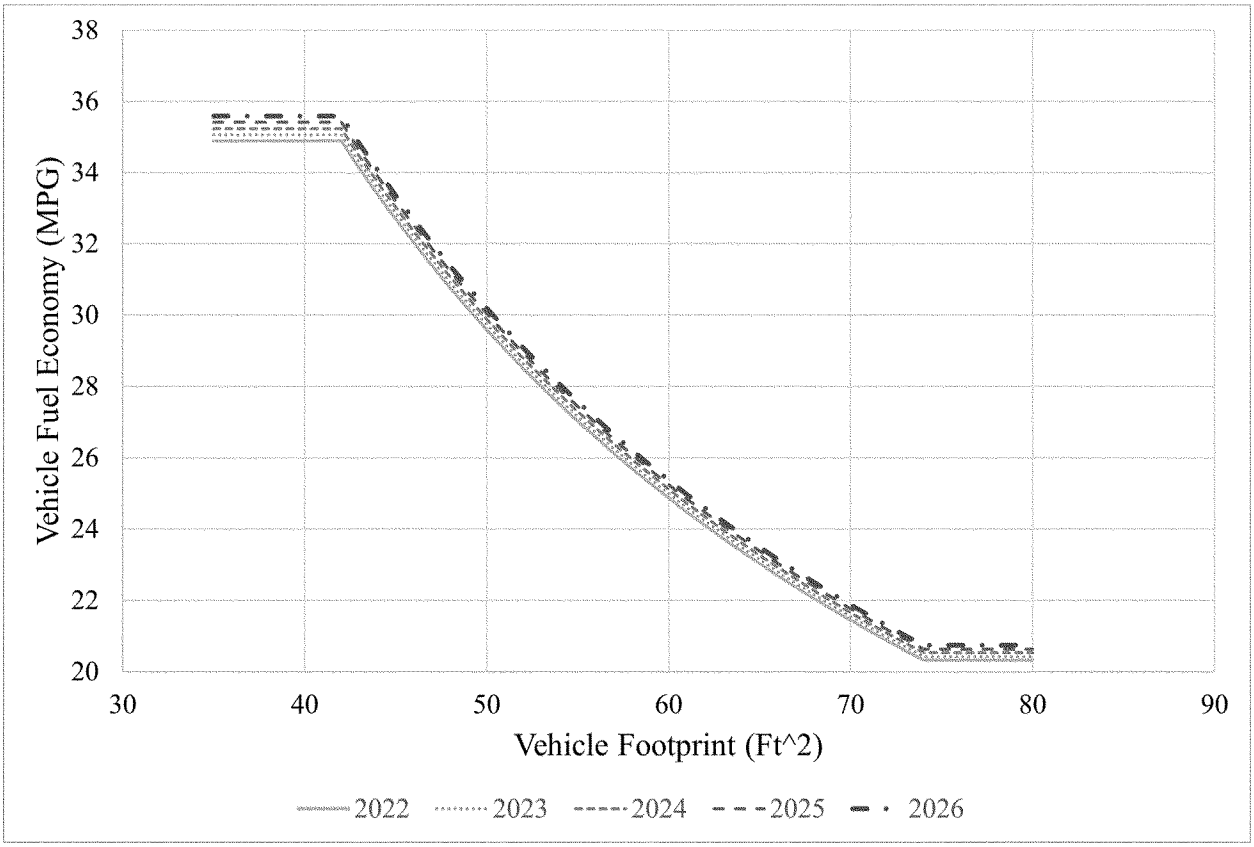


Figure III-8: Alternative 2, Light Truck Fuel Economy, Target Curves for the MYs 2022-2026 Amendment



Under this alternative, the MDPCS is as follows:

Table III-15: Alternative 2 – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2022-2026 Amendment

2022	2023	2024	2025	2026
33.1	33.1	33.5	33.7	33.9

(3) Alternative 3

Alternative 3 begins with a MY 2022 set of target function parameters with which 70 percent of the passenger car fleet complied in MY 2022, and with which 50 percent of light trucks complied in MY 2022. From there, Alternative 3 would increase CAFE stringency by 0.5 percent per year for MYs 2022–2026 for passenger cars and light trucks.

Table III-16: Passenger Car CAFE Target Function Coefficients for Alternative 3 for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	39.60	39.80	40.00	40.20	40.40
b (mpg)	33.75	33.92	34.09	34.26	34.43
c (gpm per s.f)	0.00039781	0.00039583	0.00039386	0.00039190	0.00038995
d (gpm)	0.00814761	0.00810707	0.00806674	0.00802660	0.00798667

Table III-17: Light Truck CAFE Target Function Coefficients for Alternative 3 for the MYs 2022-2026 Amendment

	2022	2023	2024	2025	2026
a (mpg)	37.31	37.50	37.69	37.88	38.07
b (mpg)	21.74	21.85	21.96	22.07	22.18
c (gpm per s.f)	0.00059995	0.00059697	0.00059400	0.00059104	0.00058810
d (gpm)	0.00160203	0.00159406	0.00158613	0.00157824	0.00157038

Table III-18: Alternative 3 – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2022-2026 Amendment

2022	2023	2024	2025	2026
34.4	34.4	34.8	35.0	35.2

These equations are represented graphically below:

Figure III-9: Alternative 3, Passenger Car Fuel Economy, Target Curves for the MYs 2022-2026 Amendment

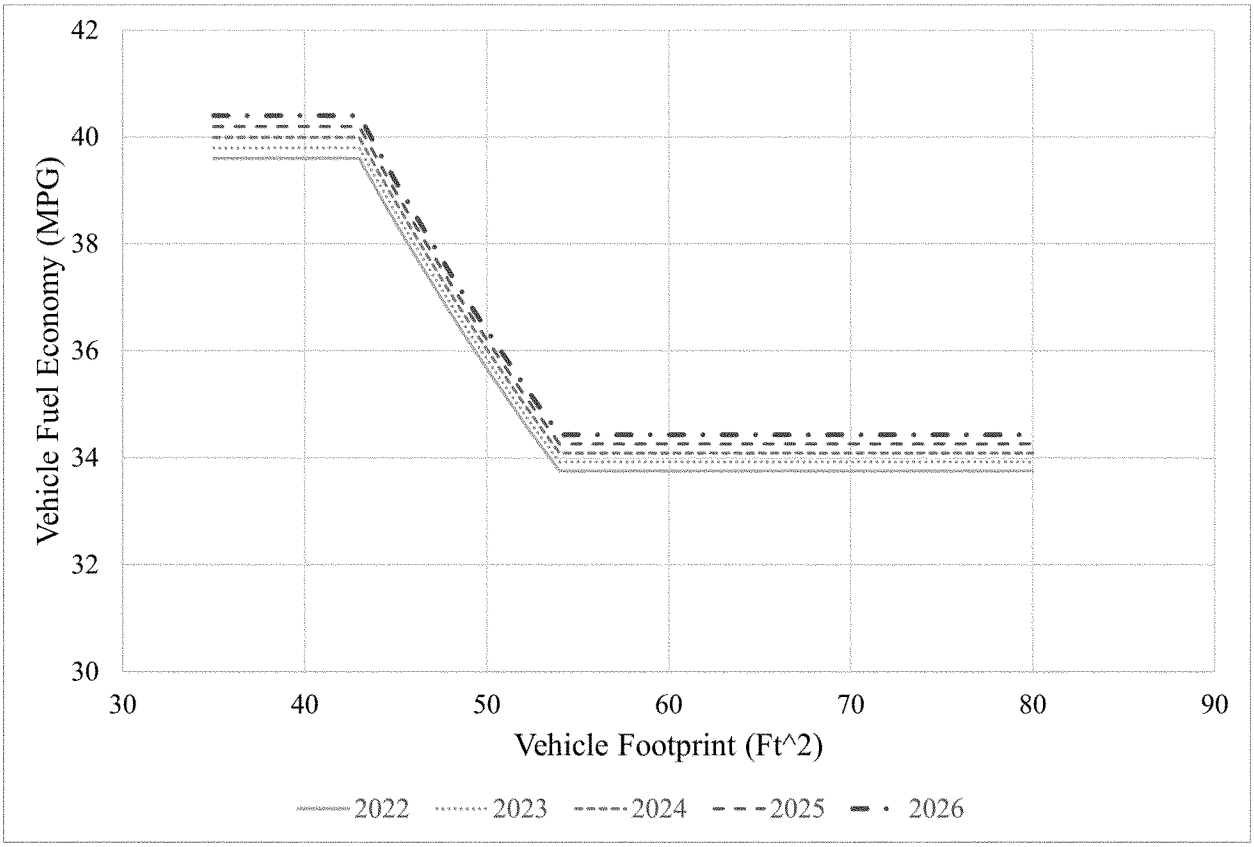
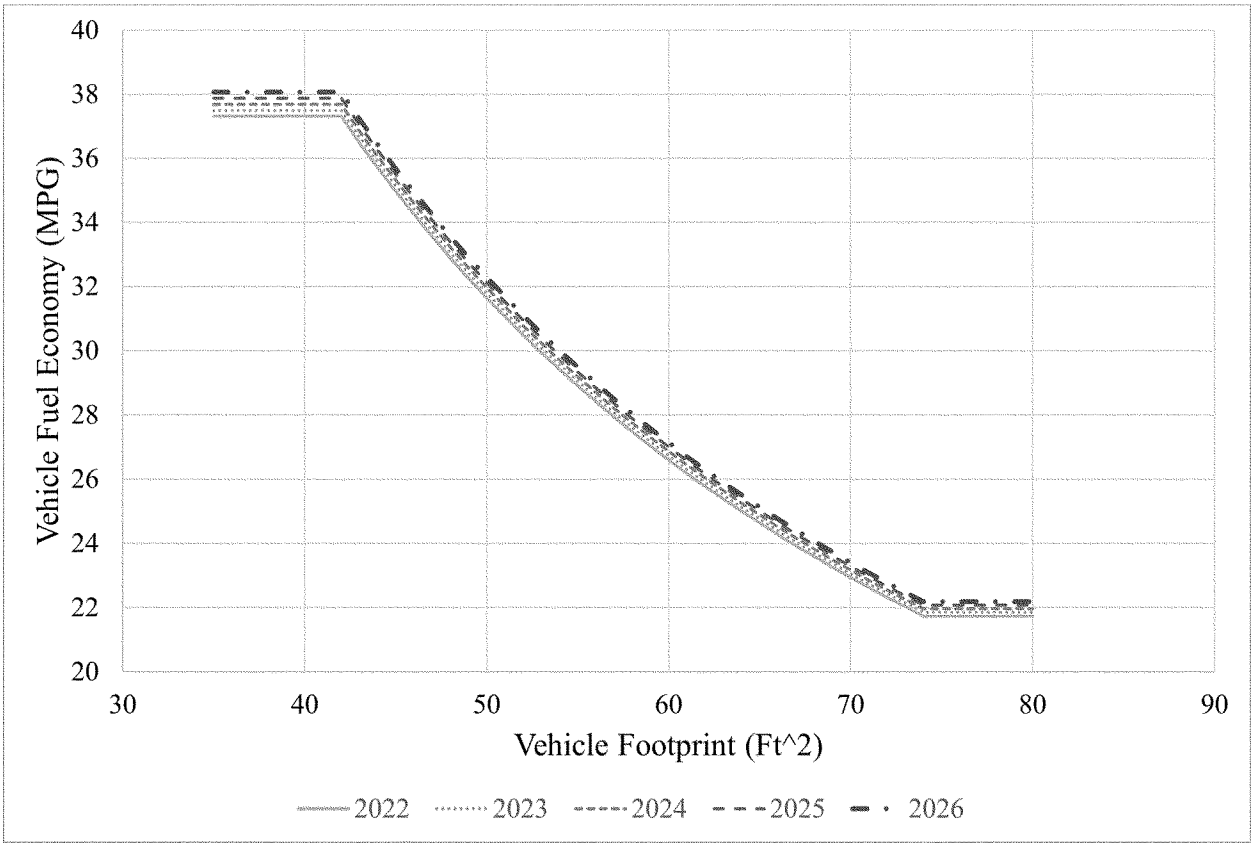


Figure III-10: Alternative 3, Light Truck Fuel Economy, Target Curves for the MYs 2022-2026 Amendment



b. Action Alternatives for MYs 2027–2031 Amendment

(1) Alternative 1

Alternative 1 would increase CAFE stringency for passenger cars by 0.1 percent from MYs 2026–2027, by 0.3 percent from MYs 2027–2028, and 0.25 percent per year for MYs 2029–2031. Alternative 1 would increase CAFE stringency for light trucks by 0.8 percent from MYs 2026–2027, by 0.6 percent from MYs 2027–2028, and by 0.25 percent year over year for MYs 2029–2031.

Table III-19: Passenger Car CAFE Target Function Coefficients for Alternative 1 for the MYs 2027-2031 Amendment

	2027	2028	2029	2030	2031
a (mpg)	37.89	39.37	39.47	39.57	39.67
b (mpg)	32.29	29.48	29.56	29.63	29.71
c (gpm per s.f)	0.00041574	0.00070967	0.00070790	0.00070613	0.00070436
d (gpm)	0.00851494	-0.00653427	-0.00651793	-0.00650164	-0.00648539

Table III-20: Light Truck CAFE Target Function Coefficients for the Alternative 1 for the MYs 2027-2031

	2027	2028	2029	2030	2031
a (mpg)	34.91	30.75	30.83	30.91	30.98
b (mpg)	20.34	25.34	25.41	25.47	25.53
c (gpm per s.f)	0.00064119	0.00038562	0.00038465	0.00038369	0.00038273
d (gpm)	0.00171212	0.01246562	0.01243445	0.01240337	0.01237236

These equations are represented graphically below. Note that the shapes of the curves for MY 2027 are also different from the shapes of the curves for MYs 2028–2031 due to the proposed reclassification in MY 2028.

Figure III-11: Alternative 1, Passenger Car Fuel Economy, Target Curves for the MYs 2027-2031 Amendment

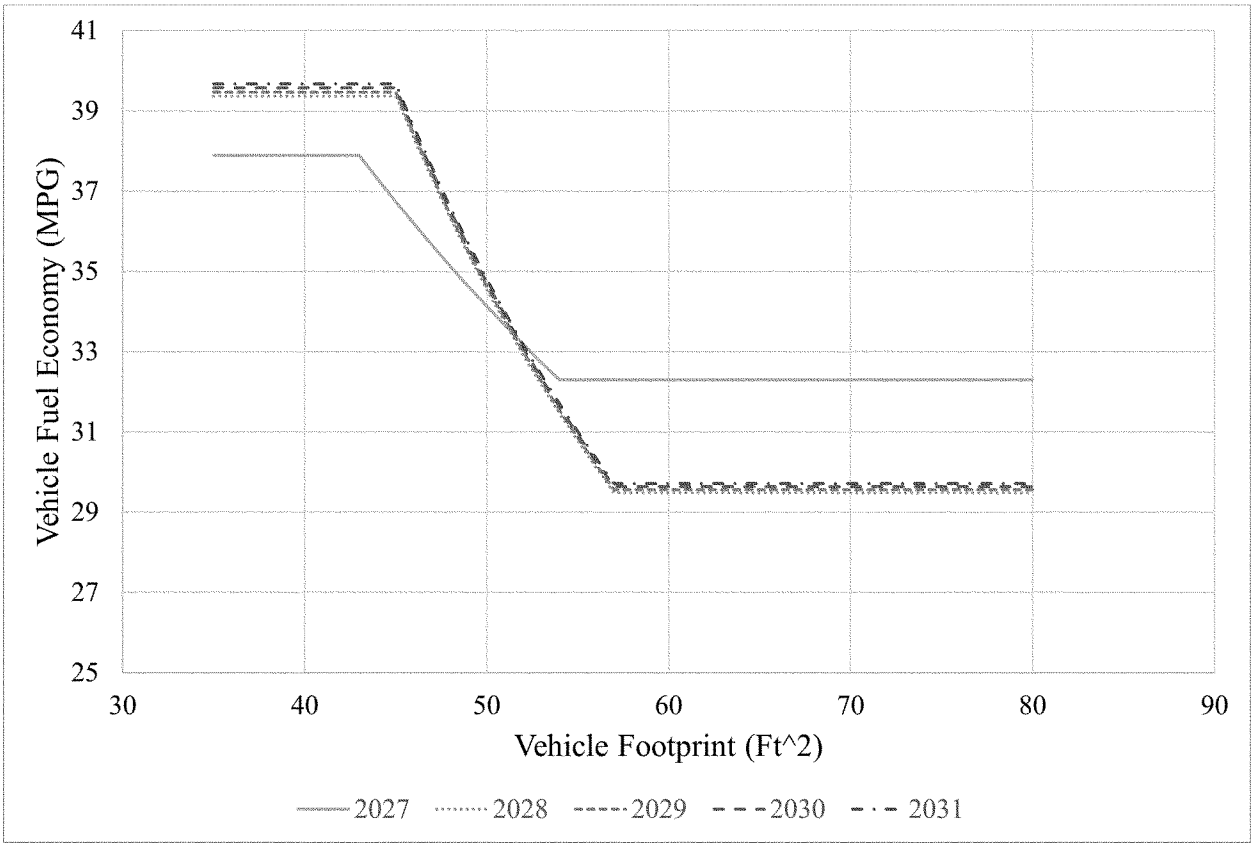
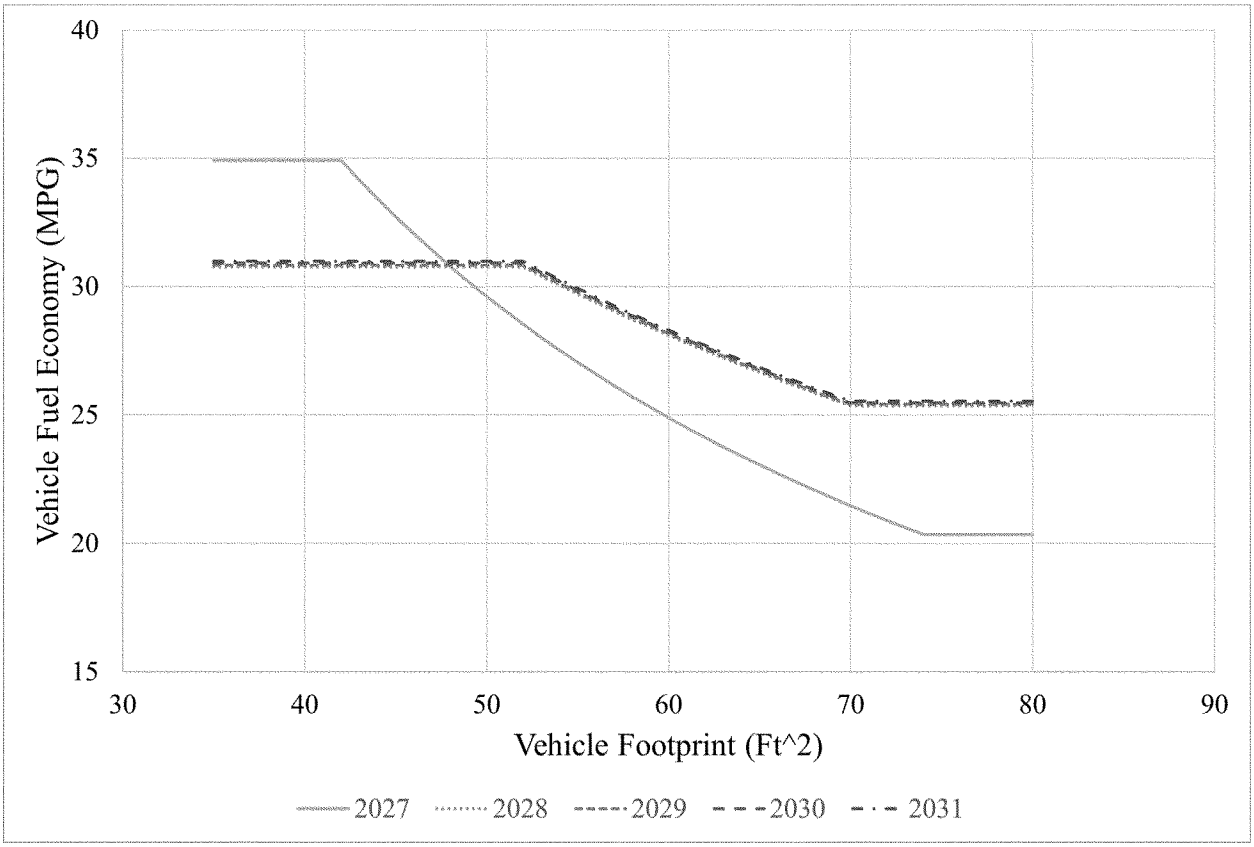


Figure III-12: Alternative 1, Light Truck Fuel Economy, Target Curves for the MYs 2027-2031 Amendment



For this rulemaking, NHTSA has updated the analysis it uses to estimate the offset and calculated an offset of 0.7 percent, which will be applicable to the MDPCS for each action alternative in MYs 2027–2031. Under this alternative, the MDPCS is as follows:

Table III-21: Alternative 1 – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2027-2031 Amendment

2027	2028	2029	2030	2031
33.0	33.1	33.2	33.2	33.3

(2) Alternative 2—Preferred Alternative

The Preferred Alternative would increase CAFE stringency for passenger cars by 0.35 percent from MYs 2026–2027, by 0.25 percent from MYs 2027–2028, and 0.25 percent per year for MYs 2029–2031. The Preferred Alternative would increase CAFE stringency for LTs by 0.7 percent from MYs 2026–2027, by 0.25 percent from MYs 2027–2028, and by 0.25 percent per year for MYs 2029–2031.

Table III-22: Passenger Car CAFE Target Function Coefficients for Alternative 2 for the MYs 2027-2031 Amendment

	2027	2028	2029	2030	2031
a (mpg)	39.04	40.57	40.67	40.78	40.88
b (mpg)	33.28	30.38	30.46	30.54	30.61
c (gpm per s.f)	0.00040346	0.00068863	0.00068691	0.00068519	0.00068348
d (gpm)	0.00826345	-0.00634053	-0.00632468	-0.00630887	-0.00629310

Table III-23: Light Truck CAFE Target Function Coefficients for Alternative 2 for the MYs 2027-2031

	2027	2028	2029	2030	2031
a (mpg)	35.84	31.45	31.53	31.61	31.69
b (mpg)	20.88	25.92	25.99	26.05	26.12
c (gpm per s.f)	0.00062460	0.00037701	0.00037607	0.00037513	0.00037419
d (gpm)	0.00166784	0.01218745	0.01215698	0.01212659	0.01209627

These equations are represented graphically below. Note that the shapes of the curves for MY 2027 are also different from the shapes of the curves for MYs 2028–2031 due to the proposed reclassification in MY 2028.

Figure III-13: Alternative 2, Passenger Car Fuel Economy, Target Curves for the MYs 2027-2031 Amendment

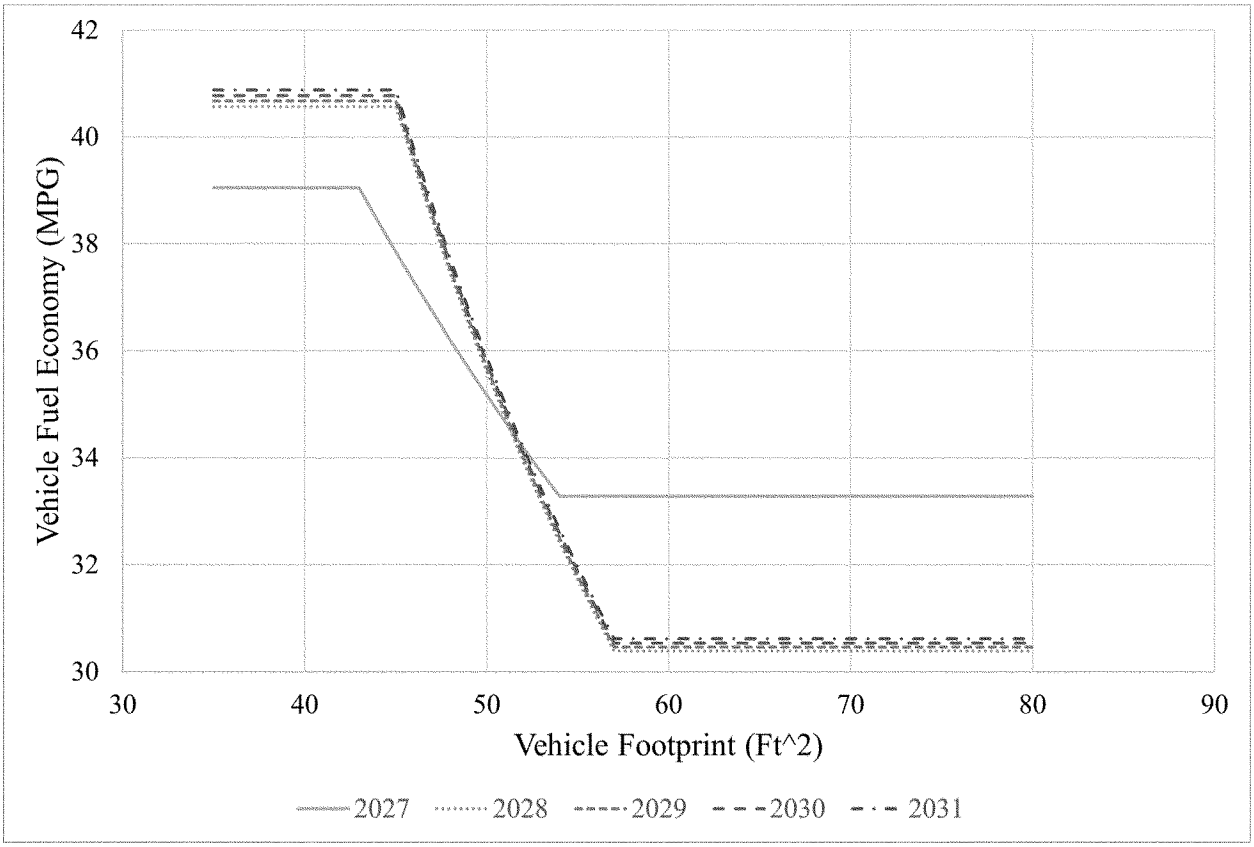
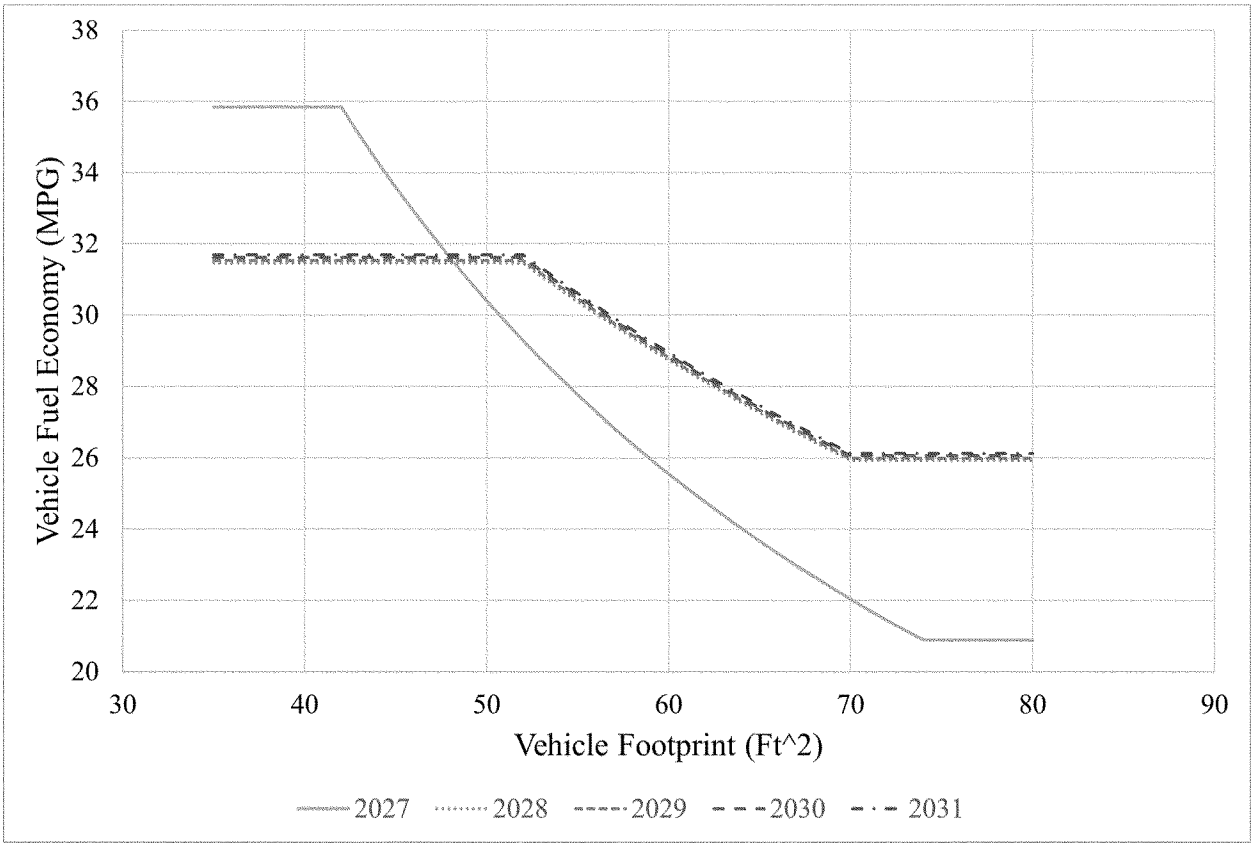


Figure III-14: Alternative 2, Light Truck Fuel Economy, Target Curves for the MYs 2027-2031 Amendment



For this rulemaking, NHTSA has updated the analysis it uses to estimate the offset applied to the MDPCS, which is now calculated at 0.7 percent and is applied to each action alternative in MYs 2027–2031. Under this alternative, the MDPCS is as follows:

Table III-24: Alternative 2 – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2027-2031 Amendment

2027	2028	2029	2030	2031
34.0	34.1	34.2	34.2	34.3

(3) Alternative 3

Alternative 3 would increase CAFE stringency for passenger cars by 1.4 percent from MYs 2026–2027, by 1.5 percent from MYs 2027–2028, and 1.0 percent year over year for MYs 2029–2031. Alternative 3 would increase CAFE stringency for LTs by 0.4 percent from MYs 2026–2027, by 0.2 percent from MYs 2027–2028, and by 1.0 percent year over year for MYs 2029–2031.

Table III-25: Passenger Car CAFE Target Function Coefficients for Alternative 3 for the MYs 2027-2031 Amendment

	2027	2028	2029	2030	2031
a (mpg)	40.96	43.09	43.52	43.96	44.41
b (mpg)	34.91	32.27	32.59	32.92	33.26
c (gpm per s.f)	0.00038460	0.00064843	0.00064195	0.00063553	0.00062917
d (gpm)	0.00787715	-0.00597040	-0.00591070	-0.00585159	-0.00579307

Table III-26: Light Truck CAFE Target Function Coefficients for Alternative 3 for the MYs 2027-2031 Amendment

	2027	2028	2029	2030	2031
a (mpg)	38.21	33.52	33.86	34.20	34.54
b (mpg)	22.26	27.62	27.90	28.18	28.47
c (gpm per s.f)	0.00058580	0.00035380	0.00035026	0.00034676	0.00034329
d (gpm)	0.00156423	0.01143710	0.01132273	0.01120950	0.01109741

These equations are represented graphically below. Note that the shapes of the curves for MY 2027 are also different from the shapes of the curves for MYs 2028–2031 due to the proposed reclassification in MY 2028.

Figure III-15: Alternative 3, Passenger Car Fuel Economy, Target Curves for the MYs 2027-2031 Amendment

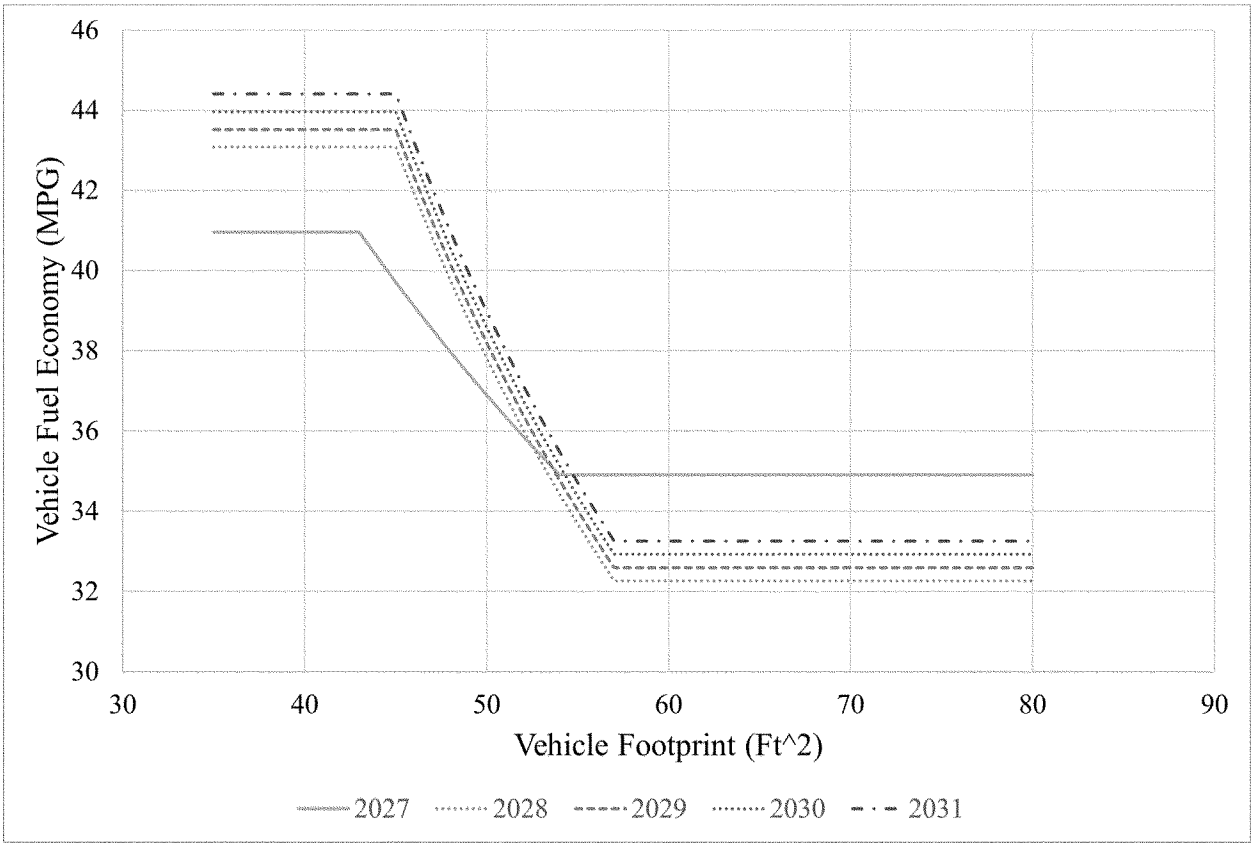
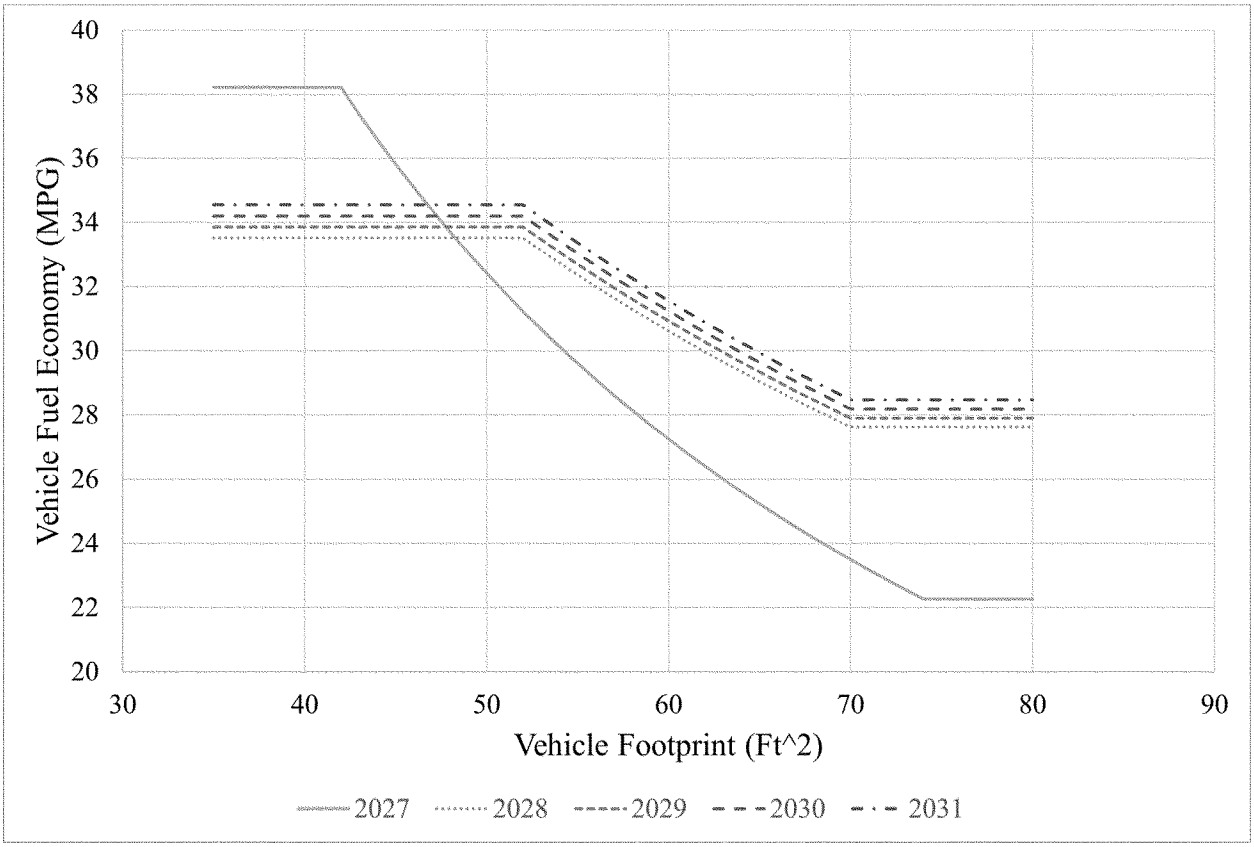


Figure III-16: Alternative 3, Light Truck Fuel Economy, Target Curves for the MYs 2027-2031 Amendment



Under this alternative, the MDPCS is as follows:

Table III-27: Alternative 3 – Minimum Domestic Passenger Car Standard (MDPCS) (MPG) for the MYs 2027-2031 Amendment

2027	2028	2029	2030	2031
35.7	36.2	36.6	36.9	37.3

IV. Effects of the Regulatory Alternatives

A. Effects of the Regulatory Alternatives for MYs 2022–2026

NHTSA does not estimate any impacts from changes to the MY 2022–2026 standards other than the difference between the estimated achieved compliance value and the proposed standard for each manufacturer's fleet. At the time of the proposal, manufacturers have already produced fleets for MYs 2022–2025, either partially or completely. Furthermore, manufacturers have already made vehicle design decisions related to their MY 2026 fleets, leaving them limited options to adjust their production for that year in response to the proposed standards. As a result, NHTSA's proposed standards are expected to have no impact on manufacturers' production decisions. Similarly, new vehicles produced for MYs 2022–2024 have already been purchased, as have, at the time of this proposal, most new vehicles produced in MY 2025. While manufacturers may adjust prices for vehicles produced in MYs 2025–2026 in response to the proposed standards, modeling such price changes would require significant speculation about how manufacturers will make decisions regarding their pricing strategies.

Table IV–1 through Table IV–9 present compliance gaps for domestic passenger cars, imported passenger cars, and non-passenger automobile fleets for MYs 2022–2024, comparing the fuel economy levels that have been achieved to those that would have been achieved under the standards contemplated by NHTSA.

Table IV-1: Manufacturer Compliance Positions, Domestic Passenger Car, MY 2022[329]

Manufacturer	Achieved Fuel Economy (mpg)[330]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
Ford	34.6	44.1	34.8	35.8	37.2
GM	35.7	44.0	34.7	35.7	37.1
Honda	43.4	44.7	35.2	36.2	37.5
Hyundai	50.7	48.7	37.1	38.1	39.6
Karma	32.8	40.9	32.2	33.1	34.4
KIA	45.0	45.8	35.8	36.8	38.2
Nissan	41.7	44.5	35.0	36.0	37.4
Stellantis	27.8	41.3	33.2	34.1	35.4
Toyota	41.0	43.0	34.2	35.1	36.5
Volvo	39.3	42.2	33.7	34.7	36.0
VWA	32.8	41.4	33.3	34.3	35.6
Industry	39.1	44.1	34.8	35.8	37.1

[329] Domestic passenger car standard equals the larger of two values: the value computed based on the manufacturer's domestic passenger car fleet, and the minimum domestic passenger car standard for the model year. The minimum domestic passenger car standard is set equal to 92 percent of the average fuel economy for the entire passenger car fleet in the model year as projected by NHTSA when the standards are promulgated.

[330] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

Table IV-2: Manufacturer Compliance Positions, Imported Passenger Car, MY 2022

Manufacturer	Achieved Fuel Economy (mpg)[331]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
BMW	33.9	43.2	34.3	35.2	36.6
GM	41.1	47.1	36.4	37.4	38.9
Honda	29.4	44.9	35.3	36.3	37.6
Hyundai	40.8	44.2	34.9	35.8	37.2
JLR	29.4	43.1	34.2	35.2	36.5
KIA	40.5	44.5	35.0	36.0	37.4
Mazda	39.5	46.1	35.7	36.7	38.1
Mercedes-Benz	32.7	41.9	33.6	34.5	35.8
Mitsubishi	41.0	47.0	36.1	37.1	38.5
Nissan	41.9	45.1	35.4	36.4	37.8
Stellantis	32.2	44.8	35.3	36.2	37.6
Subaru	37.0	45.9	35.9	36.9	38.3
Toyota	44.8	45.3	35.5	36.5	37.9
Volvo	34.5	41.5	33.2	34.2	35.5
VWA	35.9	45.7	35.7	36.7	38.1
Industry	40.0	44.8	35.2	36.2	37.6

Table IV-3: Manufacturer Compliance Positions, Non-Passenger Automobile, MY 2022

Manufacturer	Achieved Fuel Economy (mpg)[332]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
BMW	28.8	32.5	27.3	28.1	30.0
Ford	28.1	30.9	25.6	26.3	28.2
GM	26.5	30.0	24.7	25.4	27.2
Honda	32.8	34.0	28.7	29.5	31.5
Hyundai	33.9	34.0	28.6	29.4	31.5
JLR	27.2	32.6	27.4	28.2	30.1
KIA	32.3	34.0	28.7	29.5	31.5
Mazda	34.3	36.0	30.6	31.4	33.6
Mercedes-Benz	29.4	32.9	27.7	28.4	30.4
Mitsubishi	35.6	37.0	31.5	32.4	34.6
Nissan	30.9	32.9	27.7	28.4	30.4
Stellantis	26.7	30.8	25.7	26.4	28.2
Subaru	36.6	36.5	31.0	31.9	34.1
Toyota	32.5	32.9	27.6	28.4	30.3
Volvo	32.1	33.4	28.1	28.9	30.9
VWA	29.7	33.9	28.6	29.4	31.5
Industry	29.8	32.3	27.0	27.7	29.6

Table IV-4: Manufacturer Compliance Positions, Domestic Passenger Car, MY 2023[333]

Manufacturer	Achieved Fuel Economy (mpg)[334]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
Ford	33.8	44.7	34.9	35.9	37.3
GM	33.5	44.3	34.7	35.7	37.0
Honda	44.5	45.0	35.1	36.1	37.5
Hyundai	40.5	44.8	35.0	36.0	37.3
Kia	41.9	45.6	35.4	36.4	37.8
Mazda	41.6	45.7	35.5	36.5	37.9
Nissan	41.5	45.2	35.2	36.2	37.6
Stellantis	26.0	41.2	32.3	33.2	34.4
Subaru	41.9	43.9	34.4	35.4	36.8
Toyota	45.1	45.6	35.5	36.5	37.9
Volvo	38.3	42.9	33.9	34.8	36.2
VWA	28.3	41.2	32.2	33.1	34.4
Industry	37.9	44.3	34.6	35.6	37.0

Table IV-5: Manufacturer Compliance Positions, Imported Passenger Car, MY 2023

Manufacturer	Achieved Fuel Economy (mpg)[335]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
BMW	33.4	44.0	34.5	35.4	36.8
Ferrari	20.4	44.0	34.6	35.5	36.9
GM	40.3	47.0	36.3	37.3	38.7
Hyundai	40.5	44.8	35.0	36.0	37.3
JLR	26.0	45.4	35.3	36.3	37.7
Kia	41.9	45.6	35.4	36.4	37.8
Mazda	39.5	47.8	36.2	37.2	38.7
Mercedes-Benz	32.8	42.7	33.9	34.8	36.2
Mitsubishi	53.0	50.9	37.3	38.3	39.8
Nissan	45.2	45.6	35.5	36.5	37.9
Stellantis	29.8	42.8	33.8	34.8	36.1
Subaru	36.7	46.5	36.0	37.0	38.4
Toyota	45.1	45.6	35.5	36.5	37.9
Volvo	34.9	42.1	33.4	34.3	35.6
VWA	35.7	46.1	35.7	36.7	38.1
Industry	40.2	45.4	35.3	36.3	37.7

Table IV-6: Manufacturer Compliance Positions, Non-Passenger Automobile, MY 2023

Manufacturer	Achieved Fuel Economy (mpg)[336]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
BMW	30.0	33.6	28.0	28.7	30.7
Ford	27.7	30.4	24.8	25.5	27.2
GM	26.0	30.4	24.8	25.5	27.3
Honda	31.9	33.6	27.9	28.7	30.7
Hyundai	31.8	34.4	28.7	29.5	31.5
INEOS	19.6	34.6	28.8	29.6	31.7
JLR	26.2	32.7	27.1	27.9	29.8
Kia	33.2	34.6	28.9	29.7	31.7
Mazda	35.0	36.4	30.6	31.4	33.6
Mercedes-Benz	27.5	33.3	27.6	28.4	30.4
Mitsubishi	35.6	37.5	31.6	32.5	34.7
Nissan	33.1	34.3	28.6	29.4	31.4
Stellantis	27.6	31.6	26.1	26.8	28.7
Subaru	35.9	37.0	31.1	32.0	34.2
Toyota	31.7	33.4	27.7	28.5	30.5
Volvo	32.1	34.1	28.5	29.2	31.3
VWA	29.7	34.4	28.7	29.5	31.5
Industry	29.7	32.7	27.0	27.7	29.6

Table IV-7: Manufacturer Compliance Positions, Domestic Passenger Car, MY 2024[337]

Manufacturer	Achieved Fuel Economy (mpg)[338]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
Ford	32.8	48.8	35.2	36.2	37.6
GM	35.3	48.4	35.0	36.0	37.4
Honda	45.2	49.1	35.4	36.4	37.8
KIA	44.3	50.6	36.2	37.2	38.6
Nissan	44.6	49.5	35.6	36.6	38.0
Toyota	42.3	47.7	34.6	35.6	36.9
Volvo	39.5	46.6	34.0	35.0	36.3
VWA	29.7	45.3	32.6	33.5	34.8
Industry	41.3	48.9	35.3	36.3	37.7

Table IV-8: Manufacturer Compliance Positions, Imported Passenger Car, MY 2024

Manufacturer	Achieved Fuel Economy (mpg)[339]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
BMW	34.2	47.5	34.5	35.5	36.8
Ferrari	21.2	47.5	34.7	35.7	37.0
GM	42.0	50.6	36.2	37.2	38.6
Hyundai	41.1	48.6	35.1	36.1	37.4
JLR	28.4	47.4	34.4	35.4	36.8
KIA	41.8	49.1	35.4	36.4	37.8
Mazda	39.9	50.6	36.0	37.0	38.4
Mercedes-Benz	34.0	46.1	33.9	34.8	36.1
Mitsubishi	53.9	55.4	37.5	38.5	40.0
Nissan	41.9	49.6	35.7	36.7	38.1
Stellantis	38.7	50.5	36.1	37.2	38.6
Subaru	36.3	50.5	36.1	37.1	38.5
Toyota	46.5	49.7	35.7	36.7	38.1
Volvo	30.5	47.7	34.6	35.6	37.0
VWA	36.7	50.7	36.1	37.2	38.6
Industry	41.2	49.5	35.6	36.6	38.0

Table IV-9: Manufacturer Compliance Positions, Non-Passenger Automobile, MY 2024

Manufacturer	Achieved Fuel Economy (mpg)[340]	Standard (mpg)			
		No-Action Alternative	Alternative 1	Alternative 2	Alternative 3
BMW	31.0	36.4	28.0	28.8	30.8
Ford	28.9	33.4	25.5	26.2	28.0
GM	26.2	32.4	24.6	25.3	27.0
Honda	34.7	37.4	28.9	29.7	31.7
Hyundai	33.1	37.4	28.9	29.7	31.8
INEOS	19.9	36.5	28.1	28.9	30.9
JLR	26.9	35.3	27.1	27.8	29.8
KIA	31.4	37.0	28.6	29.3	31.4
Mazda	34.7	38.5	29.8	30.6	32.7
Mercedes-Benz	27.4	35.8	27.5	28.2	30.2
Mitsubishi	35.9	40.8	31.8	32.6	34.9
Nissan	30.7	36.2	27.8	28.6	30.6
Stellantis	27.3	34.5	26.4	27.1	29.0
Subaru	36.1	40.3	31.4	32.3	34.5
Toyota	34.4	35.7	27.4	28.2	30.1
Volvo	33.6	37.0	28.5	29.3	31.3
VWA	30.7	37.8	29.2	30.0	32.1
Industry	30.5	35.5	27.2	27.9	29.9

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Unlike MYs 2022–2024, NHTSA is not yet in possession of pre- or mid-model year manufacturer data for MYs 2025–2026 from which to generate estimates of fuel economy standards and values. As a reminder, a manufacturer's fleet fuel economy standard is generated based on a calculation of sales-weighted volumes of vehicles by footprint and fuel economy in a particular regulatory fleet. MPG values are not the standards; instead, the coefficients that go into the mathematical functions that create the footprint-to-fuel economy relationship curves define the standards. Accordingly, without data for MYs 2025–2026 in hand, NHTSA performed sensitivity cases using the CAFE Model to generate estimated fleet average CAFE standards for MYs 2025–2026.

Table IV–10 through Table IV–13 show the estimated required CAFE level for MYs 2025–2026. Table IV–10 shows these values for passenger cars, light trucks, and the fleet as a whole for the Preferred Alternative. Tables Table IV–11through Table IV–13 show these values by regulatory class (domestic passenger cars, imported passenger cars, and light trucks) for each manufacturer in each alternative. It is important to note that these values are projections of the average mpg that the fleets will need to achieve. The actual level of performance that each manufacturer would need to meet varies and is calculated for each manufacturer's compliance fleet based on the footprint of each vehicle in the fleet and the corresponding footprint curve.

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[331] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[332] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[333] Domestic passenger car standard equals the larger of two values: the value computed based on the manufacturer's domestic passenger car fleet, and the minimum domestic passenger car standard for the model year. The minimum domestic passenger car standard is set equal to 92 percent of the average fuel economy for the entire passenger car fleet in the model year as projected by NHTSA when the standards are promulgated.

[334] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[335] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[336] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[337] Domestic passenger car standard equals the larger of two values: the value computed based on the manufacturer's domestic passenger car fleet, and the minimum domestic passenger car standard for the model year. The minimum domestic passenger car standard is set equal to 92 percent of the average fuel economy for the entire passenger car fleet in the model year as projected by NHTSA when the standards are promulgated.

[338] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[339] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[340] Calculated achieved fuel economy does not include the effects of AC/OC adjustments.

[341] Values derived from CAFE Model analysis using proposed MYs 2022–2026 footprint curves. See RIA Chapter 9, sensitivity case ''Proposed standards (2022–2026)'' for additional details.

Table IV-10: Estimated Required Average CAFE Levels (mpg), Alternative 2, MYs 2025-2026[341]

	2025	2026
Passenger Car	36.6	36.8
Light Truck	28.0	28.1
Total LD Fleet	30.4	30.4

Table IV-11: Estimated Required Average CAFE Levels (mpg), Domestic Passenger Car, MYs 2025-2026

Manufacturer	2025				2026			
	No Action	Alt. 1	Alt. 2	Alt. 3	No Action	Alt. 1	Alt. 2	Alt. 3
Ford	53.0	35.4	36.4	37.8	58.9	35.6	36.6	38.0
GM	52.6	35.2	36.2	37.6	58.5	35.4	36.4	37.7
Honda	53.4	35.6	36.5	37.9	59.3	35.7	36.7	38.1
KIA	55.0	36.4	37.4	38.8	61.1	36.5	37.6	39.0
Nissan	53.9	35.8	36.8	38.2	59.9	36.0	37.0	38.4
Toyota	51.8	34.8	35.8	37.1	57.6	35.0	35.9	37.3
Volvo	50.7	34.2	35.2	36.5	56.3	34.4	35.3	36.7
VWA	48.1	32.8	33.7	35.0	53.5	32.9	33.9	35.2
Industry	53.2	35.5	36.5	37.8	59.1	35.7	36.6	38.0

Table IV-12: Estimated Required Average CAFE Levels (mpg), Imported Passenger Car, MYs 2025-2026

Manufacturer	2025				2026			
	No Action	Alt. 1	Alt. 2	Alt. 3	No Action	Alt. 1	Alt. 2	Alt. 3
BMW	51.7	34.7	35.7	37.0	57.4	34.9	35.8	37.2
Ferrari	51.7	34.9	35.8	37.2	57.5	35.0	36.0	37.4
GM	55.0	36.4	37.4	38.8	61.2	36.6	37.6	39.0
Hyundai	52.9	35.3	36.2	37.6	58.7	35.4	36.4	37.8
JLR	51.5	34.6	35.6	37.0	57.2	34.8	35.8	37.1
KIA	53.4	35.6	36.6	38.0	59.4	35.8	36.8	38.2
Mazda	55.1	36.2	37.2	38.6	61.2	36.4	37.4	38.8
Mercedes-Benz	50.1	34.0	35.0	36.3	55.7	34.2	35.1	36.5
Mitsubishi	60.2	37.7	38.7	40.2	66.9	37.8	38.9	40.4
Nissan	54.0	35.8	36.9	38.3	60.0	36.0	37.0	38.5
Stellantis	54.9	36.3	37.4	38.8	61.0	36.5	37.5	39.0
Subaru	54.9	36.3	37.3	38.7	61.0	36.5	37.5	38.9
Toyota	54.0	35.9	36.9	38.3	60.0	36.1	37.1	38.5
Volvo	51.9	34.8	35.8	37.2	57.7	35.0	36.0	37.3
VWA	55.1	36.3	37.3	38.8	61.2	36.5	37.5	39.0
Industry	53.9	35.8	36.8	38.2	59.8	36.0	37.0	38.4

Table IV-13: Estimated Required Average CAFE Levels (mpg), Non-Passenger Automobile, MYs 2025-2026

Manufacturer	2025				2026			
	No Action	Alt. 1	Alt. 2	Alt. 3	No Action	Alt. 1	Alt. 2	Alt. 3
BMW	39.6	28.1	28.9	30.9	43.9	28.3	29.0	31.1
Ford	36.3	25.6	26.3	28.1	40.4	25.7	26.4	28.3
GM	34.9	24.5	25.2	26.9	38.8	24.6	25.3	27.0
Honda	40.7	29.0	29.8	31.9	45.2	29.2	30.0	32.1
Hyundai	40.7	29.0	29.8	31.9	45.2	29.2	30.0	32.1
INEOS	39.7	28.3	29.0	31.1	44.1	28.4	29.2	31.2
JLR	38.4	27.2	28.0	29.9	42.7	27.3	28.1	30.1
KIA	40.3	28.7	29.5	31.5	44.7	28.8	29.6	31.7
Mazda	41.8	29.9	30.7	32.9	46.5	30.1	30.9	33.0
Mercedes-Benz	38.9	27.6	28.4	30.3	43.2	27.7	28.5	30.5
Mitsubishi	44.3	31.9	32.8	35.1	49.2	32.1	33.0	35.3
Nissan	39.4	28.0	28.7	30.7	43.7	28.1	28.9	30.9
Stellantis	37.5	26.5	27.3	29.1	41.7	26.7	27.4	29.3
Subaru	43.9	31.6	32.4	34.7	48.7	31.7	32.6	34.9
Toyota	38.8	27.5	28.3	30.3	43.1	27.7	28.4	30.4
Volvo	40.2	28.6	29.4	31.5	44.7	28.8	29.6	31.6
VWA	41.1	29.4	30.2	32.3	45.7	29.5	30.3	32.5
Industry	38.4	27.2	28.0	29.9	42.7	27.4	28.1	30.1

B. Effects of the Regulatory Alternatives for 2027–2031

1. Effects on Vehicle Manufacturers

Each regulatory alternative considered in this proposed rule, aside from the No-Action Alternative, would change the stringency of both passenger car and light truck CAFE standards during MYs 2027–2031. To estimate the potential effects of each of these alternatives, including effects beyond these years, NHTSA has, as it has done with all recent CAFE rulemakings, assumed that standards would continue unchanged after the last model year to be covered by CAFE targets (in this case, after MY 2031).

The estimated required average fuel economy values for the passenger car, light truck, and total fleets for each action alternative that NHTSA considered alongside values for the No-Action Alternative are presented in Table IV–14 below. NHTSA recognizes that the size and composition of the fleet (*i.e.,* in terms of distribution across the range of vehicle footprints) can change over time, affecting the average fuel economy requirements under both the passenger car and light truck standards, and for the overall fleet. To the extent the fleet differs from NHTSA's projections, average requirements also would differ from NHTSA's projections.

Table IV-14: Estimated Required Average Fuel Economy (MPG), by Regulatory Fleet

Model Year	2024	2027	2028	2029	2030	2031
Passenger Car						
No-Action	49.3	60.7	62.0	63.2	64.5	65.8
Alternative 1	49.3	35.9	36.0	36.1	36.2	36.2
Alternative 2	49.3	36.9	37.1	37.2	37.3	37.4
Alternative 3	49.3	38.8	39.4	39.8	40.2	40.6
Light Truck						
No-Action	35.4	42.7	42.7	43.6	44.5	45.4
Alternative 1	35.4	27.6	27.8	27.9	27.9	28.0
Alternative 2	35.4	28.3	28.4	28.5	28.5	28.6
Alternative 3	35.4	30.2	30.3	30.6	30.9	31.2

Table IV-15: Estimated Required Average Fuel Economy (MPG), Total Light-Duty Fleet

Model Year	2024	2027	2028	2029	2030	2031
No-Action	38.8	46.8	46.9	48.0	48.9	49.9
Alternative 1	38.8	29.6	33.3	33.4	33.5	33.6
Alternative 2	38.8	30.4	34.2	34.4	34.4	34.5
Alternative 3	38.8	32.3	36.4	36.8	37.2	37.5

Manufacturers' achieved average fuel economy does not always exactly match each CAFE standard in each model year, and some manufacturers have tended to exceed at least one requirement.[342] NHTSA uses the CAFE Model to approximate compliance solutions of manufacturers, while observing statutory constraints on the factors NHTSA may consider in setting standards (and thus its analysis of alternative standards).[343] As discussed in the accompanying PRIA and Draft TSD, NHTSA simulates manufacturers' responses to each alternative given a wide range of input estimates (*e.g.,* technology cost and efficacy and fuel prices), each of which is subject to uncertainty. NHTSA's analysis simply illustrates one potential way manufacturers could respond to each regulatory alternative; manufacturers' actual responses may differ from NHTSA's simulations, and therefore the achieved compliance levels will likely differ from the estimated achieved fuel economy for each regulatory alternative shown in these tables.

[342] Over-compliance can be the result of multiple factors including projected ''inheritance'' of technologies (*e.g.,* changes to engines shared across multiple vehicle model/configurations) applied in earlier model years, future technology cost reductions (*e.g.,* decreased technology costs due to learning), and changes in fuel prices that affect technology cost effectiveness. As in all past rulemakings over the last decade, NHTSA assumes that beyond fuel economy changes in response to CAFE standards, manufacturers may also improve fuel economy via technologies that would pay for themselves within the first 36 months of vehicle operation.

[343] NHTSA's standard-setting analysis does not consider factors prohibited under 49 U.S.C. 32902(h), including the application of compliance credits and consideration of fuel economy attributable to alternative fuel sources. For plug-in hybrid vehicles, this means only the gasoline-powered operation (*i.e.,* non-electric fuel economy, or charge sustaining mode operation only) is considered when selecting technology to meet the standards.

Table IV-16: Estimated Achieved Average Fuel Economy (MPG), by Regulatory Fleet

Model Year	2024	2027	2028	2029	2030	2031
Passenger Car						
No-Action	43.2	56.1	58.5	61.9	62.2	62.8
Alternative 1	43.2	54.3	45.5	45.9	46.1	46.3
Alternative 2	43.2	54.3	45.5	45.9	46.1	46.3
Alternative 3	43.2	54.4	45.8	46.2	46.5	46.7
Light Truck						
No-Action	32.7	39.8	42.1	43.3	44.5	44.7
Alternative 1	32.7	38.6	31.0	31.5	31.8	32.1
Alternative 2	32.7	38.6	31.1	31.5	31.8	32.1
Alternative 3	32.7	38.8	31.3	32.0	32.4	32.6

Table IV-17: Estimated Achieved Average Fuel Economy (MPG), Total Light-Duty Fleet

Model Year	2024	2027	2028	2029	2030	2031
No-Action	35.4	43.5	45.8	47.5	48.5	48.8
Alternative 1	35.4	42.2	40.3	40.8	41.1	41.3
Alternative 2	35.4	42.2	40.4	40.8	41.1	41.3
Alternative 3	35.4	42.4	40.6	41.3	41.6	41.8

The SHEV share of the fleet initially (*i.e.,* in MY 2024) is around 10 percent, and the Model shows this share increasing to 41 percent for all alternatives by MY 2026. By the end of the regulatory period (MYs 2027–2031), SHEV penetration rates reach 52–55 percent for the action alternatives and 80 percent for the No-Action Alternative (including both the passenger car and light truck fleets). SHEVs are estimated to make up a similar portion of the light truck fleet and the passenger car fleet across MYs 2027–2031 in each of the regulatory alternatives.

The PHEV share of the fleet in MY 2024 is around 3.4 percent for light trucks and 1.7 percent for passenger cars. While their market shares do not increase to the levels seen for SHEVs, PHEVs are estimated to make up around 13 percent of the light truck fleet for all the regulatory alternatives by MY 2031, and around 10 percent for the No-Action Alternative. In the passenger car fleet, PHEV penetration stays under 3 percent for all regulatory alternatives across MYs 2027–2031.[344]

Variation in penetration rates across regulatory alternatives generally results from differences in the number of vehicles or models a manufacturer would need to add technology to comply with each alternative. For example, a certain technology pathway could be the most cost-effective pathway if a manufacturer is just shy of its fuel economy target, but the pathway likely becomes ineffective if there's a larger gap, which may necessitate pursuing broader changes in powertrain technology across the manufacturer's fleet. For more detail on the technology application by regulatory fleet, see PRIA Chapter 8.2.2.1.

[344] Due to the statutory constraints imposed on the analysis by EPCA that exclude consideration of AFVs, BEVs are not a compliance option in any model year. Similarly, PHEVs can be introduced by the CAFE Model, but only their charge-sustaining fuel economy value (as opposed to their charge-depleting fuel economy value) is considered in this analysis.

Table IV-18: Estimated Strong Hybrid Electric Vehicle (SHEV) Penetration Rate, by Regulatory Fleet

Model Year	2024	2027	2028	2029	2030	2031
Passenger Car						
No-Action	8.7	57.5	68.0	82.0	83.4	86.2
Alternative 1	8.7	52.7	51.0	51.4	51.5	52.4
Alternative 2	8.7	52.7	51.0	51.4	51.5	52.4
Alternative 3	8.7	52.9	53.1	53.5	53.7	54.6
Light Truck						
No-Action	11.2	51.5	60.2	67.3	74.0	77.8
Alternative 1	11.2	43.3	42.0	47.6	50.5	52.4
Alternative 2	11.2	43.3	42.0	47.6	50.5	52.4
Alternative 3	11.2	45.8	42.8	52.2	55.1	57.2

Table IV-19: Estimated Strong Hybrid Electric Vehicle (SHEV) Penetration Rate, Total Light-Duty Fleet

Model Year	2024	2027	2028	2029	2030	2031
No-Action	10.4	53.3	62.4	71.7	76.7	80.2
Alternative 1	10.4	46.1	48.5	50.4	51.3	52.4
Alternative 2	10.4	46.1	48.5	50.4	51.3	52.4
Alternative 3	10.4	47.9	50.3	53.2	54.1	55.3

Table IV-20: Estimated Plug-in Hybrid-Electric Vehicle (PHEV) Penetration Rate, by Regulatory Fleet

Model Year	2024	2027	2028	2029	2030	2031
Passenger Car						
No-Action	1.7	1.7	1.7	1.7	1.7	1.7
Alternative 1	1.7	1.7	2.6	2.6	2.6	2.6
Alternative 2	1.7	1.7	2.6	2.6	2.6	2.6
Alternative 3	1.7	1.7	2.6	2.6	2.6	2.6
Light Truck						
No-Action	3.4	7.1	9.6	9.6	9.6	9.6
Alternative 1	3.4	7.1	13.3	13.3	13.3	13.3
Alternative 2	3.4	7.1	13.3	13.3	13.3	13.3
Alternative 3	3.4	7.1	13.3	13.3	13.3	13.3

Table IV-21: Estimated Plug-in Hybrid-Electric Vehicle (PHEV) Penetration Rate, Total Light-Duty Fleet

Model Year	2024	2027	2028	2029	2030	2031
No-Action	2.9	5.5	7.3	7.3	7.3	7.3
Alternative 1	2.9	5.5	5.5	5.5	5.5	5.5
Alternative 2	2.9	5.5	5.5	5.5	5.5	5.5
Alternative 3	2.9	5.5	5.5	5.5	5.5	5.5

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The PRIA also presents NHTSA's estimates of manufacturers' potential application of fuel-saving technologies, including advanced transmissions, aerodynamic improvements, and reduced vehicle mass, in response to each regulatory alternative. The accompanying PRIA Appendix provides more detailed and comprehensive results, and the underlying CAFE Model Output File provide all the information used to construct these estimates, including the specific combination of technologies estimated to be applied to every vehicle model/configuration in each of MYs 2024–2050.

NHTSA's analysis estimates manufacturers' regulatory costs for compliance with the CAFE standards. As summarized in Table IV–22, NHTSA estimates manufacturers' *cumulative* regulatory costs across MYs 2027–2031 would total $117 billion under the No-Action Alternative and $73.9 billion, $73.9 billion, and $77.8 billion under regulatory alternatives 1, 2, and 3, respectively, considered in this proposal. These regulatory costs account for fuel-saving technologies added in the simulation (and AC improvements and other OC technologies through MY 2027). Table IV–22 below shows estimated costs by manufacturer. The variation in aggregate costs among manufacturers is a function of both differences in the quantities of vehicles produced for sale in the United States and differences in technology application and compliance pathways. Technology costs for each model year are defined on an incremental basis, with costs equal to the relevant technology applied minus the costs of the initial technology state in a reference fleet (*i.e.,* MY 2024).[345] The accompanying PRIA Appendix presents results separately for each manufacturer's compliance fleets (*i.e.,* domestic passenger car, imported passenger car, and light truck) under each regulatory alternative and model year, and the underlying CAFE Model Output File also show results for each manufacturer's combined passenger car fleet (*i.e.,* domestic and imported cars).

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[345] As discussed in the Draft TSD, the technology costs considered in the CAFE Model reflect a markup factor to account for manufacturer profits and other retail costs. For more detail regarding the calculation of technology costs, see the CAFE Model Documentation.

Table IV-22: Estimated Cumulative Technology Costs ($b) During MYs 2027-2031

Model Year	No-Action	Alternative 1	Alternative 2	Alternative 3
BMW	2.8	2.0	2.0	2.0
Ferrari	0.0	0.0	0.0	0.0
Ford	12.1	6.6	6.6	7.7
GM	32.8	24.2	24.2	24.2
Honda	6.9	3.9	3.9	3.9
Hyundai	8.2	3.6	3.6	3.6
INEOS	0.1	0.1	0.1	0.1
JLR	0.6	0.4	0.4	0.5
KIA	7.8	5.4	5.4	5.4
Mazda	3.4	0.9	0.9	0.9
Mercedes-Benz	1.3	0.9	0.9	1.0
Mitsubishi	1.0	0.9	0.9	0.9
Nissan	5.0	3.4	3.4	3.5
Stellantis	10.4	5.2	5.2	5.9
Subaru	4.0	0.2	0.2	0.5
Toyota	13.0	10.7	10.7	11.9
Volvo	0.8	0.7	0.7	0.7
VWA	7.1	4.8	4.8	5.1
Industry Total	117.4	73.9	73.9	77.8

NHTSA assumes that technology costs are reflected in vehicle prices. NHTSA's estimates of the average costs to new vehicle purchasers from MYs 2027–2031 are summarized in Table IV–23 and Table IV–24.

Table IV-23: Estimated Average Per-Vehicle Regulatory Cost ($), by Regulatory Fleet

Model Year	2024	2027	2028	2029	2030	2031
Passenger Car						
No-Action	0	1,476	1,705	2,000	1,997	2,019
Alternative 1	0	1,237	1,108	1,100	1,092	1,090
Alternative 2	0	1,237	1,108	1,100	1,092	1,090
Alternative 3	0	1,248	1,150	1,142	1,138	1,136
Light Truck						
No-Action	0	1,469	1,874	2,008	2,111	2,139
Alternative 1	0	1,165	1,423	1,419	1,423	1,414
Alternative 2	0	1,166	1,427	1,419	1,423	1,414
Alternative 3	0	1,210	1,502	1,584	1,586	1,581

Table IV-24: Estimated Average Per-Vehicle Regulatory Cost ($), Total Light-Duty Fleet

Model Year	2024	2027	2028	2029	2030	2031
No-Action	0	1,471	1,825	2,006	2,078	2,104
Alternative 1	0	1,186	1,194	1,186	1,182	1,179
Alternative 2	0	1,187	1,195	1,186	1,182	1,179
Alternative 3	0	1,221	1,246	1,262	1,260	1,257

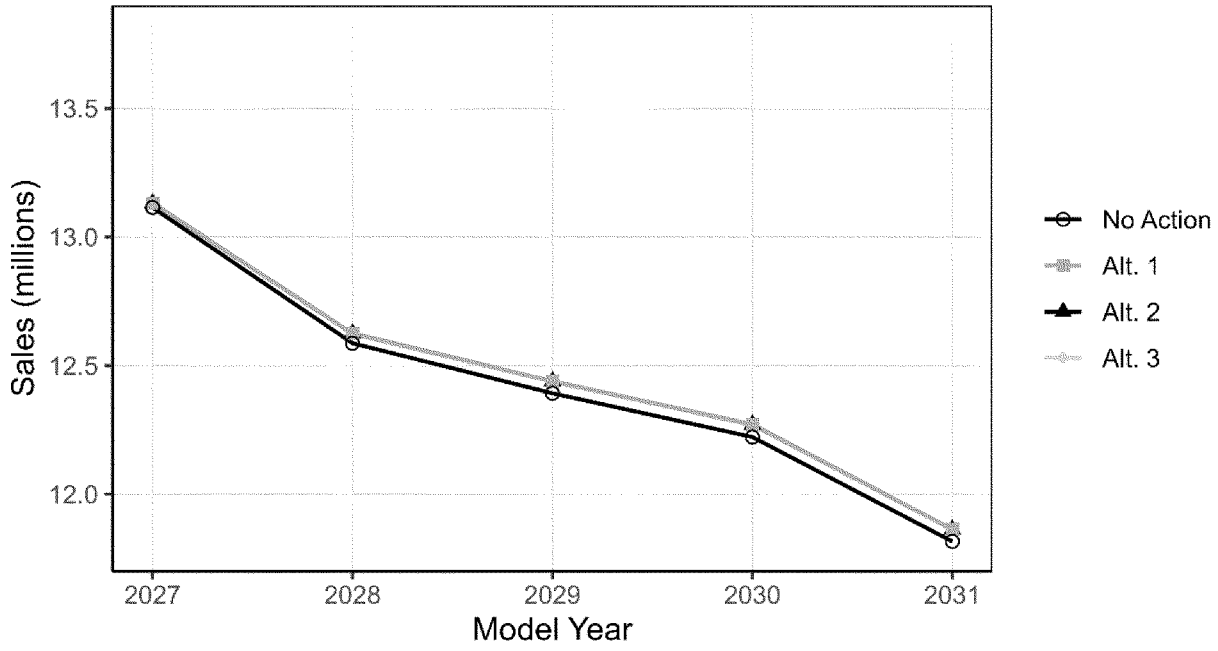
Table IV–25 shows how these costs could vary among manufacturers. See Chapter 8.2.2 of the PRIA for more details of the effects on vehicle manufacturers, including compliance and regulatory costs.

Table IV-25: Average Manufacturer Per-Vehicle Costs by Alternative, Total Light-Duty Fleet, MY 2031 ($)

Model Year	No-Action	Alternative 1	Alternative 2	Alternative 3
BMW	1,844	1,208	1,208	1,208
Ferrari	2,968	2,970	2,970	2,969
Ford	1,874	932	932	1,075
GM	3,596	2,356	2,356	2,356
Honda	1,420	649	649	648
Hyundai	2,585	991	991	991
INEOS	2,735	2,735	2,735	2,735
JLR	1,284	274	274	735
KIA	2,715	1,665	1,665	1,665
Mazda	2,078	593	593	594
Mercedes-Benz	1,442	709	709	848
Mitsubishi	1,380	1,235	1,235	1,235
Nissan	1,513	885	885	902
Stellantis	2,447	1,161	1,161	1,306
Subaru	1,285	44	44	182
Toyota	1,392	994	994	1,166
Volvo	1,396	1,136	1,136	1,136
VWA	2,188	1,413	1,413	1,537
Industry Average	2,104	1,179	1,179	1,257

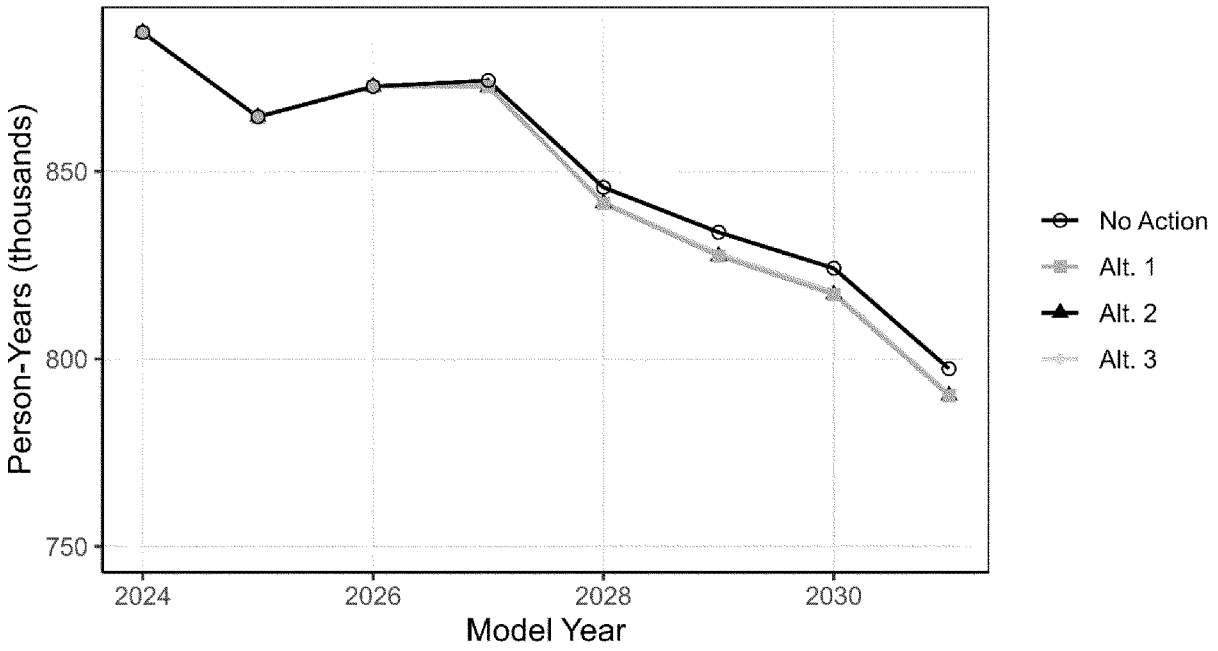
Fuel savings and regulatory costs act as countervailing forces on new vehicle sales. All else being equal, as fuel savings increase, the CAFE Model projects higher new vehicle sales, but as regulatory costs increase, the CAFE Model projects lower new vehicle sales. Both fuel savings and regulatory costs increase with stringency. The magnitude of these fuel savings and vehicle price increases depend on manufacturer compliance decisions, especially technology application. Draft TSD Chapter 4.2.1.2 discusses NHTSA's approach to estimating new vehicle sales. For all scenarios modeled in this analysis, vehicle sales stay constant relative to the No-Action Alternative through MY 2026, after which the CAFE Model begins applying technology differently in response to the standards that would be set under the various regulatory alternatives. The three regulatory alternatives result in essentially the same vehicle sales for all model years. The No-Action Alternative, which has higher projected regulatory costs starting in MY 2027, results in approximately 0.1 to 0.4 percent lower vehicle sales in each model year for MY 2027 and beyond, compared to the regulatory alternatives. Figure IV–1 shows the estimated annual light-duty industry sales by regulatory alternative.

Figure IV-1: Estimated Annual Light-Duty Vehicle Sales (Millions)



Differences in sales and the cost of technology applied to vehicles in turn tend to affect projected automobile industry labor utilizations. Because the action alternatives produce similar levels of technology costs and sales volumes, the related changes in labor predicted by the CAFE Model across these alternatives are also negligible. For the No-Action Alternative, since the CAFE Model directly translates costs into labor hours, the additional technology costs convert to a higher labor impact than decreased sales volumes, resulting in a level of automotive employment, measured in person years, that is about 1 percent higher than the regulatory alternatives by MY 2031. Figure IV–2 shows the estimated number of person years under each alternative.

Figure IV-2: Estimated Light-Duty Automobile Industry Labor as Thousands of Person Years



The accompanying Draft TSD Chapter 6.2.5 discusses NHTSA's approach to estimating automobile industry employment, and the accompanying PRIA Chapter 8 (and its Appendix I) and CAFE Model Output File provide more detailed results of NHTSA's light-duty analysis.

2. Effects on Society

NHTSA accounts for the effects of the standards on society using a benefit-cost framework. The categories considered include private costs borne by manufacturers and passed on to consumers; external costs, which include government costs and costs pertaining to emissions, congestion, noise, and energy security; and costs associated with safety impacts. In this accounting framework, the CAFE Model records costs and benefits related to vehicles in the fleet throughout the lifetime of a particular model year and also allows for the accounting of costs and benefits by calendar years. Examining program effects through this lens illustrates the temporal differences in major cost and benefit components and allows NHTSA to examine costs and benefits tied only to those vehicles that are directly impacted by this proposal.

NHTSA splits effects on society into private costs, external costs, private benefits, and external benefits. Table IV–26 and Table IV–27 present NHTSA's estimates of the costs and benefits of changing CAFE standards in each alternative considered in this proposal, as well as the party (private interests or society as a whole) to which they accrue. Manufacturers are directly regulated under the program and incur additional production costs when they apply technology to their vehicle offerings to improve fuel economy. NHTSA assumes that those costs are fully passed through to new car and truck buyers in the form of higher prices (and conversely, that decreases in technology costs pass through as lower prices for consumers).

While incremental maintenance and repair costs and benefits would change for buyers of new cars and trucks affected by modified CAFE standards, NHTSA does not include these impacts in the analysis because they are difficult to estimate, and NHTSA does not currently have sufficient data to estimate them accurately. NHTSA may include estimates of the impact that CAFE standards have on lifetime maintenance and repair costs in future analyses if sufficient data become available.

The analysis's estimates also take into account the rebound effect, in which vehicles are driven more as increased fuel economy reduces the cost of driving. NHTSA also assumes that drivers of new vehicles internalize 90 percent of the risk associated with increased exposure to crashes when they engage in additional travel.

The value of fuel savings,[346] which accrue to new car and truck buyers, is the largest component of the estimated private benefits associated with each of the regulatory alternatives. For this proposal, the estimates reflect forgone fuel savings for consumers, as fuel efficiency is lower than it would be under the No-Action Alternative. NHTSA is exploring options for the final rule to present the value of fuel savings as those savings accrue to multiple buyers over the vehicle's life; currently, the value of fuel savings is presented as one value attached to the entire vehicle's life. In contrast, in the real world, a vehicle may have multiple owners that experience different benefits between the up-front savings from reduced technology application under lower fuel economy standards and the forgone fuel savings for the vehicle's first owner for the time that they own the vehicle. NHTSA seeks comment on such alternative presentations of fuel savings that the agency could include for informational purposes in the final rule, in addition to its traditional presentation of fuel savings as shown below.

Benefits to new vehicle buyers are also expected to be reduced as the regulatory alternatives increase the cost of driving relative to the No-Action Alternative (*i.e.,* lower fuel economy increases the per-mile cost of travel) and results in more frequent refueling and a rebound-related reduction in the mobility benefits of travel. While fuel savings diminish under the proposed standards, by reducing standards NHTSA enables manufacturers to provide a mix of vehicles with attributes that consumers desire. NHTSA accounts for forgone improvements in attributes other than fuel economy due to CAFE standards through the implicit opportunity cost in its analysis; however, the agency does not account for changes in the fleet mix offered by manufacturers in an effort to comply with standards, including eliminating some models entirely. Because the proposed standards would prevent these distortionary effects, it would increase the range of choices available to Americans and would, thus, provide additional benefits to new car and truck buyers.

In addition to private benefits and costs—those borne by manufacturers, buyers, and owners of cars and light trucks—there are other benefits and costs from resetting CAFE standards that are borne more broadly throughout the economy or society, which NHTSA refers to as external benefits and costs.[347] In the case of the proposed standards, the increase in per-mile fuel costs would lead to a reduction in congestion and road noise costs, due to reduced rebound travel.[348] The external benefits of health outcomes related to exposure of criteria pollutants and of improved energy security also would decrease slightly relative to the No-Action Alternative under each of the regulatory alternatives considered in this proposal.

Table IV–26 and Table IV–27 below present NHTSA's estimates of the benefits and costs of each regulatory alternative at different discount rates and from both model year and calendar year perspectives. Estimated net benefits are positive for all regulatory alternatives at both the 3- and 7-percent discount rates and for each perspective, with higher costs and benefits estimated in the calendar year analysis.

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[346] Fuel savings are valued in NHTSA's analysis at retail fuel prices (inclusive of Federal and state taxes).

[347] Some of these external benefits and costs result from changes in economic and environmental externalities from supplying or consuming fuel, while others do not involve changes in such externalities but are similar in that they are borne by parties other than those whose actions impose them.

[348] NHTSA also accounts for changes in fuel tax revenue that occurs as a result of changes in fuel consumption. Changes in tax revenues are considered a transfer and not an economic externality as defined traditionally, but NHTSA groups these with social costs instead of private costs because that loss in revenue affects society as a whole as opposed to impacting only consumers or manufacturers. The offsetting changes in costs to consumers are accounted for in the estimates of fuel cost savings, which are valued at retail prices inclusive of taxes.

Table IV-26: Incremental Benefits and Costs Over the Lifetimes of Total Light-Duty Fleet Produced Through MY 2031 (2024$ Billions), by Alternative[349]

	3% Discount Rate			7% Discount Rate		
	Alt 1	Alt 2	Alt 3	Alt 1	Alt 2	Alt 3
Private Costs						
Technology Costs	-37.1	-37.1	-33.7	-30.3	-30.3	-27.5
Maintenance and Repair Costs*	-	-	-	-	-	-
Sacrifice in Other Vehicle Attributes	-26.6	-26.5	-23.0	-16.9	-16.9	-14.6
Consumer Surplus Loss	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
Safety Costs Internalized by Drivers	-22.9	-22.9	-20.5	-14.4	-14.4	-12.9
Subtotal - Private Costs	-86.5	-86.4	-77.2	-61.6	-61.5	-55.0
External Costs						
Congestion and Noise Costs from Rebound-Effect Driving	-9.6	-9.6	-8.5	-6.1	-6.1	-5.4
Safety Costs Not Internalized by Drivers	-4.1	-4.1	-3.7	-2.6	-2.6	-2.3
Loss in Fuel Tax Revenue	-9.0	-9.0	-7.8	-5.8	-5.8	-5.0
Subtotal - External Costs	-22.7	-22.7	-20.0	-14.5	-14.5	-12.7
Total Costs (incl. private)	-109.2	-109.1	-97.1	-76.1	-76.0	-67.7
Private Benefits						
Fuel Cost Savings	-53.9	-53.9	-46.5	-34.2	-34.2	-29.5
Benefits from Additional Driving	-25.1	-25.1	-21.7	-15.8	-15.8	-13.7
Refueling Frequency	-3.0	-3.0	-2.7	-1.9	-1.9	-1.7
Subtotal - Private Benefits	-82.1	-82.0	-70.8	-52.0	-51.9	-44.9
External Benefits						
Petroleum Market Security	-2.2	-2.2	-1.9	-1.4	-1.4	-1.2
Health Outcomes	-0.8	-0.8	-0.7	-0.5	-0.5	-0.4
Total Benefits (incl. private)	-85.2	-85.1	-73.5	-53.9	-53.8	-46.5
Net Total Benefits	24.0	24.0	23.7	22.2	22.2	21.2
*Maintenance and repair costs are not quantified in the analysis.						

Table IV-27 Incremental Benefits and Costs for the On-Road Light-Duty Fleet CYs 2024-2050 (2024$ Billions), by Alternative[350]

	3% Discount Rate			7% Discount Rate		
	Alt 1	**Alt 2**	**Alt 3**	**Alt 1**	**Alt 2**	**Alt 3**
Private Costs						
Technology Costs	-150.1	-150.0	-138.0	-94.0	-94.0	-86.3
Maintenance and Repair Costs*	-	-	-	-	-	-
Sacrifice in Other Vehicle Attributes*	-119.2	-119.2	-105.2	-57.4	-57.4	-50.5
Consumer Surplus Loss	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Safety Costs Internalized by Drivers	-57.3	-57.3	-51.1	-31.3	-31.3	-27.9
Subtotal - Private Costs	-326.5	-326.4	-294.1	-182.6	-182.6	-164.6
External Costs						
Congestion and Noise Costs from Rebound-Effect Driving	-26.6	-26.6	-23.6	-14.6	-14.6	-12.9
Safety Costs Not Internalized by Drivers	-11.0	-11.0	-9.8	-6.0	-6.0	-5.4
Loss in Fuel Tax Revenue	-29.8	-29.8	-26.2	-16.3	-16.3	-14.3
Subtotal - External Costs	-67.4	-67.4	-59.7	-37.0	-36.9	-32.6
Total Costs (incl. private)	-393.9	-393.8	-353.8	-219.6	-219.5	-197.2
Private Benefits						
Fuel Cost Savings	-185.4	-185.4	-163.3	-100.6	-100.6	-88.4
Benefits from Additional Driving	-84.3	-84.3	-74.1	-45.4	-45.4	-39.8
Refueling Frequency	-10.1	-10.1	-9.0	-5.5	-5.5	-4.9
Subtotal - Private Benefits	-279.8	-279.7	-246.5	-151.5	-151.4	-133.2
External Benefits						
Petroleum Market Security	-7.8	-7.8	-6.9	-4.2	-4.2	-3.7
Health Outcomes	-3.5	-3.5	-3.1	-1.7	-1.7	-1.5
Total Benefits (incl. private)	-291.2	-291.1	-256.5	-157.4	-157.4	-138.4
Net Total Benefits	102.8	102.8	97.3	62.1	62.1	58.8
*Maintenance and repair costs are not quantified in the analysis.						

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3. Physical and Environmental Effects

NHTSA estimates various physical and environmental effects associated with the standards. These include quantities of fuel consumed, non-criteria and criteria pollutant emissions, and health and safety impacts. Table IV–28 shows the average annual impacts, including the on-road fleet sizes, vehicle-miles traveled (VMT), fuel consumption, and CO_2 emissions, across alternatives and grouped by decade. The overall size of the on-road ICE fleet decreases in later decades regardless of alternative due to declining ICE sales, with the lowest on-road fleet size projected under the No-Action Alternative.[351] All three regulatory alternatives result in marginally larger fleets by 2050 compared to the No-Action Alternative. Increased sales over time increases the existing vehicle stock, thereby expanding the size of the overall fleet.

In the No-Action Alternative, the decreasing size of the overall ICE fleet results in ICE VMT decreases in the later decades, with the lowest average VMT per year occurring between 2041 and 2050. Similarly, on an annual basis fuel consumption (measured in gallons of gasoline gallon equivalents) and non-criteria emissions decline in the later decades due to reduced VMT and new, more efficient vehicles replacing older, less efficient vehicles in the fleet. Relative to the No-Action Alternative, all regulatory alternatives considered

[349] Totals in the following table may not sum perfectly due to rounding.

[350] Totals in the following table may not sum perfectly due to rounding.

[351] NHTSA's projection of total sales excludes BEVs and FCEVs.

result in slightly lower VMT but increase fuel consumption and non-criteria emissions due to a larger ICE fleet, with the largest increases observed in Alternative 1.

Table IV-28: Average Annual Effects for All Alternatives by Calendar Year Cohort

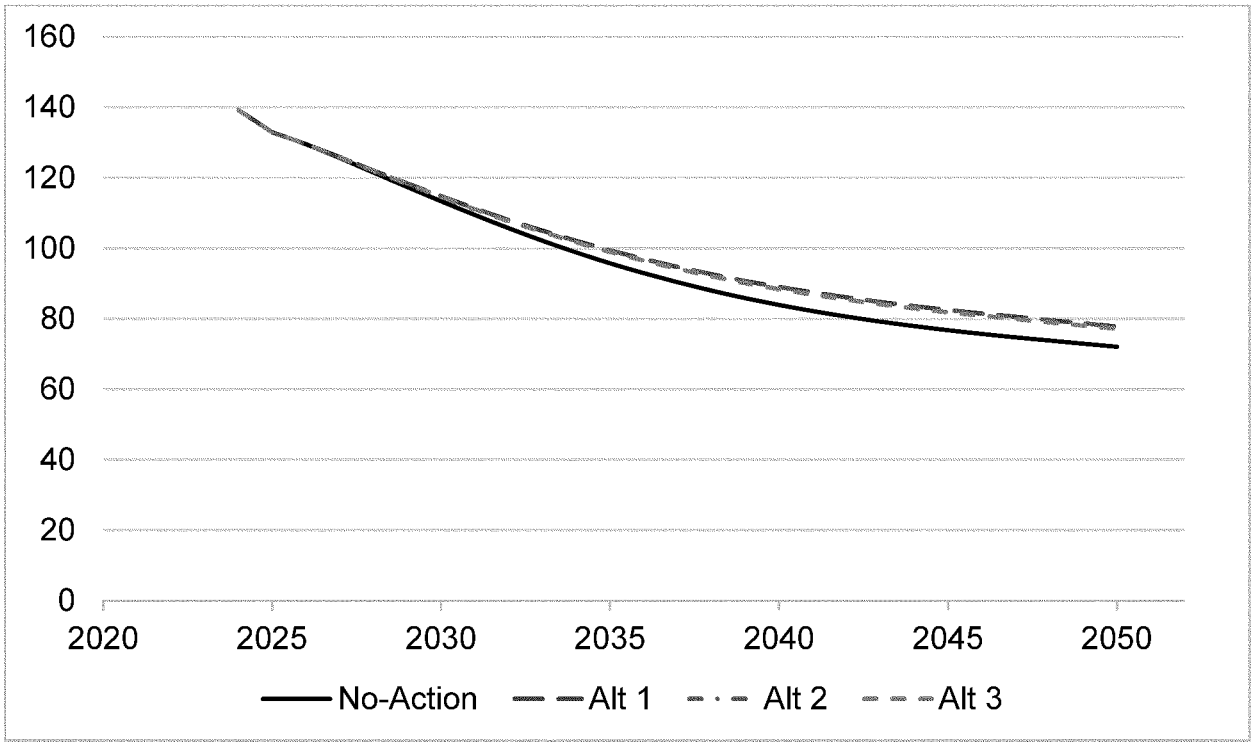
	No-Action	Alt 1	Alt 2	Alt 3
On-Road ICE Fleet (Million Units)[352]				
2024 - 2030	251	251	251	251
2031 - 2040	222	222	222	222
2041 - 2050	198	199	199	199
ICE Vehicle-Miles Traveled (Billion Miles)[353]				
2024 - 2030	3,082	3,081	3,081	3,081
2031 - 2040	2,776	2,762	2,762	2,764
2041 - 2050	2,527	2,506	2,506	2,508
ICE Fuel Consumption (Billion Gallons/GGE)				
2024 - 2030	126	126	126	126
2031 - 2040	95	99	99	99
2041 - 2050	77	82	82	82

NHTSA's analysis estimates total annual consumption of fuel by the ICE on-road fleet on a calendar basis for 2024 through 2050, as shown in Figure IV–3 for the No-Action Alternative, Alternative 1, Alternative 2, and Alternative 3. Gasoline consumption decreases over time, with smaller decreases seen under the regulatory alternatives compared to the No-Action Alternative. Note that in many of the figures presented, the lines representing different regulatory alternatives lay nearly on top of each other, indicating that estimated impacts are very similar.

[352] These rows report total vehicle units observed during the period. For example, 1,760 million units are modeled in the on-road fleet for CYs 2024–2030. On average, this represents approximately 251 million vehicles in the on-road fleet for each calendar year in this calendar year cohort; this is the highest average across all cohorts.

[353] These rows report total miles traveled during the period. For example, 21,577 billion miles traveled in CYs 2024–2030. On average, this represents approximately 3.08 trillion annual miles traveled in this calendar year cohort.

Figure IV-3: Gasoline Consumption by Calendar Year and Alternative (Billions of Gallons)



NHTSA estimates the non-criteria emissions attributable to the light-duty on-road fleet, from both vehicles and upstream energy sector processes (*e.g.,* petroleum refining, or fuel transportation and distribution) as shown in Figure IV–4, Figure IV–5, and Figure IV–6.[354] All three non-criteria emissions follow similar trends of decline in the years between 2024–2050, with smaller declines for the regulatory alternatives compared to the No-Action Alternative.[355]

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[354] While NHTSA considers the impacts of this rulemaking on the levels of CO_2, CH_4, and N_2O emissions, the analysis does not include a monetization of any changes. An analysis using the domestic-only value of these emissions is included in a sensitivity case.

[355] Note that CO_2 emissions are expressed in units of million metric tons (mmt) while emissions from other pollutants are expressed in metric tons.

Figure IV-4: Total CO_2 Emissions by Calendar Year and Alternative (Million Metric Tons)

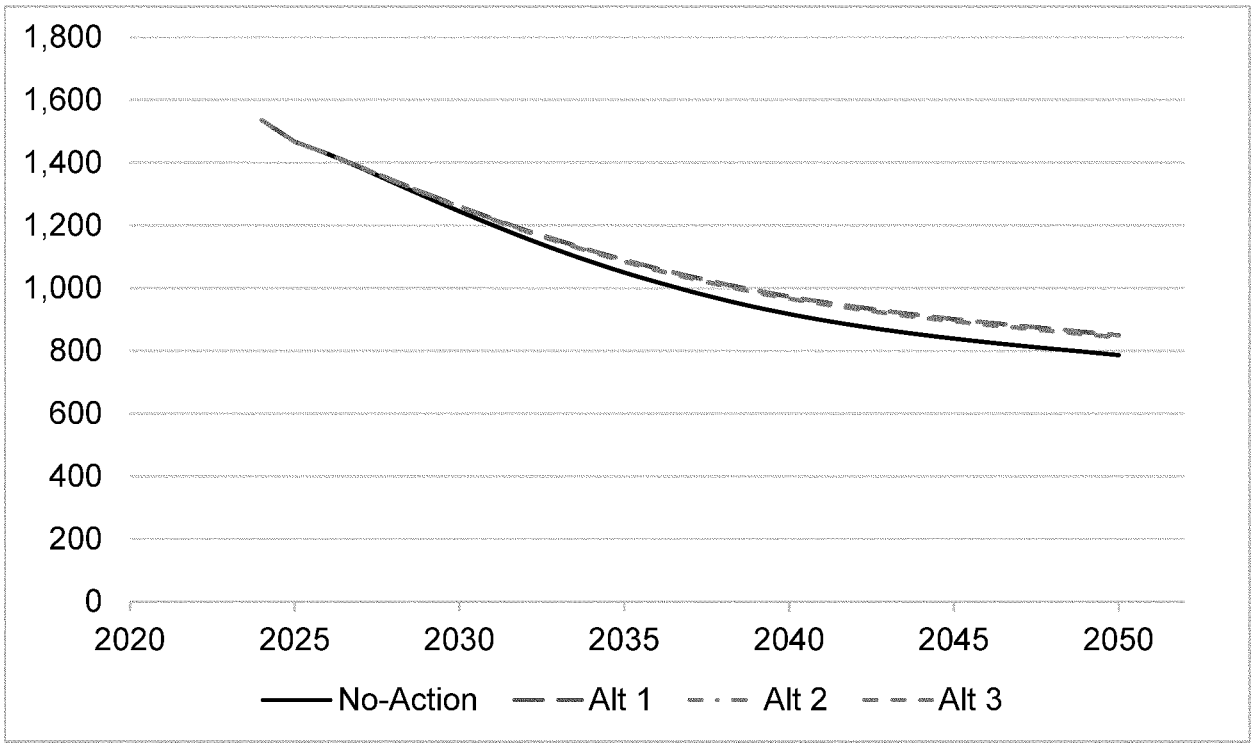


Figure IV-5: Total CH_4 Emissions by Calendar Year and Alternative (Tons)

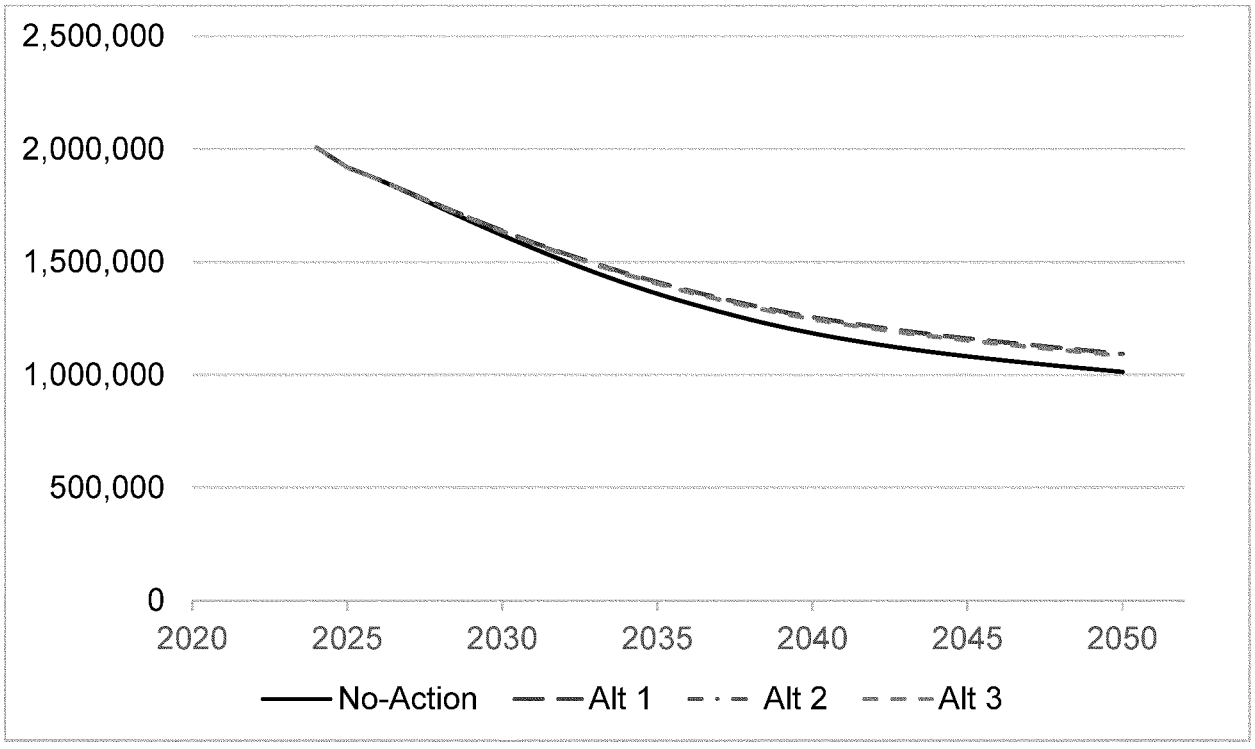
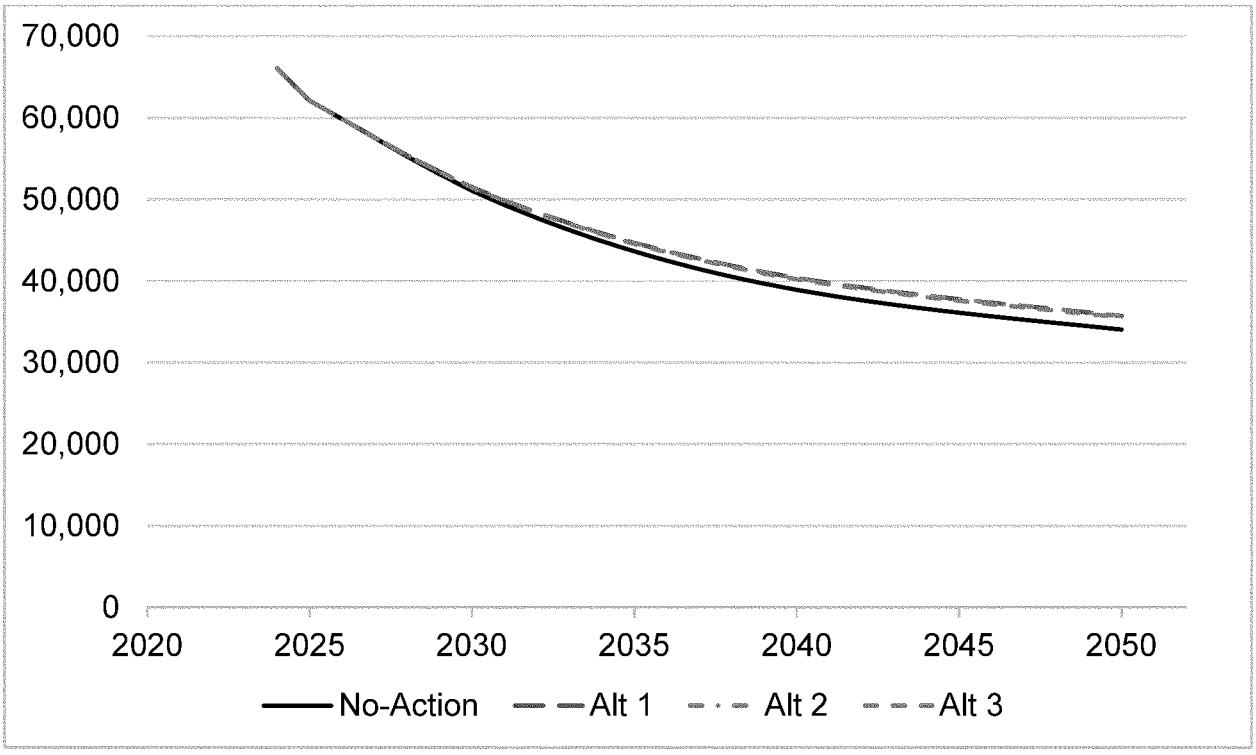


Figure IV-6: Total N_2O Emissions by Calendar Year and Alternative (Tons)



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NHTSA estimates criteria pollutant emissions attributable to the light-duty on-road fleet from both vehicles and upstream energy sector processes (*e.g.,* petroleum refining, or fuel transportation and distribution) as shown in Figure IV–8, Figure IV–9, and Figure IV–10. Changes in criteria pollutant emissions in turn lead to changes in adverse health outcomes described in later sections. Under the No-Action Alternative and each regulatory alternative, NHTSA projects a decrease in emissions of all criteria pollutants attributable to the light-duty on-road ICE fleet between 2024 and 2050 due to the analogous decrease in VMT and retirement of older less efficient vehicles. These criteria for pollutant emissions increase relative to the baseline as the stringencies of proposed alternatives decrease.

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Figure IV-7: Total NO_X Emissions by Calendar Year and Alternative (Tons)

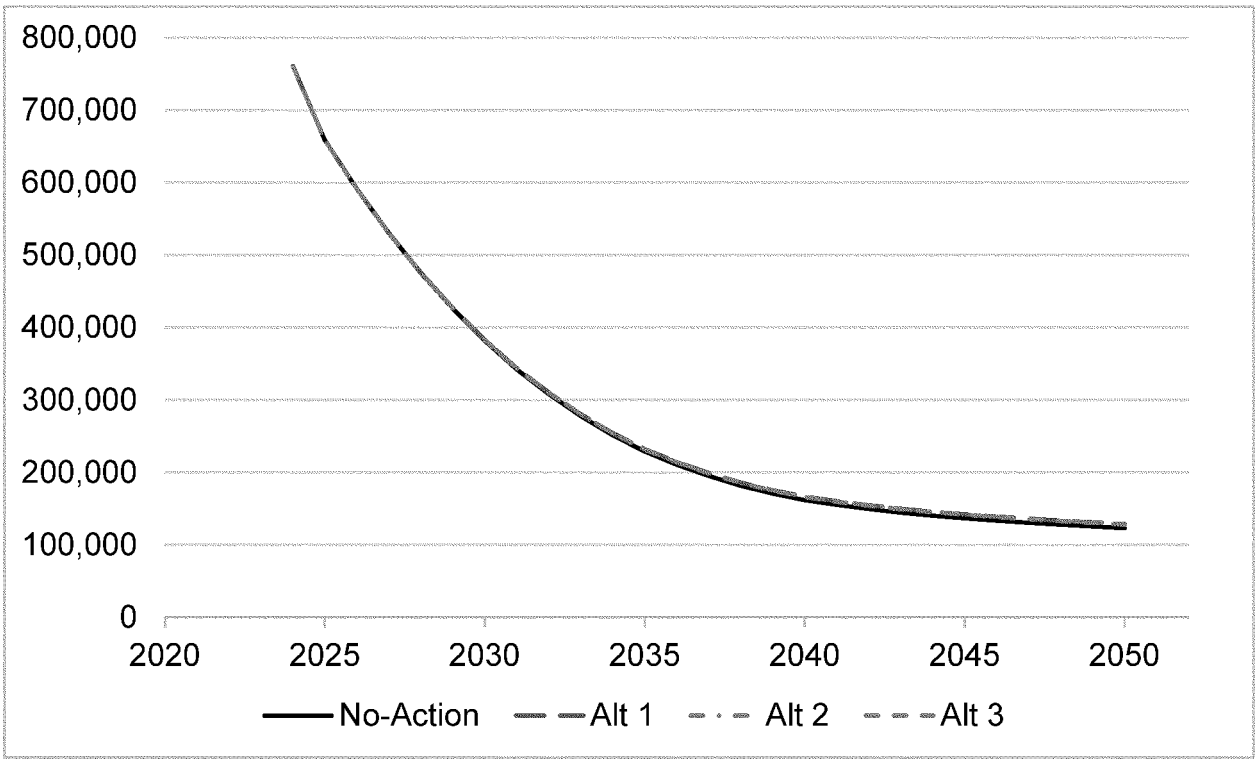


Figure IV-8: Total SO_2 Emissions by Calendar Year and Alternative (Tons)

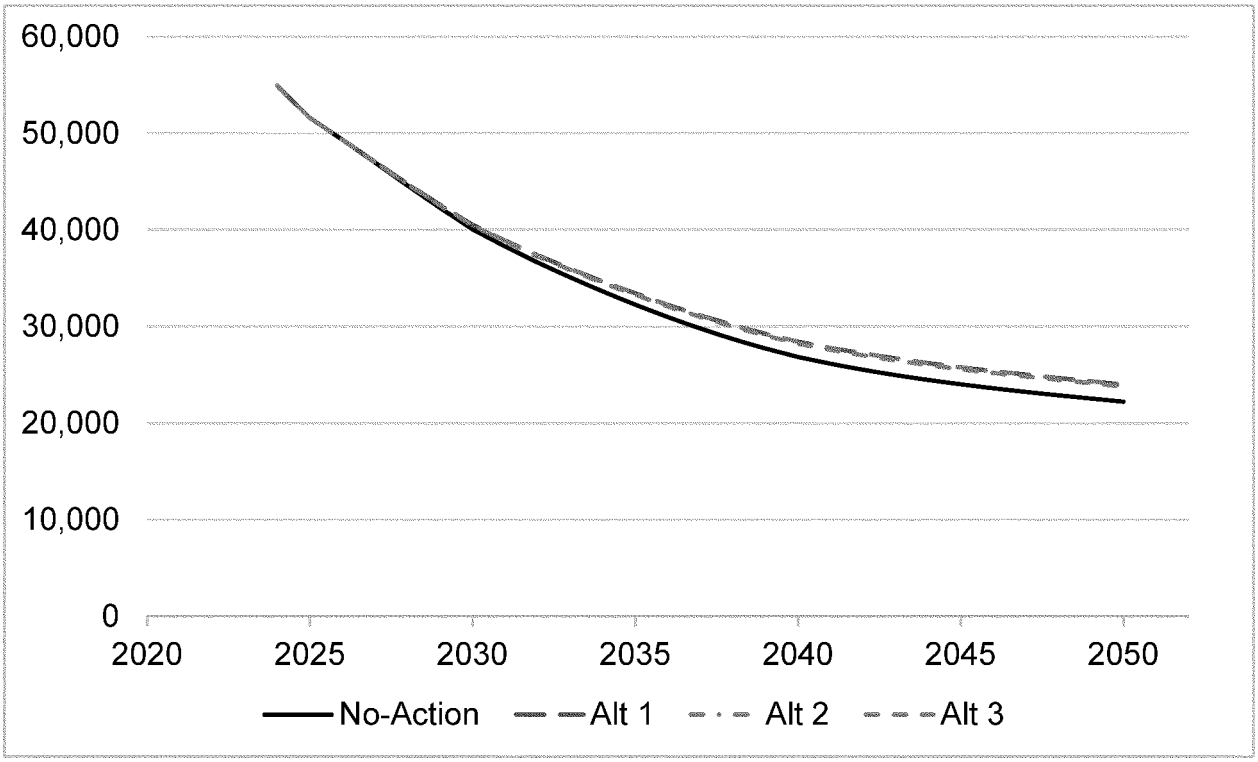
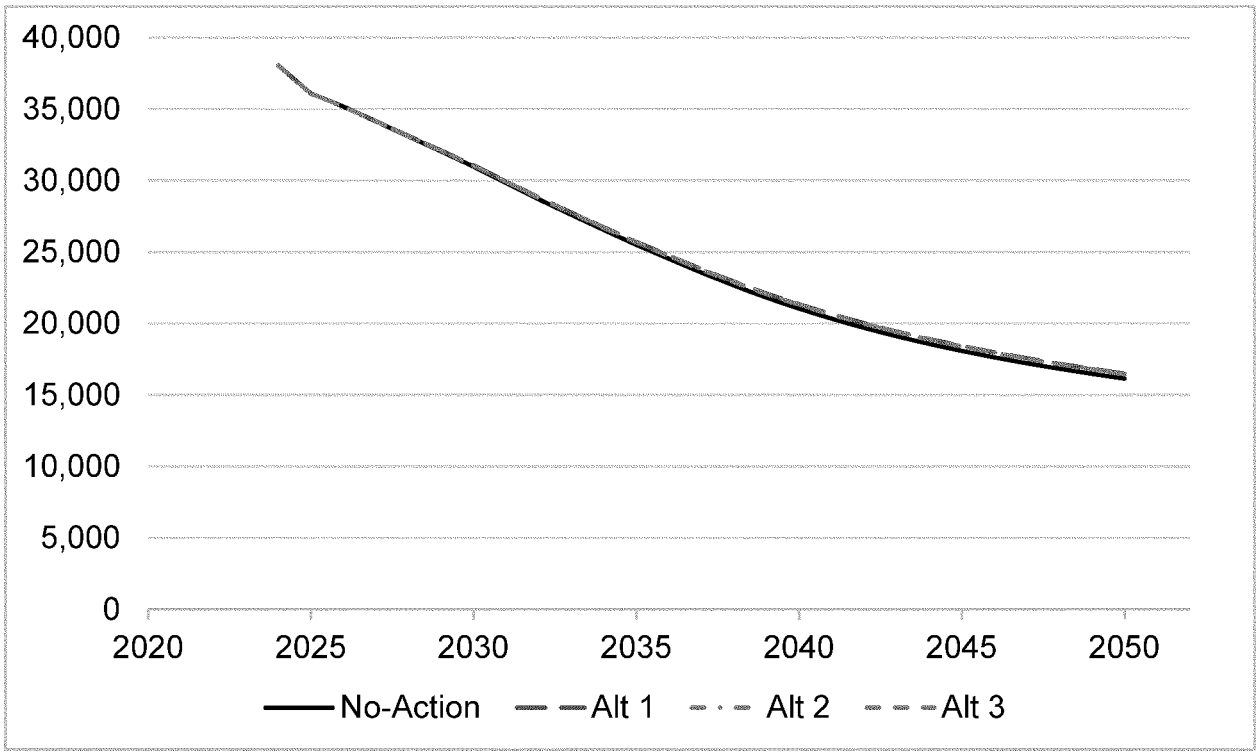


Figure IV-9: Total $PM_{2.5}$ Emissions by Calendar Year and Alternative (Tons)



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Health impacts quantified by the CAFE Model include various instances of hospital visits due to respiratory problems, minor restricted activity days, non-fatal heart attacks, acute bronchitis, premature mortality,[356] and other effects of criteria pollutant emissions on health. Table IV–29 shows changes in select health outcomes relative to the No-Action Alternative, across all action alternatives. The magnitude of the differences relates directly to the changes in the volumes of criteria pollutants emitted. See Chapter 5.4 of the Draft TSD for information regarding how the CAFE Model calculates these health impacts.

[356] Premature mortality includes deaths that are estimated to occur before the normally expected life span of persons within a group defined by specific demographic characteristics.

Table IV-29: Emission Health Outcomes Across Alternatives Relative to the No-Action Alternative (CYs 2024-2050)

Measures (Incidents)	Alternative 1	Alternative 2	Alternative 3
Premature Mortality	473	473	416
Respiratory Emergency Room Visits	267	267	234
Acute Bronchitis	661	661	581
Lower Respiratory Symptoms	8,435	8,434	7,412
Upper Respiratory Symptoms	11,896	11,893	10,452
Minor Restricted Activity Days	349,387	349,316	306,969
Work Loss Days	59,714	59,702	52,465
Asthma Exacerbation	13,946	13,943	12,253
Cardiovascular Hospital Admissions	126	126	111
Respiratory Hospital Admissions	121	121	106
Non-Fatal Heart Attacks (Peters)	491	491	432
Non-Fatal Heart Attacks (All Others)	53	53	47

NHTSA also quantifies safety impacts in its analysis. These include the estimated numbers of fatalities, non-fatal injuries, and property damage crashes occurring over the lifetimes of the light-duty vehicles considered in the analysis. The following table shows the changes in these projected outcomes under the action alternatives relative to the reference baseline.

Table IV-30: Change in Safety Outcomes Across Alternatives Relative to the No-Action Alternative (CYs 2024-2050)

Alternative	Alt 1	Alt 2	Alt 3
Fatalities			
Fatalities from Mass Changes	27	27	20
Fatalities from Rebound Effect	-1,528	-1,528	-1,354
Fatalities from Sales/Scrappage	-66	-66	-64
Total - Fatalities	-1,568	-1,567	-1,398
Non-Fatal Injuries			
Non-Fatal Injuries from Mass Changes	4,264	4,264	3,221
Non-Fatal Injuries from Rebound Effect	-245,022	-244,963	-217,158
Non-Fatal Injuries from Sales/Scrappage	-5,709	-5,709	-5,564
Total - Non-Fatal Injuries	-246,467	-246,408	-219,501
Property Damage Crashes			
Property Damage Crashes from Mass Changes	13,629	13,629	10,379
Property Damage Crashes from Rebound Effect	-835,103	-834,915	-740,855
Property Damage Crashes from Sales/Scrappage	26,991	26,989	25,437
Total - Property Damage Crashes	-794,482	-794,297	-705,039

Decreasing fuel economy stringency leads to a reduction in adverse safety outcomes from rebound-related reductions in VMT (motorists choosing to drive less as driving becomes more expensive), and the increase in scrappage causing newer vehicles with more safety features to enter the fleet sooner. The impacts of mass changes are nonlinear and depend on the specific fleet receiving those changes, with mass increases in passenger cars causing a reduction in adverse safety outcomes and mass increases for light trucks causing an increase in adverse safety outcomes. Though the point estimates applied suggest a marginal increase under the regulatory alternatives, NHTSA notes that none of these safety outcomes due to mass changes can be distinguished statistically from zero. Chapter 7.1.5 of the PRIA accompanying this document contains an in-depth discussion of the effects of the various alternatives on these safety measures, and Chapter 7 of the Draft TSD contains information regarding the construction of the safety estimates.

4. Sensitivity Analysis

The regulatory impact analysis conducted to support this rulemaking relies on many different inputs, parameters, and other analytical assumptions that reflect the agency's best judgments regarding a variety of factors relevant to the anticipated outcomes of the proposed CAFE standards reset, which are all applied within an analytical framework using the CAFE Model. NHTSA recognizes that the values of many analytical inputs are uncertain, and some to a significant degree, which in turn results in uncertainty for some estimates of the benefits, costs, and other outcomes. Some of the uncertain input parameters have a considerable influence on specific types of estimated impacts, and some are likely to do so for the bulk, while others may affect the results of the analysis more broadly. To understand the effect that particular assumptions have on the estimated outcomes, NHTSA conducted a sensitivity analysis by running the CAFE Model using alternative assumptions (referred to as ''sensitivity cases''). The results allow NHTSA to explore a range of potential analytical inputs and to understand the sensitivity of estimated impacts to changes in these specified model inputs. The sensitivity cases developed for this analysis span assumptions related to technology applicability and cost, economic conditions, consumer response, externality values, and safety assumptions, among others.[357]

A sensitivity analysis can identify two critical pieces of information: *how big an influence* does each parameter exert on the analysis, and *how sensitive the model results are* to that assumption. NHTSA acknowledges, however, that influence is different from likelihood. NHTSA does not mean to suggest that any one of the sensitivity cases presented here is inherently more likely than the collection of assumptions that represent the analysis NHTSA conducted to support the proposals advanced in this rulemaking (referred to as the ''central analysis''). The sensitivity analysis simply provides an indication of which assumptions have the greatest impact and the extent to which future deviations from the central analysis assumptions could affect the actual future costs and future benefits of the rule.

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[357] In contrast to an uncertainty analysis, where many assumptions are varied simultaneously, the sensitivity analyses included here vary a single assumption and provide information about the influence of each individual factor, rather than suggesting that an alternative assumption would have justified a different Preferred Alternative.

Table IV-31: Cases and Baselines Included in the Sensitivity Analysis

Case Name	Description
Central analysis	The analysis that NHTSA uses to estimate the impacts of this proposed rulemaking. This is the analysis to which each sensitivity case is compared.
Annual vehicle redesigns	Vehicles redesigned every model year
No advanced engines	Skips advanced engine technologies including start/stop 12V and 48V systems
Oil price (high)	Fuel prices from AEO 2025 High Oil Price Case
Oil price (low)	Fuel prices from AEO 2025 Low Oil Price Case
GDP (high)	GDP and sales based on spring Global Insights optimistic economic growth case
GDP (low)	GDP and sales based on spring Global Insights pessimistic economic growth case
Oil market externalities (low)	Price shock component set to 10th percentile of estimates.
Oil market externalities (high)	Price shock component set to 90th percentile of estimates.
Fuel reduction import share (50%)	Assume 50 percent share of fuel consumption reduction supplied by imports
Fuel reduction import share (100%)	Assume 100 percent share of fuel consumption reduction supplied by imports
No payback period	Payback period set to 0 months
24-month payback period	Payback period set to 24 months
30-month payback period	Payback period set to 30 months
60-month payback period	Payback period set to 60 months
Rebound (10%)	Rebound effect set at 10 percent
Rebound (20%)	Rebound effect set at 20 percent
Sales-scrappage response (-0.1)	Sales-scrappage model with price elasticity multiplier of -0.1
Sales-scrappage response (-1)	Sales-scrappage model with price elasticity multiplier of -1
Light-duty vehicle sales (AEO Ref. 2025 growth)	Light-duty vehicles sales rate of change and gas-powered share in 2025-50 consistent with AEO 2025 Reference Case
No fleet share price response	Fleet share elasticity estimate set to 0 (i.e., no fleet share response across alternatives)
Fixed fleet share	Fleet share level fixed at 2024 value
Fixed fleet share, no price response	Fixed fleet share at 2024 level, fleet share elasticity set to zero
Mass-size-safety (low)	The lower bound of the 95 percent confidence interval for all mass-size-safety model coefficients.
Mass-size-safety (high)	The upper bound of the 95 percent confidence interval for all mass-size-safety model coefficients.
Crash avoidance (low)	Lower bound estimate of effectiveness of six current crash avoidance technologies at avoiding fatalities, injuries, and property damage
Crash avoidance (high)	Upper bound estimate of effectiveness of six current crash avoidance technologies at avoiding fatalities, injuries, and property damage

Apply CO_2 value[358]	2019 EPA domestic only CO_2 monetization value
Apply CO_2, CH_4, N_2O values	2019 EPA domestic only CO_2, CH_4, and N_2O monetization values
AMPC 26-31	Advanced Manufacturing Production Credit included in MYs 2026-2031
No vehicle reclassification	Remove reclassification in the action alternatives
Reclassified vehicles in the No-Action Alternative	Include reclassification in the No-Action Alternative
AC/OC phase-out in 2032	Maintain central analysis AC/OC levels through action alternatives
No AC/OC in No-Action Alternative	AC/OC phased out in MY 2028 in all alternatives including No-Action Alternative
Proposed standards (2022-2026)	Replace existing MYs 2022-2026 standards with Alternative 2's (Preferred Alternative) standards

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Chapter 9 of the accompanying PRIA summarizes results for each of the sensitivity cases, and detailed model inputs and outputs are available on NHTSA's website.[359] The figures in Section IV.B.1 illustrate the relative changes produced by the sensitivity effects of selected inputs on the costs and benefits estimated for this proposal. Each collection of figures groups sensitivity cases by the category of input assumption (*e.g.,* macroeconomic assumptions, technology, and safety assumptions). The figures provide a sense of which inputs are ones for which a different assumption would have a much different effect on analytical findings, and which ones would not have been much affected. For example, assuming a different oil price trajectory would have a relatively large effect, as would changing the assumptions about the effects of changes in vehicle mass on safety outcomes. Chapter 9 of the PRIA provides an extended discussion of these findings and presents net benefits estimated under each of the cases included in the sensitivity analysis. The results presented in the earlier subsections of Section IV and discussed in Section V are drawn from the central analysis and reflect NHTSA's best judgments regarding many different factors; the sensitivity analysis discussed here is simply to illustrate how differences in assumptions can lead to differences in analytical outcomes, some of which can be large and some of which may be smaller.

Overall, NHTSA finds that, for light-duty vehicles, the Preferred Alternative in this proposal, Alternative 2, produces positive estimated net benefits under all sensitivity cases, at both 3- and 7-percent discount rates. Societal net benefits are highest in the ''Mass-size-safety (high)'' case ($46.7 billion) and lowest in the ''Mass-size-safety (low)'' case ($1.3 billion), when applying a 3-percent social discount rate.

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[358] NHTSA's sensitivity cases applying a monetized value to changes in NCEs use NCE values derived from the 2019 EPA Regulatory Impact Analysis for the Repeal of the Clean Power Plan. EPA, Regulatory Impact Analysis for the Repeal of the Clean Power Plan, and the Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units, EPA–452/R–19–003 EPA: Washington, DC (2019), available at: *https://www.epa.gov/sites/default/files/2019-06/documents/utilities_ria_final_cpp_repeal_and_ace_2019-06.pdf* (accessed: Sept. 10, 2025). These values (per metric ton) range from $8.98 (2024) to $13.98 (2050) for CO2, $268.58 to $474.37 for CH4, and $3144.65 to $5033.59 for N20 (3% discount rate, 2024 dollars). The specific values used for this sensitivity at both 3-percent and 7-percent discount rates can be found in the Parameters Input file associated with these sensitivity cases.

[359] NHTSA, Corporate Average Fuel Economy, (2025), available at: *https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy* (accessed: Sept. 10, 2025).

Figure IV-10: Net Social Benefits for Lifetime of Vehicles through MY 2031 (MYs 1985-2031), Alternative 2 Relative to the Central Analysis, Technology and Safety Assumptions Sensitivity Cases (2024$, 3% Discount Rate)

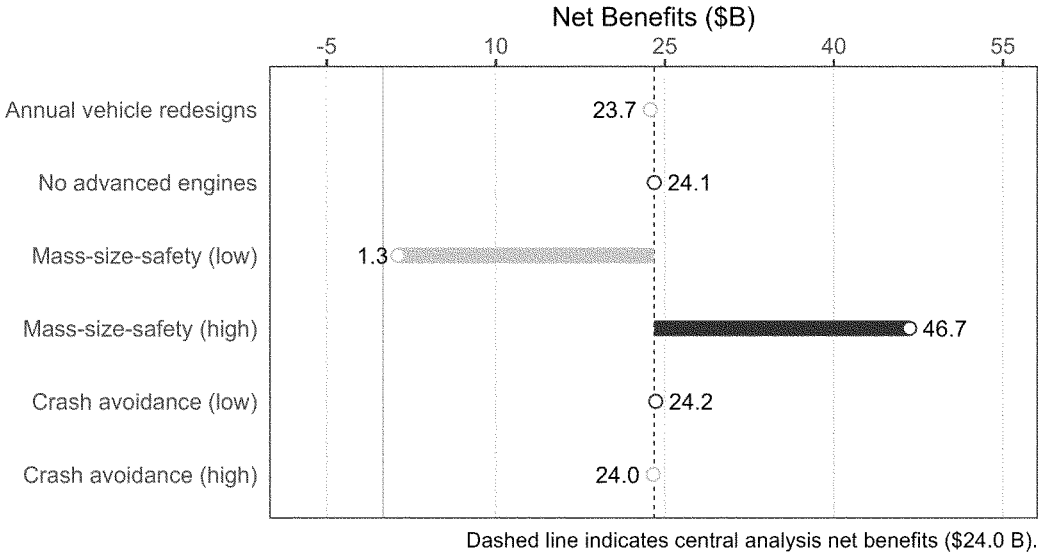


Figure IV-11: Net Social Benefits for Lifetime of Vehicles through MY 2031 (MYs 1985-2031), Alternative 2 Relative to the Central Analysis, Macroeconomic Assumptions Sensitivity Cases (2024$, 3% Discount Rate)

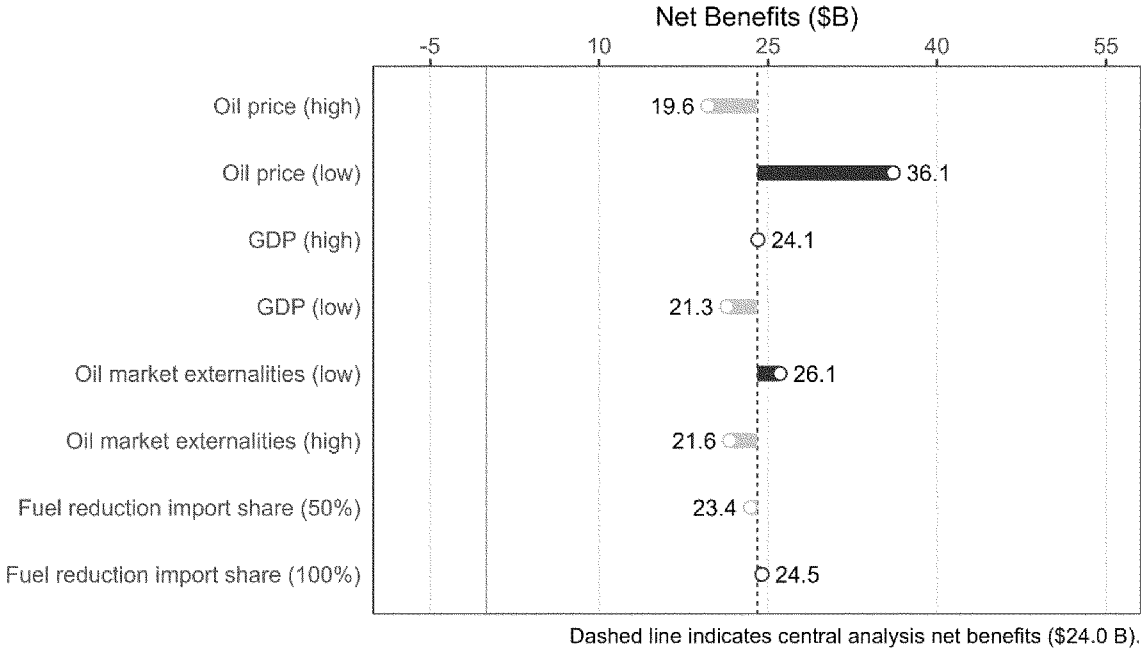


Figure IV-12: Net Social Benefits for Lifetime of Vehicles through MY 2031 (MYs 1985-2031), Alternative 2 Relative to the Central Analysis, Payback, VMT, and Fleet Turnover Assumptions Sensitivity Cases (2024$, 3% Discount Rate)

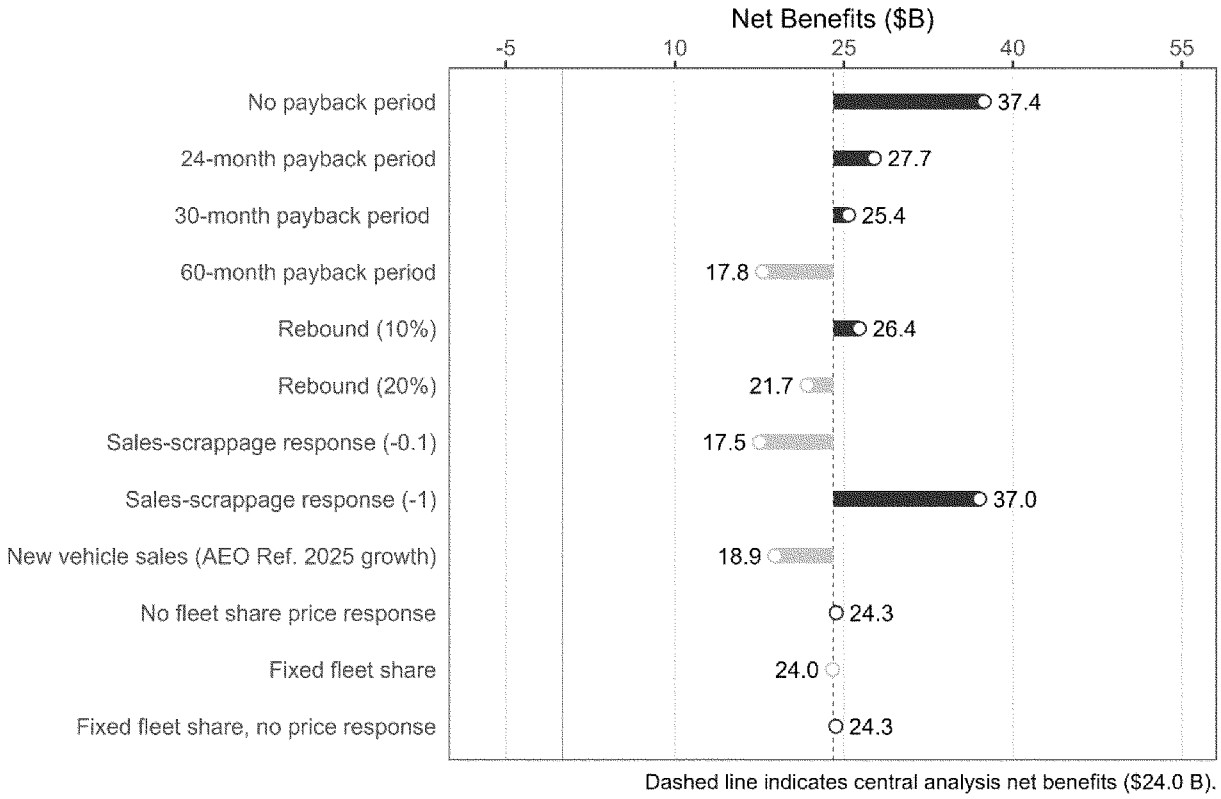
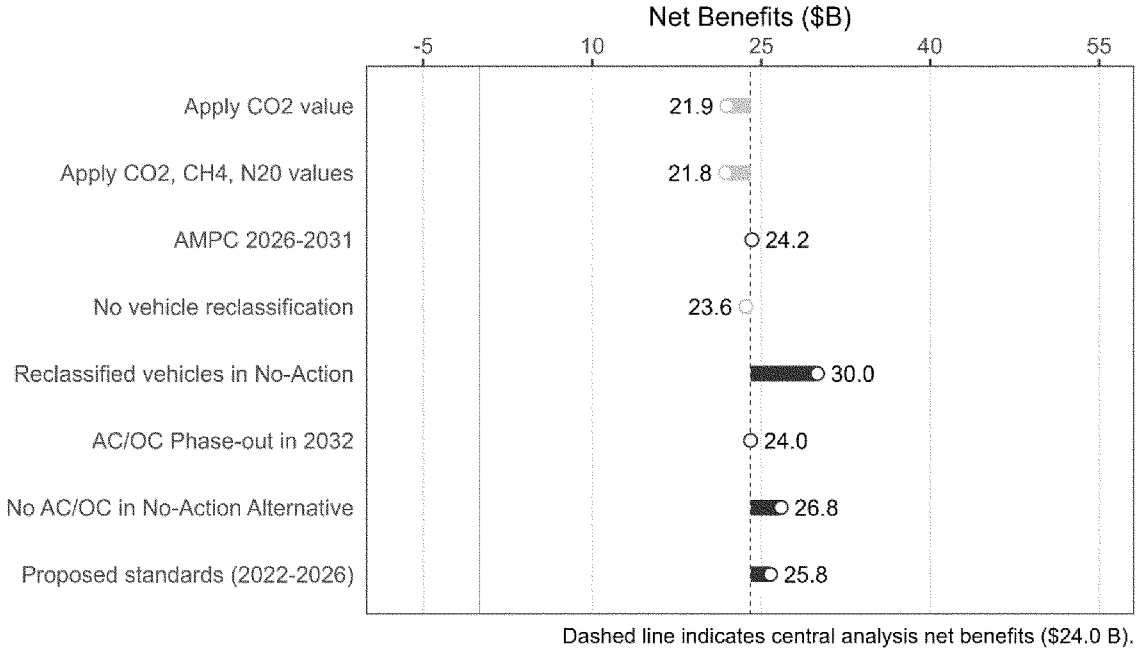


Figure IV-13: Net Social Benefits for Lifetime of Vehicles through MY 2031 (MYs 1985-2031), Alternative 2 Relative to the Central Analysis, Policy and Other Assumptions Sensitivity Cases (2024$, 3% Discount Rate)



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V. Basis for NHTSA's Tentative Conclusion That the Proposed Standards Are Maximum Feasible

In this section, NHTSA discusses the statutory and other factors, data, and analysis that the agency has considered in the selection of the proposed CAFE standards for MYs 2022–2026 and MYs 2027–2031.

A. EPCA, as Amended by EISA

Under EPCA, NHTSA is required to set separate average fuel economy standards for new passenger cars and light trucks produced or imported for sale in the United States at the ''maximum feasible'' levels NHTSA determines manufacturers can achieve in each model year to which the standards apply.[360] That mandate is subject to important limiting considerations, which center on the statutory concept of ''maximum feasibility.'' In determining maximum feasibility, NHTSA must consider the factors set forth in section 32902(f). Specifically, the fuel economy standards established by NHTSA must be based on consideration of technological feasibility, economic practicability, the effects of other Government standards applicable to motor vehicles, and the need of the Nation to conserve energy.[361]

Consistent with the terms of the CAFE program, fuel economy standards are designed based on light-duty vehicles powered by ''fuel,'' which is defined in EPCA to include gasoline, diesel fuel, or other liquid or gaseous fuels with similar combustion properties as identified by NHTSA.[362] While EPCA includes specific provisions designed to incentivize automakers to invest in the development of new technologies, including battery-electric and other alternative-fuel powertrains, BEVs are fueled by electricity, which is an ''alternative fuel'' as defined by EPCA.[363] EPCA prohibits NHTSA from considering the fuel economy of alternative-fueled vehicles in setting or amending its standards.[364] As for dual-fueled vehicles, such as plug-in hybrid electric vehicles (but not non-plug-in hybrid vehicles),[365] the statute requires NHTSA to consider their fuel economy only while operated exclusively on gasoline or diesel fuel.[366] EPCA also prohibits NHTSA from considering the availability of compliance credits in setting or amending its standards.[367]

In addition to these considerations, section 32902 includes several provisions specifying how NHTSA must prescribe CAFE standards, including the form that the CAFE standards must take and the manner and timing of setting such standards and any subsequent amendments. The following subsections discuss in greater detail these requirements, including the requirement to set maximum feasible fuel economy standards.

[360] 49 U.S.C. 32902(a) and (b)(2)(B).

[361] 49 U.S.C. 32902(f).

[362] 49 U.S.C. 32901(a)(10).

[363] 49 U.S.C. 32901(a)(1)(J).

[364] 49 U.S.C. 32902(h).

[365] *See* 63 FR 66066 (Dec. 1, 1998). Non-plug-in hybrid vehicles are not dual-fueled vehicles under Chapter 329 because any electricity generated by the electric motors or other electric components are generated solely by the petroleum-fueled engine and the batteries are incapable of charging from an external source: ''a vehicle which is entirely dependent on a petroleum fuel for its motive power, regardless of whether electricity is used in the powertrain, is powered by petroleum.''

[366] 49 U.S.C. 32901(a)(1), (8), (9), and (10); 49 U.S.C. 32902(h).

[367] *Id.* at 32902(h)(3).

1. Administrative Provisions Governing CAFE Standard Setting

a. Lead Time, Amendatory Authority, and Number of Model Years for Which Standards May Be Set at a Time

EPCA requires that NHTSA prescribe new CAFE standards at least 18 months before the beginning of each model year.[368] In addition, EPCA authorizes NHTSA to prescribe regulations amending the standard established previously for a model year to a level that the Secretary decides is the maximum feasible average fuel economy level for that model year.[369] NHTSA had interpreted EPCA previously to allow amendments reducing the stringency of an industry-wide fuel economy standard for a particular model year up until the beginning of the model year in question.[370] The beginning of the model year is considered generally to be October 1st of the calendar year preceding the named model year (*e.g.,* a MY 2027 vehicle might be offered for sale on or after October 1st, 2026).[371] However, the statute does not contain any language suggesting that reading or any limitation on the model years for which standards may be amended. The only statutory provision addressing a time limitation of an amendment to an existing standard states that NHTSA must provide at least 18 months of lead time if the standards are amended to become more stringent.[372] EPCA contains no lead time requirement if the amendment makes an average fuel economy standard less stringent. As such, NHTSA interprets EPCA as authorizing amendment of standards after a model year has concluded, so long as the amendment makes the standard less stringent. NHTSA proposes to amend standards beginning in MY 2022 as set forth in this NPRM. Proposing amended standards beginning with MY 2022 is consistent with the Secretary's direction in the January 28, 2025, memorandum titled ''Fixing the CAFE Program'' and is also the earliest model year for which NHTSA has not concluded compliance proceedings.

NHTSA is aware that this is a change in its previous interpretation of the statute, with respect to generally applicable standards.[373] NHTSA's prior interpretation was made in response to a manufacturer request for broad downward adjustment to standards in response to manufacturer non-compliance. In this case, NHTSA proposes to amend existing standards because they were promulgated in violation of specific statutory provisions and do not advance the purposes of the CAFE program in the manner most faithful to Congress's design. NHTSA does not believe that Congress intended for NHTSA to leave in place codified standards promulgated in violation of such statutory provisions, and moreover, did not intend for NHTSA to place several vehicle manufacturers in the position of committing violations because they could not meet a standard that is beyond maximum feasible.[374] This conclusion is consistent with NHTSA's rationale for amending standards for low-volume manufacturers in some cases well after the conclusion of a model year, to avoid penalizing manufacturers for NHTSA's own conduct (there, a delay in addressing the manufacturers' petitions).[375] NHTSA's interpretation here is further supported by recent legislative action amending the CAFE civil penalty provision, which applies to years for which the Secretary of Transportation (NHTSA, by delegation) has not notified a manufacturer of the penalty due for an average fuel economy less than the applicable standard.[376] That statutory change likewise applies to MY 2022 and later.[377]

EISA also requires NHTSA to ''issue regulations . . . prescribing average fuel economy standards for at least 1, but not more than 5, model years.'' [378] In the 2020 final rule, NHTSA explained that it interpreted EISA's legislative history to suggest that Congress included the 5-year maximum limitation so NHTSA would issue standards for a period of time where it would have reasonably realistic estimates of market conditions, technologies, and economic practicability (*i.e.,* not setting standards too far into the future because of potential feasibility challenges or the uncertainty surrounding future market conditions).[379] NHTSA explained, however, that the concerns Congress sought to address by imposing those limitations are not present for nearer model years where NHTSA already has existing standards and noted that revisiting existing standards is contemplated by both 49 U.S.C. 32902(c) and 32902(g). NHTSA stated that the agency therefore believed that it is reasonable to interpret section 32902(b)(3)(B) as applying only to the establishment of new standards rather than to the combined action of establishing new standards and amending existing standards.

In addition, NHTSA stated that the statute allows NHTSA to revisit existing standards and separately the statute allows NHTSA to prescribe new standards ''for at least 1, but not more than 5, model years'' when it ''issue[s] regulations.'' NHTSA also explained that it was not clear whether the statute precluded multiple concurrent or quickly sequential rulemakings ''issuing regulations'' for different periods of time. NHTSA provided as an example that it could issue two separate rulemakings, one amending a single model year's standard and one setting new standards for the five immediately ensuing model years, but this would be an unnecessary waste of resources that could be saved by consolidating agency (and commenter) work into a single rulemaking. For these reasons, NHTSA concluded that its interpretation was reasonable and appropriate.

Consistent with the 2020 interpretation, NHTSA continues to believe that the 5-year maximum applies only to rulemakings establishing new standards, and not to—as in this case—the amendment of existing standards. Unlike a situation when NHTSA must be cautious about setting new standards for distant future years, the agency is proposing amended standards to rectify placing

[368] 49 U.S.C. 32902(a).

[369] 49 U.S.C. 32902(c).

[370] 49 FR 41250, 41255 (Oct. 22, 1984); 53 FR 14241, 14241–14302 (Apr. 28, 1988).

[371] *See In re Ctr. for Auto Safety,* 793 F.2d 1346 (D.C. Cir. 1986).

[372] 49 U.S.C. 32902(c).

[373] 49 FR 41250, 41255 (Oct. 22, 1984) (referencing the EPCA Conference Report's statement that ''[a]n amendment which has the effect of making an average fuel economy standard less stringent can be promulgated at any time prior to the beginning of the model year in question,'' the Administrative Procedure Act's definition of a ''rule,'' and the agency's belief that Congress intended to provide certainty and finality for manufacturers' planning purposes and that Congress intended standards to ''encourage the achievement of particular fuel economy levels rather than simply ratifying past conduct.''); 53 FR 14241–14302 (Apr. 28, 1988) (explaining that retroactive downward adjustments were inconsistent with the statutory scheme as inferred by congressionally imposed credit and civil penalty provisions, equity considerations, the APA, and General Motors' perceived theories of Congressional intent). *See also* Gen. Motors Corp. v. Nat'l Highway Traffic Safety Admin., 898 F.2d 165 (D.C. Cir. 1990).

[374] 49 U.S.C. 32911(b) (''A manufacturer of automobiles commits a violation if the manufacturer fails to comply with an applicable average fuel economy standard under section 32902 of this title.'').

[375] *See* 87 FR 39439, 39441 (July 1, 2022).

[376] Section 40006 of Public Law 119–21, 139 Stat. 72 (July 4, 2025). *https://www.congress.gov/119/plaws/publ21/PLAW-119publ21.pdf.*

[377] NHTSA's prior justification that amending standards after the end of a model year ''would undermine the limits Congress placed on NHTSA's authority to mitigate penalties'' no longer applies now that Congress has removed the civil penalty for all model years for which NHTSA is proposing to amend standards. *See Gen. Motors Corp.,* 898 F.2d at 173.

[378] 49 U.S.C. 32902(b)(3)(B).

[379] 85 FR 24174, 25129 (Apr. 30, 2020).

manufacturers in a situation where they violate unlawful standards set at beyond maximum feasible levels due to the consideration of factors prohibited explicitly from consideration in 49 U.S.C. 32902(h). Moreover, as in the example NHTSA provided in the 2020 final rule, the agency believes the public interest in efficiency is best served by presenting proposed amendments for all model years covered by this proposed rule in one notice. NHTSA emphasizes that two separate analyses were conducted for the 2022–2026 and 2027–2031 standards, as described elsewhere in the preamble. It made sense, however, to seek public input on the standards in a single proceeding. In addition, this is the first time that NHTSA's consideration of maximum feasible standards for all model years has appropriately excluded the 32902(h) factors, meaning this is the first time the public will be able to provide comments on a fuel economy standards trajectory for the automotive fleet that appropriately only includes gasoline- and diesel-powered vehicles. Accordingly, NHTSA has concluded that it is appropriate to present all years covered by this amendment in one action.

b. Separate Standards for Passenger Automobiles and Non-Passenger Automobiles

EPCA requires NHTSA to set separate standards for passenger automobiles and non-passenger automobiles for each model year.[380] Based on the plain language of the statute, NHTSA has long interpreted this requirement as preventing NHTSA from setting a single combined CAFE standard for passenger and non-passenger automobiles. EPCA requires separate CAFE standards for passenger and non-passenger automobiles to reflect the different fuel economy capabilities of those different types of vehicles; over the history of the CAFE program, this requirement has remained unchanged.

Since 2012, NHTSA has at times proposed or finalized standards for passenger and non-passenger automobiles that increase at different numerical rates year over year.[381] Even if NHTSA set passenger and non-passenger automobile standards previously with the same numerical rates of increase (*i.e.,* percentage increase from the prior years' standard, which could, for example, increase at a rate of 2 percent for both passenger and non-passenger automobiles), the standards themselves were different because of the starting point for each fleet. This underscores that NHTSA's obligation is to set maximum feasible standards separately for each fleet, based on an assessment of each fleet's circumstances and considering the four statutory factors: technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy.

c. Minimum Standards for Domestic Passenger Automobiles

The 2007 EISA CAFE amendments also required NHTSA to begin setting a separate standard for domestically manufactured passenger automobiles.[382] Unlike the generally applicable standards for passenger and non-passenger automobiles described above, the compliance obligation of the MDPCS is identical for all manufacturers. The statute states that any manufacturer's domestically manufactured passenger car fleet must meet the greater of either 27.5 mpg on average or ''92 percent of the average fuel economy projected by the Secretary for the combined domestic and non-domestic passenger automobile fleets manufactured for sale in the United States by all manufacturers in the model year, which projection shall be published in the **Federal Register** when the standard for that model year is promulgated in accordance with [49 U.S.C. 32902(b)].'' [383] Consistent with the statutory language stating that the 92-percent standards must be determined at the time an overall passenger car standard is promulgated and published in the **Federal Register**, NHTSA has also determined that it must recalculate the MDPCS when amending a passenger car standard.[384]

Since the first post-EISA CAFE rules establishing the MDPCS (the 2008 proposal for MYs 2011–2015 standards and the subsequent 2009 final rule for MY 2011 standards), NHTSA has interpreted ''92 percent of the average fuel economy projected by the Secretary'' to mean 92 percent of the average fuel economy standard projected by the Secretary.[385] Consistent with NHTSA's longstanding interpretation, the proposed MDPCS presented in this NPRM for each model year is based on the projected passenger automobile standards. NHTSA has also limited the proposed MDPCS to the gasoline- and diesel-powered vehicles assessed in this analysis. NHTSA believes doing so is required by EPCA for the reasons discussed throughout this proposal and in the interpretive rule ''Resetting the Corporate Average Fuel Economy Program,'' issued in May 2025,[386] which is discussed in more detail below. In short, EPCA itself is premised on gasoline- and diesel-powered vehicles and it presumes that U.S. fleets will be composed of those vehicles. It is inconsistent with the statute's text and structure to peg the domestic standard to vehicles—specifically EVs, which are powered by an ''alternative fuel'' within the statutory definition—that are different in kind from the gasoline- and diesel-powered vehicles presupposed by EPCA.

As in the 2020, 2022, and 2024 final rules, NHTSA continues to recognize industry concerns that actual total passenger car fleet standards have differed significantly from past projections, perhaps more so when NHTSA projects into the future. In the 2020 final rule, the compliance data showed that the standards projected in the 2012 final rule were consistently more stringent than the actual standards as calculated at the end of the model year, by an average of 1.9 percent. NHTSA stated that this difference indicated that in rulemakings conducted in 2009 through 2012, NHTSA's and

[380] 49 U.S.C. 32902(b)(1).

[381] *See* 85 FR 24174, 25186 (Apr. 30, 2020) (while the agency finalized a different set of standards, it considered and explained that net benefits appear to be maximized under the 2 percent/3 percent alternative, which proposed to raise PC standards at 2 percent per year and LT standards at 3 percent per year); 89 FR 52540, 52547 (June 24, 2024) (explaining that after consideration of relevant data and comments, an alternative that raised PC stringency at 2 percent per year and held LT stringency at 0 percent per year for 2 years, followed by 2 percent increases, was maximum feasible).

[382] 49 U.S.C. 32902(b)(4). In the CAFE program, ''domestically manufactured'' is defined by Congress in 49 U.S.C. 32904(b). The definition roughly provides that a passenger car is ''domestically manufactured'' as long as at least 75 percent of the cost to the manufacturer is attributable to value added in the United States, Canada, or Mexico, unless the assembly of the vehicle is completed in Canada or Mexico and the vehicle is imported into the United States more than 30 days after the end of the model year.

[383] 49 U.S.C. 32902(b)(4). Since the statutory requirement was established, the ''92 percent'' has always been greater than 27.5 mpg and foreseeably will continue to be so in the future.

[384] 77 FR 62624, 63028 (Oct. 15, 2012) (explaining that the agency does not read EISA as precluding ''any change, ever, in the minimum standard after it is first promulgated for a model year'' and that ''the language of the statute suggests that the 92 percent should be determined anew any time the passenger car standards are revised''); 85 FR 24174, 25124 (Apr. 30, 2020); 87 FR 25710, 25962 (May 2, 2022).

[385] 74 FR 14196, 14410 (May 29, 2009) (''NHTSA calculated 92 percent of the final projected passenger car standards as the minimum standard, which for MY 2011 is 27.8.''); 75 FR 25324, 25614 (May 7, 2010); 89 FR 52540, 52792 (June 24, 2024).

[386] 90 FR 24518 (June 11, 2025).

EPA's projections of passenger car vehicle footprints and production volumes underestimated the production of larger passenger cars over the MYs 2011–2018 period.[387] Unlike the passenger car standards and light truck standards, which are vehicle-attribute-based and automatically adjust with changes in consumer demand, the MDPCS is not attribute-based, and therefore it does not adjust with changes in consumer demand and production. Instead, it is a fixed standard established at the time of the rulemaking. As a result, by assuming a smaller footprint fleet, on average, than what was actually produced, the MYs 2011–2018 MDPCS ended up being more stringent and placed a greater burden on manufacturers of domestic passenger cars than was projected and expected at the time of the rulemakings that established those standards.

In the 2020 final rule, NHTSA concurred with industry concerns over the impact of changes in consumer demand (especially when contrasted against what was assumed in the 2012 rulemaking about future consumer demand for greater fuel economy) on manufacturers' ability to comply with the MDPCS, particularly for those manufacturers that produce larger passenger cars domestically. Some of the largest civil penalties for noncompliance in the history of the CAFE program have been paid based on noncompliance with the MDPCS.[388] NHTSA also expressed concern at that time that consumer demand may shift even more in the direction of larger passenger cars if fuel prices continue to remain low. NHTSA explained that sustained low oil prices can be expected to have real effects on consumer demand for additional fuel economy, and if that occurs, it is foreseeable that consumers may be even more interested in 2WD crossovers and passenger-car-fleet SUVs (and less interested in smaller passenger cars) than they were at the time. Therefore, to help avoid outcomes from application of the MDPCS in the MYs 2021–2026 timeframe similar to those observed over the preceding model years, NHTSA determined that it was reasonable and appropriate to consider the recent projection errors as part of estimating the total passenger car fleet fuel economy for MYs 2021–2026. Thus, in the 2020 final rule, NHTSA projected the passenger car fleet fuel economy standard for each model year and applied an offset based on the historical 1.9-percent difference identified for MYs 2011–2018.

NHTSA continued to apply the 1.9-percent offsets in calculating the MDPCS for the 2022 and 2024 final rules after additional quantitative and qualitative analysis showing the offset, and specifically the 1.9 percent-value, was still appropriate and reasonable. NHTSA noted in the 2022 final rule its concern with the stringency in overall standards for MYs 2024–2026 and the increase in the civil penalty rate as reasons why the agency should continue to employ the 1.9-percent offset, specifically if automakers struggling to meet the MDPCS would choose to import their passenger cars rather than produce them domestically.[389] In the 2024 final rule, NHTSA retained the offset, stating all of the reasons presented previously for the offset continued to apply.

For this rulemaking, NHTSA reviewed the analysis it used to calculate the MDPCS offset and updated the analysis to add new data sources and refine the methodology used to calculate the offset value. NHTSA describes the updated analysis in more detail in Section III. The MYs 2027–2031 proposed MDPCS presented in this NPRM accordingly includes a recalculated 0.7 percent-offset. NHTSA believes that the basis for the offset, the inability to project precisely the mix of vehicles sold in the future, is inapplicable to the proposed MYs 2022–2026 standards because those standards incorporate the most up-to-date data available to the agency for vehicle sales volume and footprint sizes in MY 2022. NHTSA's proposed MDPCS for MYs 2027–2031 include this offset to ensure that the standard sufficiently reflects industry capabilities while still considering the original intent behind the MDPCS.

The proposed MDPCS for each model year is as follows:

Table V-1: Minimum Domestic Passenger Car Standard (mpg)

2022	2023	2024	2025	2026	2027*	2028*	2029*	2030*	2031*
33.1	33.1	33.5	33.7	33.9	33.8	33.9	34.0	34.0	34.1

*Includes 0.7-percent offset

d. Attribute-Based Standards Defined by a Mathematical Function

EISA requires NHTSA to set CAFE standards ''based on 1 or more vehicle attributes related to fuel economy and express[ed] . . . in the form of a mathematical function.'' [390] Under attribute-based standards, every vehicle model has a fuel economy target, the levels of which depend on the level of that vehicle's determining attribute. The manufacturer's fleet average CAFE performance is calculated by the harmonic production-weighted average of those targets. This means that no vehicle is required to meet its target; instead, manufacturers are free to balance improvements however they deem best within their fleets.

While CAFE standards for passenger cars and light trucks must be specified as a mathematical function dependent on one or more attributes related to fuel economy, NHTSA has the authority to select *which* attributes and mathematical functions. Prior to the requirement that CAFE standards be attribute-based and defined by a mathematical function, CAFE standards were instead specified as single mpg values (*e.g.,* 27.5 mpg for passenger cars and 20.7 mpg for light trucks). Because these single-mpg standards were wholly independent of fleet composition, these requirements posed a significantly greater technical challenge for manufacturers producing more larger vehicles for the U.S. market than for manufacturers focused more on smaller

[387] 85 FR 24174, 25127 (Apr. 30, 2020).

[388] See the Civil Penalties Report visualization tool at *https://www.nhtsa.gov/corporate-average-fuel-economy/cafe-public-information-center* for more specific information about civil penalties previously paid.

[389] 87 FR 25710, 25965–25966 (May 2, 2022).

[390] 49 U.S.C. 32902(b)(3)(A).

vehicles, because smaller vehicles achieve greater fuel economy levels generally. Therefore, because the standards are fleet-average standards, these single-mpg standards presented an inherent incentive to shift production toward smaller vehicles rather than increasing the application of fuel-saving technologies across entire fleets, meaning that fuel economy benefits would be available primarily to purchasers of smaller vehicles, rather than available broadly to consumers with a more diverse range of vehicle preferences.

In setting attribute-based standards, NHTSA has sought to reflect the trade-off (*i.e.,* the relationship) between the attribute and fuel economy, consistent with the overarching purpose of the program to conserve energy. If the shape of the standards captures these trade-offs, every manufacturer is more likely to continue adding fuel-efficient technology across the distribution of the attribute within their fleet, instead of changing the attribute—and other correlated attributes, including fuel economy—as part of their compliance strategy. The shape of the standards is discussed in more detail in Draft TSD Chapter 1.

Historically, NHTSA has based standards on vehicle footprint, and the agency is proposing to continue to do so in this rulemaking. As in previous rulemakings, NHTSA is proposing to define the standards in the form of a constrained linear function that sets higher (more stringent) targets for smaller footprint vehicles and lower (less stringent) targets for larger footprint vehicles. These footprint curves are discussed in more detail in Section II and Draft TSD Chapter 1.

2. Maximum Feasible Standards

As discussed above, EPCA requires NHTSA to consider four factors in determining what levels of CAFE standards would be maximum feasible. In the sections below, NHTSA presents its understanding of the meanings of those four factors, in addition to other statutory requirements the agency must consider.

a. Technological Feasibility

Under EPCA, ''[t]echnological feasibility'' refers to whether a particular method of improving fuel economy is available for deployment in commercial application in the model year for which a standard is being established. Though NHTSA is not limited in determining the level of new standards to technology already being commercially applied at the time of the rulemaking, NHTSA is not required to attempt to account for every technology that might conceivably be applied to improve fuel economy and has considered it unnecessary to do so given that many technologies address fuel economy in similar ways. It is also important to note that technological feasibility and economic practicability are often conflated. The question of whether a fuel-economy-improving technology does or will exist (technological feasibility) is a different question from what economic consequences could ensue if NHTSA effectively requires that technology to become widespread in the fleet in the absence of sufficient consumer demand for such technologies (economic practicability). Accordingly, it is possible for standards to be technologically feasible but still beyond the level that NHTSA determines to be maximum feasible due to consideration of the other relevant factors.

NHTSA has long rejected interpretations of the technological feasibility factor that would require NHTSA to set ''technology-forcing'' standards. NHTSA has recognized that ''[i]t is important to remember that technological feasibility must also be balanced with the other of the four statutory factors. Thus, while 'technological feasibility' can drive standards higher by assuming the use of technologies that are not yet commercial, 'maximum feasible' is still also defined in terms of economic practicability, for example, which might caution the agency against basing standards (even fairly distant future standards) *entirely* on such technologies'' (emphasis original).[391] NHTSA has also concluded that ''as the 'maximum feasible' balancing may vary depending on the circumstances at hand for the model years in which the standards are set, the extent to which technological feasibility is simply met or plays a more dynamic role may also shift.'' [392]

NHTSA continues to believe that the crucial question on the technological feasibility factor is not whether technologies exist to meet the standards. Rather, the question is how much existing technology should be required to be added to new cars and trucks to conserve fuel, and how appropriately to balance any additional fuel conserved against the additional cost the mileage requirements will impose on new vehicles. Regardless of whether technological feasibility allows the agency to set technology-forcing standards, technological feasibility does not require, by itself, NHTSA to set technology-forcing standards if other statutory factors would point the agency in a different direction. NHTSA has applied this moderating interpretation of technological feasibility over the course of multiple rulemakings.[393]

b. Economic Practicability

NHTSA has long interpreted ''[e]conomic practicability'' to focus on whether a standard is one ''within the financial capability of the industry, but not so stringent as to'' lead to ''adverse economic consequences, such as a significant loss of jobs or the unreasonable elimination of consumer choice.'' [394] In evaluating economic practicability, the agency considers the uncertainty surrounding future market conditions and consumer demand for fuel economy alongside consumer demand for other vehicle attributes. NHTSA has explained in the past that this factor can be especially important during rulemakings in which the auto industry is facing significantly adverse economic conditions (with a corresponding risk of significant job losses). Consumer acceptability is also a major component of economic practicability,[395] which can involve consideration of anticipated consumer responses not just to increased vehicle cost, but also to the way manufacturers may change vehicle models and vehicle sales mix in response to CAFE standards. In attempting to determine the economic practicability of attribute-based standards, NHTSA considers a wide variety of elements, including the annual rate at which manufacturers can increase the percentage of their fleet that employs a particular type of fuel-saving technology, as well as manufacturer fleet mixes. NHTSA also considers the effects on consumer affordability resulting from costs to comply with the standards, and consumers' valuation of fuel economy, among other things.

NHTSA's consideration of economic practicability depends on a number of elements. These include expected availability of capital to make investments in new technologies and production facilities; manufacturers' expected ability to sell vehicles with certain technologies; likely consumer choices; and other elements. NHTSA's

[391] 77 FR 62624, 63015 (Oct. 15, 2012).

[392] *Id.*

[393] *Id.; see also* 75 FR 25324, 25605 (May 7, 2010).

[394] 67 FR 77015, 77021 (Dec. 16, 2002).

[395] *See Ctr. for Auto Safety* v. *NHTSA*, 793 F.2d 1322 (D.C. Cir. 1986) (Administrator's consideration of market demand as component of economic practicability found to be reasonable); *see also Public Citizen* v. *NHTSA*, 848 F.2d 256 (D.C. Cir. 1988) (Congress established broad guidelines in the fuel economy statute; agency's decision to set lower standards was a reasonable accommodation of conflicting policies).

analysis also incorporates assumptions to capture aspects of consumer preferences, vehicle attributes, safety, and other elements relevant to an impacts estimate. Although the agency accounts for safety independently under its longstanding practice, it also considers safety as closely related to, and in some circumstances, a subcomponent of economic practicability. Because manufacturers have finite resources to invest in research and development, investment into the development and implementation of fuel-saving technology necessarily comes at the expense of investing in other areas, such as safety technology. Moreover, when making decisions on how to equip vehicles, manufacturers must balance cost considerations to avoid pricing more consumers out of the market. As manufacturers add technology to increase fuel efficiency, they may decide against installing additional safety equipment to reduce cost increases. And as the prices of new vehicles increase beyond the reach of more consumers, such consumers continue to drive or purchase older, less safely used vehicles. In assessing economic practicability, NHTSA thus also considers the harm to the U.S. economy caused by highway fatalities and injuries.

c. The Effect of Other Motor Vehicle Standards of the Government on Fuel Economy

The effect of other motor vehicle standards of the Government on fuel economy involves analysis of the effects of compliance with emission, safety, noise, or damageability standards on fuel economy capability and thus on average fuel economy. From the CAFE program's earliest years until recently,[396] the effects of compliance with such standards on fuel economy capability over the history of the CAFE program have been negative ones. For example, safety standards that have the effect of increasing vehicle weight thereby lower fuel economy capability, thus decreasing the level of average fuel economy that NHTSA can determine to be feasible. For recent proposals, including this proposal, NHTSA has captured the added weight due to safety standards in baseline vehicle mass estimates. There are no safety standards with compliance dates within the timeframe of this proposal expected to impose further effects on light-duty vehicle mass. NHTSA had also previously considered EPA's motor vehicle emissions standards set pursuant to the CAA when both agencies had set standards in joint rules and also set separate yet coordinated standards. However, this proposal does not incorporate EPA's non-criteria emissions standards as a result of the proposed rescission of its Endangerment Finding and all resulting greenhouse gas emissions standards for light-, medium-, and heavy-duty vehicles and engines.[397] NHTSA will continue to monitor actions in this area for the final rule.

In addition, as discussed further below in the section titled ''Factors That NHTSA Is Prohibited from Considering'' and at length in the final rule titled ''Resetting the Corporate Average Fuel Economy Program,'' [398] NHTSA acknowledges that in the previous rulemakings, the agency considered standards set by the California Air Resources Board (CARB). Regardless of whether NHTSA previously explicitly considered those standards as ''other motor vehicle standards of the Government'' or otherwise, NHTSA now explicitly rejects such consideration. For the reasons explained in this section, CARB's standards are not ''other motor vehicle standards of the Government on fuel economy.''

Under EPCA's blanket preemption provision, states may not adopt or enforce regulatory requirements related to fuel economy standards.[399] This preemption mandate holds true regardless of whether EPA has granted waivers for emissions requirements under the CAA. In any event, the President has signed into law three resolutions adopted by Congress under the Congressional Review Act (CRA) to disapprove waivers EPA granted under CAA section 209,[400] including for, as is relevant to the model years and vehicle classes under consideration in this proposal, the Advanced Clean Cars II action. Given the above, CARB standards cannot be justified as policies properly incorporated in the analytical baseline for EPCA purposes.

In addition, regardless of the status of the CARB standards given EPA's proposed repeal, NHTSA believes that the best interpretation of the text of EPCA rebuts the conclusion that CARB's standards are appropriately considered under this section 32902(f) factor. The statute uses the singular ''the Government,'' which refers to the Federal Government, consistent with the 1994 recodification discussed below. This reference likely reflects that only the Federal Government has authority to set standards ''on fuel economy,'' as EPCA itself provides. Under this reading, even if California were held to have authority to set vehicle emission standards pursuant to a waiver under the CAA, for purposes of the maximum feasibility determination, such standards could not be considered because they are not standards of ''the Government,'' as that term is used in EPCA. Again, the use of the definite article ''the'' in reference to the relevant Government suggests that Congress limited consideration to standards set by the Federal Government. Congress easily could have referred to standards set by ''a government'' if it sought to authorize NHTSA to consider state standards in the maximum feasible determination. Congress did not do so.

EPCA's history buttresses the plain meaning of the text. As initially passed in 1975, EPCA mandated average fuel economy standards for passenger cars beginning with MY 1978. The law required the Secretary of Transportation to establish, through regulation, maximum feasible fuel economy standards for MYs 1981–1984 with the intent to provide steady increases to achieve the standard established for 1985 and thereafter authorized the Secretary to adjust that standard. For the statutorily established standards for MYs 1978–1980, EPCA provided each manufacturer with the right to petition for changes in the fuel economy standards applicable to that manufacturer, based on the application of other Federal standards.[401] A petitioning manufacturer had the burden of demonstrating that a ''Federal fuel economy standards reduction'' was likely to exist for that manufacturer in one or more of those model years and that it had made reasonable technology choices. ''Federal standards,'' for that limited purpose, included not only safety standards, noise emission standards, property loss reduction standards, and emission standards issued under various Federal statutes, but also ''emissions standards applicable by reason of section 209(b) of [the CAA].'' Critically, all definitions, processes, and required findings regarding a Federal fuel economy

[396] 42 FR 63184, 63188 (Dec. 15, 1977); *see* 42 FR 33534, 33537 (June 30, 1977).

[397] 90 FR 36288 (Aug. 1, 2025).

[398] 90 FR 24518 (June 11, 2025).

[399] *See* 49 U.S.C. 32919.

[400] H.J. Res. 87 (Pub. L. 119–15); H.J. Res. 88 (Pub. L. 119–16); H.J. Res. 89 (Pub. L. 119–17); *see also* The White House, Statement by the President, Last revised: June 12, 2025, available at: *https://www.whitehouse.gov/briefings-statements/2025/06/statement-by-the-president/* (accessed: Sept. 10, 2025).

[401] Public Law 94–163, 89 Stat. 871 (Dec. 22, 1975). *https://www.govinfo.gov/content/pkg/STATUTE-89/pdf/STATUTE-89-Pg871.pdf.*

standards reduction were located within a single self-contained subsection of 15 U.S.C. 2002, which applied only to MYs 1978–1980.[402]

In 1994, Congress recodified several laws related to transportation. As part of this recodification, the CAFE provisions were moved to title 49 of the United States Code. In doing so, unnecessary provisions were deleted. Specifically, the recodification eliminated subsection (d). The House report describing the recodification declared that the subdivision was already ''executed,'' and described its purpose as ''[p]rovid[ing] for modification of average fuel economy standards for model years 1978, 1979, and 1980.'' [403] It is generally presumed, when Congress includes text in one section and not in another, that Congress knew what it was doing and made the decision deliberately. As part of the same recodification, the relevant language now found at 49 U.S.C. 32902(f) changed from ''effect of other *Federal* motor vehicle standards on fuel economy'' to ''effect of other motor vehicle standards of *the Government* on fuel economy'' (emphasis added).[404] The Senate report accompanying the legislation clarified that ''United States Government'' is substituted for ''United States'' (when used in referring to the Government), ''Federal Government'' and other terms identifying the Government the first time the reference appears in a section. Thereafter, in the same section, ''Government'' is used unless the context requires the complete term to be used to avoid confusion with other governments.[405]

Accordingly, consistent with the statutory intent and text, NHTSA has limited its consideration to the effect of other Federal motor vehicle standards on fuel economy.

d. The Need of the United States To Conserve Energy

NHTSA has historically interpreted ''the need of the United States to conserve energy'' to mean ''the consumer cost, national balance of payments, environmental, and foreign policy implications of our need for large quantities of petroleum, especially imported petroleum.'' [406]

(1) Consumer Costs and Fuel Prices

With regard to NHTSA's consideration of the need for energy conservation, fuel purchases for vehicles are costly to vehicle owners and operators. Projections of future fuel prices help NHTSA to determine the value of fuel savings both to new vehicle buyers and to society and the amount of fuel economy that the new vehicle market is likely to demand in the absence of new standards. Future fuel prices also inform NHTSA about ''the consumer cost9 . . . of our need for large quantities of petroleum.'' [407] In this proposal, NHTSA's analysis relies on fuel price projections from EIA's AEO for 2025, Alternative Transportation Case.[408] Federal Government agencies generally use EIA's price projections in their assessment of future energy-related policies.

(2) National Balance of Payments

The need of the United States to conserve energy has historically included consideration of the ''national balance of payments'' because of concerns that importing large amounts of oil created a significant wealth transfer to oil-exporting countries and left the U.S. economically vulnerable.[409] In the 20th and early 21st centuries, the U.S. trade deficit was mainly driven by petroleum.[410] As recently as 2009, almost half of the deficit was composed of petroleum imports.[411] However, this concern has largely abated in more recent CAFE actions, in part because other factors besides petroleum consumption have since played a bigger role in the U.S. trade deficit, and because of the substantial rebalancing of international petroleum markets largely driven by shale oil productivity in the United States. In light of significant increases in U.S. oil production and corresponding decreases in oil imports, this concern is likely to remain far less pronounced for the foreseeable future.[412] Increasingly, changes in the price of fuel have come to represent transfers between domestic consumers of fuel and domestic producers of petroleum rather than gains or losses to foreign entities.

Although total energy independence is not possible for any country that participates in the global energy market, the fact that the U.S. is now a net oil exporter necessarily reduces risks from global price fluctuation. Even if the U.S. consumed only domestically produced petroleum and continued to export, the U.S. economy would still be subject to oil price fluctuations due to external events and situations. But changes in the oil market mean that the risk of damage to the U.S. economy and of additional pain for U.S. drivers is lower than it was in previous decades. To be sure, risk still exists, and both production and consumption of oil are relevant to how big that risk might be. But the risk is much lower than it would have been in the absence of the rapid growth in U.S. oil production, and this diminished risk means that the need of the U.S. to conserve energy is significantly less than it was at earlier points in the history of the program.

(3) Environmental Effects

Beginning with the outset of the CAFE program, NHTSA has consistently considered environmental issues, mindful of the need to conserve energy under EPCA, of its statutory authority to set CAFE standards, and of the National

[402] As originally enacted as part of Public Law 94–163, that subsection was designated as sec. 502(d) of the Motor Vehicle Information and Cost Savings Act.

[403] H.R. Rep. No. 103–180, at 583–584, tab. 2A.

[404] *See* Public Law 103–272, 108 Stat. 745 (July 5, 1994), *https://www.congress.gov/103/statute/STATUTE-108/STATUTE-108-Pg745.pdf* (to revise, codify, and enact without substantive changes certain laws related to transportation).

[405] S. Rep. 103–265.

[406] 42 FR 63184, 63188 (Dec. 15, 1977).

[407] *Id.*

[408] EIA, Annual Energy Outlook 2025: Case Descriptions, EIA: Washington, DC (2025), available at *https://www.eia.gov/outlooks/aeo/assumptions/pdf/case_descriptions.pdf* (accessed: Sept. 10, 2025). The Alternative Transportation case removes the following policies from the modeling: NHTSA CAFE and EPA tailpipe greenhouse gas standards for light-duty vehicles in MY 2027 and beyond, EPA Phase 3 tailpipe greenhouse gas standards for freight trucks and buses in MY 2027 and beyond, EPA low nitrogen oxide requirements for freight trucks in MY 2027 and beyond, and California Air Resources Board's Advanced Clean Truck (ACT) rule (for both California and CAA sec. 177 states). That case also modifies the following behavioral assumptions: Passenger vehicle manufacturers introduce new electric vehicle nameplates endogenously based on growth in EV sales, rather than based on plans announced in 2024; charging infrastructure buildout is coupled with growth in EV registrations, rather than being exogenously determined based on private- and public-sector announcements; and projected increase in eligibility for IRA sec. 30D credits—in other words, manufacturer reshoring of EV and battery supply chains—is significantly slowed.

[409] 42 FR 63184, 63192 (Dec. 15, 1977) (''A major reason for this need [to reduce petroleum consumption] is that the importation of large quantities of petroleum creates serious balance of payments and foreign policy problems. The United States currently spends approximately $45 billion annually for imported petroleum. But for this large expenditure, the current large U.S. trade deficit would be a surplus.'').

[410] EIA, Today in Energy: Recent improvements in petroleum trade balance mitigate U.S. trade deficit, U.S. Energy Information Administration, Last revised: July 21, 2014, available at: *https://www.eia.gov/todayinenergy/detail.php?id=17191* (accessed: Sept. 10, 2025).

[411] *Id.*

[412] Although future changes in trade policy and its potential macroeconomic impacts remain a source of uncertainty in EIA's outlooks, the most recent Short Term Energy Outlook projections U.S. crude oil production to remain around 13.3 million barrels per day in 2026 compared with 13.4 million barrels per day in 2025, and U.S. crude oil inventories are expected to increase by almost 12 percent from 2025 to 2026. See EIA, Short-Term Energy Outlook, Last revised: Sept. 9, 2025, available at: *https://www.eia.gov/outlooks/steo/.*

Environmental Policy Act (NEPA).[413] In addition to discussing how these effects are weighted in NHTSA's balancing of maximum feasible standards for this action, discussed below, NHTSA also summarizes information related to the environmental effects of this action in Chapter 8.2.5 of the PRIA, and in the section below titled ''National Environmental Policy Act.'' For more detail on the NEPA analysis conducted in conjunction with this proposal, please refer to the accompanying Draft Supplemental Environmental Impact Statement (Draft SEIS).

NHTSA seeks comment on whether Congress has given it authority under EPCA to consider environmental effects when setting fuel economy standards. EPCA's charge is for the agency to set maximum feasible fuel economy standards to reduce national vulnerability to supply shocks while balancing statutory factors—none of which includes environmental effects. Among those statutory considerations is the effect of other Federal government standards on fuel economy. NHTSA has traditionally considered the fact that the vehicles NHTSA regulates are also subject to compliance obligations under the Environmental Protection Agency's criteria emission standards (*e.g.,* mass attributable to adding a catalytic converter) in setting fuel-economy standards. This is appropriate, since EPA is the Federal environmental regulator. NHTSA is not an environmental regulator, and rather than turn NHTSA into one, Congress instead directed the agency to consider the impact of regulations established by environmental regulators on fuel economy when establishing standards. This question of the appropriateness of NHTSA's historic consideration of environmental effects when setting fuel economy standards has become more relevant in light of the United States recent emergence as a net petroleum exporter. NHTSA solicits comment on whether consideration of potential effects of upstream activity such as domestic extraction and refining of petroleum conflicts with or is otherwise not contemplated by Congress' delegation of fuel-economy regulatory authority to NHTSA, including because those upstream activities are subject to regulation by the EPA under the Clean Air Act. In light of EPCA's initial passage as an energy conservation statute and the United States being a net energy exporter, the agency seeks comment on whether environmental effects should remain relevant under ''the need of the United States to conserve energy,'' or any other factor.

(4) Foreign Policy Implications

U.S. consumption and imports of petroleum products can impose costs on the domestic economy that are not reflected in the market price for crude petroleum or in the prices paid by consumers for petroleum products such as gasoline. These costs include the risk of disruptions to the U.S. economy caused by sudden increases in the global price of oil and its resulting impact on fuel prices faced by U.S. consumers.[414] Higher U.S. consumption of crude oil or refined petroleum products could increase the magnitude of external economic costs, thus increasing the true economic cost of supplying transportation fuels above the resource costs of producing them. Conversely, reducing U.S. consumption of crude oil or refined petroleum products (by reducing motor fuel use) can reduce these external costs.

While these costs are considerations, the United States has significantly increased oil production capabilities in recent years and has become a net energy exporter.[415] The U.S. today produces enough oil to satisfy nearly all its energy needs and is projected to continue to do so. In 1977, the U.S. consumed 18.43 million barrels of oil per day, producing 10.39 million, and importing 8.81 million. By 2007, when EISA was adopted, U.S. consumption had risen to 20.68 million barrels of oil per day, with production dropping to 7.85 million, and imports increasing significantly to 13.47 million. By 2022, the landscape had dramatically shifted toward stability, with U.S. consumption dropping slightly to 20.01 million barrels of oil per day, production skyrocketing to 20.08 million, and imports plummeting to 8.32 million.[416] Further, as petroleum imports have declined substantially, even the source of such imports has shifted away from more volatile sources in the Middle East and toward North America. And the source of these imports shifted dramatically as well. In 1977, 8.64 million barrels of oil per day were imported from OPEC and Persian Gulf countries, while only 540 thousand barrels were imported from Canada. In 2007, 8.14 million barrels per day were imported from OPEC and Persian Gulf countries, but Canadian imports increased to 2.23 million. By 2022, OPEC and Persian Gulf imports dropped to only 2.23 million barrels per day, while Canadian imports jumped to 4.37 million. This significant change in circumstances has added new stable supply to the global oil market since the adoption of EPCA and EISA, even as U.S. imports shifted away from volatile and adversarial sources and toward North American sources. NHTSA's assessment of the weight of this factor in balancing the ''need of the Nation to conserve energy'' has shifted accordingly, as discussed in more detail below.

e. Factors That NHTSA Is Prohibited From Considering

EPCA also provides that in determining the level at which NHTSA should set CAFE standards for a particular model year, the agency may not consider the fuel economy of dedicated automobiles; must consider dual-fueled automobiles to be operated only on gasoline or diesel fuel; and may not consider, when prescribing a fuel economy standard, the trading, transferring, or availability of credits under section 32903.[417] Because of the location of these restrictions in the United States Code, at 49 U.S.C. 32902(h), these are also referred to as the ''section 32902(h)'' factors for brevity.

On June 11, 2025, NHTSA published in the **Federal Register** an interpretive rule titled ''Resetting the Corporate Average Fuel Economy Program,'' which set forth NHTSA's interpretation of how it could consider the section 32902(h) limitations when setting maximum feasible CAFE standards.[418] That rule described the history surrounding EPCA's passage in 1975: EPCA was passed in the context of the Arab oil embargoes of the 1970s when American consumers and the U.S. economy were threatened by gasoline shortages and high fuel prices. The House report accompanying EPCA noted that, as a result, the legislation sought to address the national security

[413] 53 FR 33080, 33096 (Aug. 29, 1988); 53 FR 39275, 39302 (Oct. 6, 1988).

[414] While the U.S. maintains a military presence in certain parts of the world to help secure global access to petroleum supplies, that is neither the primary nor the sole mission of U.S. forces overseas. In addition, the scale of oil consumption reductions associated with CAFE standards would be insufficient to alter any existing military missions focused on ensuring the safe and expedient production and transportation of oil around the globe. See Chapter 7 of the PRIA for more information on this topic.

[415] EIA, U.S. Energy Facts Explained: The United States has been an annual net total energy exporter since 2019, Last revised: July 15, 2025, available at: *https://www.eia.gov/energyexplained/us-energy-facts/imports-and-exports.php* (accessed: Sept. 10, 2025).

[416] EIA, Oil and Petroleum Products Explained, Last revised: Jan. 19, 2024, available at: *https://www.eia.gov/energyexplained/oil-and-petroleum-products/imports-and-exports.php* (accessed: Sept. 10, 2025).

[417] 49 U.S.C. 32902(h).

[418] 90 FR 24518 (June 11, 2025).

dangers of America's dependence on foreign oil.[419] Consistent with that context, the House report stated that the purpose of the CAFE program was to induce automakers into offering America's consumers more fuel-efficient vehicle options to advance the national goal of conserving energy while simultaneously ''recogniz[ing] that the automobile industry has a central role in our national economy and that any regulatory program must be carefully drafted so as to require of the industry what is attainable without either imposing impossible burdens on it or unduly limiting consumer choice as to capacity and performance of motor vehicles.'' [420]

As originally enacted, EPCA did not limit the Secretary's consideration of factors when setting maximum feasible standards. Limitations in section 32902(h) first appeared in the AMFA.[421] AMFA aimed to displace energy derived from imported oil to help achieve energy security and improve air quality by encouraging the development of widespread use of methanol, ethanol, and natural gas as transportation fuels by consumers and the production of methanol, ethanol, and natural gas-powered motor vehicles. The statute specified that, in carrying out responsibilities to set maximum feasible fuel economy standards, ''the Secretary shall not consider the fuel economy of alcohol powered automobiles or natural gas powered automobiles, and the Secretary shall consider dual energy automobiles and natural gas dual energy automobiles to be operated exclusively on gasoline or diesel fuel.'' [422] One member of Congress described AMFA's approach as ''evenhanded'' in that the bill did not favor one alternative fuel over another; rather, ''[i]t allow[ed] the market to pick the non-petroleum alternative fuel of the future.'' [423]

The conferees specifically noted their intent to ensure that the Secretary of Transportation did not erase the AMFA incentives by setting the CAFE standards for passenger or non-passenger automobiles ''at a level that assumes a certain penetration of alternative fueled vehicles.'' [424] Specifically, ''[i]t is intended that [NHTSA's maximum feasibility] examination will be conducted without regard to the penetration of alternative fuel vehicles in any manufacturer's fleet, in order to ensure that manufacturers taking advantage of the incentives offered by this bill do not then find DOT including those incentive increases in the manufacturer's 'maximum fuel economy capability.' '' [425]

The Energy Policy Act of 1992 expanded the section 32902(h) limitations to include all dedicated alternative-fueled vehicles.[426] The Energy Policy Act's accompanying House report acknowledged that the widespread use of alternative fuels faced several problems, but expanded the AMFA requirements to keep the program ''fuel neutral.'' [427] This statutory expansion was because ''all the data, experience, and knowledge gathered concerning alternative fuels over the past two decades points to the fact that no one fuel is 'the winner.' '' [428]

There have been no subsequent substantive changes to the language in 49 U.S.C. 32902(h),[429] including with the enactment of EISA in 2007. The statutory prohibition was clear at the time of enactment and has remained clear: it is impermissible for NHTSA to consider the fuel economy of dedicated automobiles in setting maximum feasible fuel economy standards. NHTSA affirms that it did not consider any of these statutorily prohibited factors in determining the maximum feasible standards proposed in the present rulemaking.

f. Additional Considerations Relevant to NHTSA's Statutory Determination of Maximum Feasibility

There are additional considerations relevant to NHTSA's determination of maximum feasible standards that the agency evaluates in conjunction with its analysis of the four enumerated section 32902(f) factors mentioned above.

NHTSA has historically considered the potential for adverse safety consequences in setting CAFE standards, both independently and in the context of the section 32902(f) factors.[430] NHTSA assesses the potential safety impacts of alternative standards and considers them in balancing the statutory considerations and determining the maximum feasible level of the standards. Courts have upheld NHTSA's implementation of EPCA in this manner.[431]

NHTSA also considers consumer demand, which is ''not specifically designated as a factor, but neither is it excluded from consideration; the factors of 'technological feasibility' and 'economic practicability' are each broad enough to encompass the concept.'' [432] As the D.C. Circuit has recognized, NHTSA ''is directed to weigh the 'difficulties of individual automobile manufacturers;' there is no reason to conclude that difficulties due to consumer demand for a certain mix of vehicles should be excluded.'' [433]

In concert with E.O. 12866, NHTSA considers net benefits as relevant to determining maximum feasible CAFE standards. EPCA does not mandate that NHTSA set standards at the point at which net benefits are maximized, and NHTSA does not believe it is compelled to do so.[434] That said, this proposed rule

[419] *See* H.R. Rep. No. 94–340, at 6–10, 87–88 (1975) (available in the docket for this action) (''In 1973 the embargo affected 14 percent of U.S. petroleum consumption and precipitated a $10- to $20-billion drop in GNP. . . . In June of 1973 the average selling price for regular gasoline was reported to be approximately 38.8 cents per gallon, including tax. By June of 1974 that price had increased to 55.1 cents per gallon, an addition in excess of 42 percent. Yet in the same period, gasoline demand went from 6.8 million barrels per day to 7.0 million barrels per day. In other words, gasoline demand actually increased by 2.9 percent even though prices had jumped by over 42 percent. . . . Part B of title V of the bill establishes a long range program for improving automobile fuel economy by requiring manufacturers and importers to meet increasingly stringent average fuel economy standards, and to disclose the fuel economy of each new automobile sold in the United States.'').

[420] *Id.* at p. 87.

[421] Alternative Motor Fuels Act of 1988, Public Law 100–494, 102 Stat. 2441 (Oct. 14, 1988). *https://www.govinfo.gov/content/pkg/STATUTE-102/pdf/STATUTE-102-Pg2441.pdf.*

[422] *Id.* at 102 Stat. 2450.

[423] 134 Cong. Rec. H25122 (Sept. 23, 1988) (statement of Rep. Sharp).

[424] *Id.* at 25124 (statement of Rep. Dingell).

[425] *Id.*

[426] Energy Policy Act of 1992, Public Law 102–486 (1992) (''Title V of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2001 *et seq.*) is amended . . . in section 502(e)—(A) by striking 'alcohol powered automobiles or natural gas powered' and inserting in lieu thereof 'dedicated' '').

[427] H.R. Rep. No. 102–474, at 35 (1992).

[428] *Id.*

[429] In 1994, Congress restated the laws related to transportation in one comprehensive title in the recodification of title 49 of the United States Code, *see* S. Rep. No. 103–265 (1994); H.R. Rep. No. 103–180 (1993). The recodification, which was enacted to restate without substantive change all transportation laws in one title, substituted simple language for ''awkward and obsolete terms,'' and eliminated superseded, executed, and obsolete laws. The standard changes made uniformly throughout the revised section are explained in a report preceding the law. Important for this interpretation, ''[t]he words 'may not' are used in a prohibitory sense, as 'is not authorized to' and 'is not permitted to.' ''

[430] *See* 42 FR 33534, 33551 (June 30, 1977).

[431] *See Center for Biological Diversity* v. *NHTSA,* 538 F.3d 1172, 1203–04 (9th Cir. 2008) (upholding NHTSA's analysis of vehicle safety issues associated with weight in connection with the MYs 2008–2011 light truck CAFE rulemaking).

[432] *Ctr. for Auto Safety* v. *Nat'l Highway Traffic Safety Admin.,* 793 F.2d 1322, 1338 (D.C. Cir. 1986).

[433] *Id.* at 1339.

[434] See the 2010 final rule, which considered among the regulatory alternatives one that maximized net benefits, but explained that nothing in EPCA or EISA mandated that NHTSA choose CAFE standards that maximize net benefits (75 FR 25324, 25606 (May 7, 2010)); the 2012 final rule, which also considered among the regulatory alternatives one that maximized net benefits, and

Continued

is net beneficial as required by DOT Order 2100.7, *Ensuring Reliance Upon Sound Economic Analysis in Department of Transportation Policies, Programs, and Activities.*[435] While E.O. 12866 states that agencies should ''in choosing among alternative regulatory approaches, . . . select those approaches that maximize net benefits,'' [436] even if NHTSA believed it could quantify enough relevant factors to determine the CAFE levels at which net benefits were maximized with reasonable accuracy, there may be other considerations that would lead the agency to conclude that maximum feasible CAFE standards are not the ones that maximize net benefits—especially if weighing statutory factors would lead to a different conclusion. For example, in 2012, NHTSA rejected the regulatory alternative that appeared to maximize net benefits (and all alternatives more stringent than that one) based on the conclusion that even though estimated net benefits were maximized, the ''resultant technology application and cost'' were simply too high, and thus made those standards economically impracticable, and thus beyond maximum feasible.[437]

In addition, NHTSA has historically considered that some manufacturers may choose to pay a civil penalty rather than meet their applicable CAFE standard if the cost of paying the civil penalty is less than the cost of adding fuel economy technology. NHTSA did so through an option in the CAFE Model's Market Data Input file that provided that, if ''Y'' for ''yes'' was selected for a specific manufacturer's fine payment preferences, then the algorithm would stop applying additional technology to this manufacturer's product line when cost-effective technology solutions were exhausted.[438] NHTSA had historically justified programming the CAFE Model's technology selection algorithm accordingly because some manufacturers did choose to pay a civil penalty when applicable (*i.e.,* when the civil penalty rate was higher than $0) rather than apply technology, and NHTSA believed that its modeling was intended to reflect manufacturer decision-making in response to standards, even if that decision was to pay penalties.

In July 2025, Congress eliminated CAFE civil penalties, resetting the penalty rate to $0. In this rulemaking, and notwithstanding the change in the CAFE penalty rate, NHTSA has assumed, based upon its review and analysis of the relevant statutory provisions, that manufacturers will make the maximum practicable effort to comply with the proposed standards. ''Practicable'' in this context means subject to real-world constraints on technology application such as refresh and redesign cycles and technology applicability, concepts discussed in detail in Section II. This reading of all of EPCA's provisions best effectuates the statute's command that NHTSA establish maximum feasible standards that achieve industry-wide fuel economy improvements.[439] NHTSA remains charged with setting maximum feasible standards and the July 2025 amendment only altered the civil penalty rate. If NHTSA considered a manufacturer's ability to elect a $0 penalty as a factor in setting standards, it could significantly distort the consideration of maximum feasible standards by making virtually any standards look feasible. Making the assumption that manufacturers will make maximum practicable efforts to comply means that the 49 U.S.C. 32902(f) factors that NHTSA must consider in setting maximum feasible standards—in particular, economic practicability—are given meaning. To be clear, this does not mean NHTSA assumes all manufacturers will comply with standards for all fleets. For example, if a manufacturer could not redesign a portion of their fleet within the standard-setting years or if their baseline compliance position was simply lower than that of the rest of the industry, the CAFE Model is not assuming the manufacturer will nevertheless comply at any cost. This approach appropriately places the focus in standard setting on the feasibility of manufacturers to meet the standards through their vehicle production, consistent with the statutory direction to set maximum feasible standards without regard to the availability of compliance pathways that NHTSA cannot statutorily consider.[440]

NHTSA's modeling assumption that manufacturers will make maximum practicable efforts to comply with CAFE standards despite the $0 penalty rate is supported by longstanding real-world experience. For example, the 1979 ''Automotive Fuel Economy Program Third Annual Report to the Congress'' issued by DOT stated in its recommendation that the statutory scheme be amended to allow a longer period for credit carry forward and carry back that ''[a] number of manufacturers have raised the point that failure to meet the fuel economy standards involves a violation of the law, regardless of whether the short fall involves a penalty or involves the use of credits being carried forward or backward. The manufacturers have expressed strong reluctance to engage in any corporate planning that would involve violations.'' [441]

Today and more recently, many manufacturers have formal corporate policies committing themselves to complying with applicable legal standards. For example, Jaguar Land Rover states in its Code of Conduct that the products and services that they offer ''shall comply with applicable laws, including emissions and safety standards.'' [442] In the proposal preceding the 2024 final rule, NHTSA sought comment on its manufacturer fine payment preference assumptions—which are differentiated by specific manufacturer and model year—and Jaguar Land Rover commented that they do ''not view fine payment as an appropriate compliance route or as a

also explained that nothing in EPCA or EISA mandated that NHTSA choose CAFE standards that maximize net benefits, in fact, directly rejecting the regulatory alternative that maximized net benefits as beyond maximum feasible for the MYs 2017–2025 timeframe (77 FR 62624 (Oct. 15, 2012)); and the 2020 final rule, which stated that if the difference in net benefits between regulatory alternatives was within $20 billion that was relatively small in the total context of the program and therefore the agency did not believe that the point at which net benefits were maximized was meaningful for determining maximum feasible CAFE standards in that final rule.

[435] See DOT, Ensuring Reliance Upon Sound Economic Analysis in Department of Transportation Policies, Programs, and Activities, Last revised: Jan. 29, 2025, available at: *https://www.transportation.gov/mission/ensuring-reliance-upon-sound-economic-analysis-department-transportation-policies-programs* (accessed: Sept. 10, 2025), which requires DOT rulemaking activities to be based on sound economic principles and analysis supported by rigorous cost-benefit requirements and data-driven decisions regardless of whether the rulemaking falls below the economic threshold required for review by the Office of Information and Regulatory Affairs.

[436] 58 FR 51735 (Oct. 4, 1993).

[437] 77 FR 63050 (Oct. 15, 2012).

[438] See CAFE Model Documentation for 2024 FRM, at 82.

[439] NHTSA notes that in all modern CAFE analyses NHTSA employed a threshold at which regulatory costs (technology costs plus civil penalty payments) would be indicative that a standard exceeded maximum feasibility. NHTSA's longstanding position that a standard that would require significant civil penalty payment would exceed maximum feasibility remains unchanged.

[440] 49 U.S.C. 32902(h). It could be considered evading the statutory prohibition to instead consider an alternative means of addressing a shortfall, such as through the use of credit application.

[441] 44 FR 5742 (Jan. 29, 1979).

[442] Jaguar Land Rover Code of Conduct, p. 16, available at: *https://www.jlr.com/download-centre?_gl=1*1nnalls*_ga*MTkyNDk3NDUzNy4xNzUyNTk3MDE4*_ga_G78VTFVFM0*czE3NTI1OTcwMTckbzEkZzEkdDE3NTI1OTcwNTYkajIxJGwwJGgw* (accessed: Sept. 10, 2025).

flexibility in the regulation.'' [443] NHTSA changed this assumption for Jaguar Land Rover for the 2024 final rule. Similarly, the General Motors (GM) global environmental policy states that the company is ''committed to complying with all applicable laws and regulations,'' [444] and Toyota's Code of Conduct states that Toyota will comply with ''applicable laws and regulations'' and ''international environmental standards.'' [445] Honda's corporate responsibility statement likewise states that Honda shall comply with all applicable environmental laws and regulations in all jurisdictions in which they operate,[446] and Stellantis' code of conduct and most recent Climate Policy Report state that the company is both committed to complying with applicable laws and to CAFE compliance specifically.[447] NHTSA does not assume that all companies listed have formerly treated civil penalty payment as a violation of CAFE standards, but rather that when an applicable standard is in effect, manufacturers have reasons to give that standard due consideration even given a $0 penalty rate. NHTSA thus believes that it is reasonable to assume in its analysis of maximum feasibility that manufacturers will make the maximum practicable effort to comply with the applicable standards. NHTSA seeks comment on this assumption.

B. Other Statutory Requirements

1. Administrative Procedure Act

The APA governs agency rulemaking generally and provides the standard of judicial review for agency actions. To be upheld under the ''arbitrary and capricious'' standard of judicial review under the APA, an agency rule must be rational, based on consideration of the relevant factors, and within the scope of authority delegated to the agency by statute. The agency must examine the relevant data and articulate a satisfactory explanation for its action, including a ''rational connection between the facts found and the choice made.'' [448] The APA also requires that agencies provide notice and comment to the public when proposing regulations,[449] as NHTSA is doing with this NPRM and its accompanying materials.

2. National Environmental Policy Act

The National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.,* as amended (NEPA) directs that environmental considerations be integrated into the Federal decision-making process, considering the purpose and need for agencies' actions. To explore the potential environmental consequences of this rulemaking action, NHTSA prepared a Draft Supplemental Environmental Impact Statement (Draft SEIS) for the proposed rule. Although NHTSA is proposing MYs 2022–2031 CAFE standards, because no change in manufacturer behavior is possible for MYs 2022–2026 passenger car and light truck fleets, the main analyses of reasonably foreseeable impacts of the Proposed Action and alternatives presented in the Draft SEIS cover expected environmental impacts associated only with the proposed MYs 2027–2031 standards.

EPCA and EISA require that the Secretary of Transportation determine the maximum feasible levels of CAFE standards in a manner that disregards the potential use of CAFE credits or application of alternative fuel technologies toward compliance in model years for which NHTSA is issuing new standards.[450] NEPA, however, does not impose such constraints on analysis; instead, NEPA requires Federal agencies to consider reasonably foreseeable environmental impacts of their proposed actions.[451] NHTSA's Draft SEIS therefore presents results of an ''unconstrained'' analysis that considers manufacturers' potential use of CAFE credits and application of alternative fuel technologies (including PHEVs using their charge depleting fuel economy values, BEVs and FCEVs) to allow consideration of real-world environmental consequences of the proposed action and alternatives.[452] The rest of this preamble, and importantly NHTSA's balancing of relevant EPCA/EISA factors explained in Section V.C.1 and 2, employs the ''standard setting'' modeling to avoid consideration of the prohibited items in 49 U.S.C. 32902(h) in determining maximum feasible standards. As a result, the impacts reported in this section may differ from those reported elsewhere in the preamble. NHTSA conducts modeling both ways (''standard setting'' and ''unconstrained'') to reflect the various statutory requirements of EPCA/EISA and NEPA, respectively.

NHTSA's Draft SEIS describes the reasonably foreseeable impacts across a variety of environmental resources, including energy, air quality, emissions effects, and historic and cultural resources. The impacts of the Proposed Action and alternatives are discussed in proportion to their significance, qualitatively and quantitatively, as applicable.[453] The findings of the analysis are summarized in Section V.C.3, and more detailed discussion—in particular for any qualitative resource assessment—can be found in the Draft SEIS.

The Draft SEIS is one input among many to NHTSA's decision-making process to set CAFE standards. In preparing the Draft SEIS, NHTSA has considered and taken into account the Supreme Court's recent opinion in *Seven County Infrastructure Coalition* v. *Eagle County, Colorado* and its progeny.[454] Agencies are granted substantial deference to determine the scope of the environmental effects that they address and may decide whether to evaluate environmental effects from separate projects upstream or downstream from this action.[455]

[443] Jaguar, Docket No. NHTSA–2023–0022–57296, at p. 5.

[444] GM, General Motors Global Environmental Policy (2023), available at: *https://investor.gm.com/static-files/f5f872bd-9612-47f9-a5e1-d6c0ce1e6772* (accessed: Sept. 10, 2025).

[445] Toyota Code of Conduct, pp. 14 and 17 (2023), available at: *https://www.toyota.com/content/dam/tusa/usa/our-story/code-of-conduct-en.pdf* (accessed: Sept. 10, 2025).

[446] Honda, Honda Corporate Responsibility Statement, available at *https://csr.honda.com/longform-content/honda-corporate-responsibility-statement/* (accessed: Oct. 20, 2025).

[447] Stellantis, Code of Conduct, available at *https://www.stellantis.com/content/dam/stellantis-corporate/group/governance/code-of-conduct/Stellantis_CoC_EN.pdf* (accessed: Oct. 21, 2025); Stellantis, 2024/2025 Climate Policy Report, *https://www.stellantis.com/content/dam/stellantis-corporate/sustainability/csr-disclosure/stellantis/2024/Stellantis-2024-Climate-Policy-Report.pdf* (accessed: Oct. 21, 2025).

[448] *Burlington Truck Lines, Inc.* v. *U.S.,* 371 U.S. 156, 168 (1962).

[449] 5 U.S.C. 553.

[450] 49 U.S.C. 32902(h). See Resetting the Corporate Average Fuel Economy Program; Interpretive Rule, 90 FR 24518 (June 11, 2025).

[451] 42 U.S.C. 4332(2); DOT Order 5610.1D, sec. 13.f.

[452] See Appendix C of the Draft SEIS for a discussion of the full range of modeled electrified technologies.

[453] Section 13.g(2) of DOT Order 5610.1D.

[454] *Seven Cnty. Infrastructure Coal.* v. *Eagle Cnty., Colorado,* 145 S. Ct. 1497 (2025); see also *Sierra Club* v. *FERC,* 145 F.4th 74, 88–9 (D.C. Cir. 2025).

[455] See *Seven Cnty. Infrastructure Coal.* v. *Eagle Cnty., Colorado,* 145 S. Ct. 1497, 1504 (2025) (''Courts should defer to agencies' discretionary decisions about where to draw the line when considering indirect environmental effects and whether to analyze effects from other projects separate in time or place. See *Department of Transportation* v. *Public Citizen,* 541 U.S. 752, 767, 124 S. Ct. 2204, 159 L.Ed.2d 60. In sum, when assessing significant environmental effects and feasible alternatives for purposes of NEPA, an agency will invariably make a series of fact-dependent, context-specific, and policy-laden choices about the depth and breadth of its inquiry—and also about the length, content, and level of detail of the resulting EIS. Courts should afford substantial deference and should not micromanage those agency choices so long as they fall within a broad zone of reasonableness.'').

Because the Proposed Action amends standards for vehicle model years for which CAFE standards have previously been established, the Draft SEIS discusses certain potential environmental effects from sectors that EPCA does not delegate authority to NHTSA to regulate. NHTSA's prior CAFE EISs contained analysis of the potential environmental impacts from these sectors. *Seven County* made clear, however, that NEPA does not require NHTSA to analyze potential environmental effects from these sectors.

NHTSA has determined that analyses of such effects are not necessary for reasoned decision-making with respect to setting CAFE standards, because Congress has not given NHTSA authority under EPCA to take those effects into account when setting CAFE standards. NHTSA includes a discussion of these effects in the Draft SEIS solely for informational purposes.

Additionally, in light of the *Seven County* opinion, together with the 2023 legislative amendments to the NEPA statute and the 2025 rescission of CEQ NEPA regulations, NHTSA seeks comment on whether NHTSA is required to prepare an EIS for any similar CAFE standard-setting action—that is to say, whether Congress has given NHTSA discretion, when setting CAFE standards, to take into account the potential environmental effects of its CAFE standards in terms of the environmental effects from the sector that those standards directly regulate (*i.e.,* the regulated vehicles themselves).

C. Evaluating the Statutory Factors and Other Considerations To Arrive at the Proposed Standards

The following discussion contains NHTSA's explanation of how the agency has considered the analysis in this preamble and the accompanying Draft TSD and PRIA and other relevant information in tentatively determining that the proposed standards are maximum feasible for MYs 2022–2031 passenger cars and light trucks. As discussed in detail throughout the section below, NHTSA believes the proposed small, steady, incremental increases in fuel economy standards over time, which preserve the ability for manufacturers to focus on safety, affordability, and consumer choice, are reasonable and appropriate, and appropriately balance the four EPCA factors.

1. Why is NHTSA's tentative conclusion different from the 2020, 2022, and 2024 final rules?

The fuel economy standards NHTSA has promulgated in recent years have failed to satisfy faithfully EPCA's requirements in 49 U.S.C. 32902(h) because the prior standards considered the fuel economy of dedicated vehicles and dual-fueled vehicles in charge-depleting mode. Consequently, they do not advance and, indeed, have come to undermine the goals established in EPCA for the CAFE program. In accordance with its authority to reconsider and modify past policy decisions,[456] and in exercise of the Secretary's express authority to ''prescribe regulations amending'' CAFE standards,[457] NHTSA now proposes to reset the CAFE program and sets out the following reasons for the proposed changes in this NPRM.

As summarized in NHTSA's final rule published on June 11, 2025,[458] and relevant to the model years under consideration in this action, NHTSA in its 2020, 2022, and 2024 final rules took the position that the agency could account for the factors prohibited from consideration in section 32902(h) by using a narrow construction of that provision. This narrow interpretation permitted dedicated alternative and dual-fueled vehicles to be added to the fleet of vehicles in response to reasons other than NHTSA's CAFE standards,[459] and outside of the years for which NHTSA was setting standards. Specifically, in the 2022 and 2024 final rule baselines, NHTSA accounted for Zero Emission Vehicle (ZEV) mandates applicable in California and the other states that have adopted them,[460] and some vehicle manufacturers' voluntary commitments to the state of California to continued annual nationwide reductions of vehicle greenhouse gas emissions through MY 2026, with greater rates of electrification than would have been expected under NHTSA's 2020 final rule; and in all three final rules' baselines, NHTSA accounted for manufacturers' joint responses to previously promulgated fuel economy and greenhouse gas emissions standards, which included dedicated EVs. NHTSA prohibited the consideration of dedicated or dual-fueled vehicles only as a compliance option in response to the agency's fuel economy standards during ''standard setting'' years (*i.e.,* the model years being evaluated as the subject of the active rulemaking), and similarly prohibited consideration of manufacturers' use of compliance credits only during the standard setting years. In other words, the model did not apply dedicated or dual-fueled technology to a manufacturer's fleet of vehicles when simulating a cost-effective pathway for the manufacturer to comply with a given level of CAFE standards in standard setting years only, but application of the technology was otherwise permitted.

As NHTSA concluded in the June 2025 final rule and reaffirms here, its prior consideration of the factors prohibited in section 32902(h)—even if in response to reasons other than NHTSA's standards and even if in non-standard setting years—is inconsistent with a plain reading of section 32902(h) and with the most faithful approach to standard setting in furtherance of the design and purposes of EPCA.

As discussed below, the large increases in the stringency of standards applicable to the succeeding model years through MY 2026 were not feasible or practicable, within the meaning of EPCA, for new gas-powered cars and trucks likely to be produced in those years. The inclusion of EVs inherently impacted the agency's determination of maximum feasible standards because EVs are generally imputed to have significantly higher fuel economy than ICE vehicles.[461] NHTSA would not have proposed or adopted standards as stringent as the previous standards if NHTSA had not considered the fuel economy of EVs in its modeling analysis. NHTSA reasoned that this was appropriate because ''accounting for technology improvements that manufacturers would make even in the absence of CAFE standards allows NHTSA to gain

[456] *See, e.g., Phoenix Hydro Corp.* v. *FERC,* 775 F.2d 1187, 1191 (D.C. Cir. 1985); *Alabama Educ. Ass'n* v. *Chao,* 455 F.3d 386, 392 (D.C. Cir. 2006) (quoting *Motor Vehicle Mfrs. Ass'n of U.S., Inc.* v. *State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 57 (1983)); *Encino Motorcars, LLC* v. *Navarro,* 136 S. Ct. 2117, 2125 (2016); *FCC* v. *Fox Television Stations, Inc.,* 556 U.S. 502 (2009).

[457] 49 U.S.C. 32902(c).

[458] 90 FR 24518 (June 11, 2025).

[459] In accordance with E.O. 12866 of Sept. 30, 1993 (58 FR 51735, Oct. 4, 1993) and OMB Circular A–4 (Sept. 17, 2003), to evaluate properly the benefits and costs of regulations and their alternatives, agencies must identify a ''no action'' baseline: what the world will be like if the proposed rule is not adopted.

[460] 42 U.S.C. 7507. Other states have adopted California's ZEV program requirements under sec. 177 of the Clean Air Act (so-called ''Section 177 states'').

[461] Fuel economy for EVs is determined using the PEF set by the Department of Energy. For example, one EV manufacturer had a fuel economy performance of 739.9 and 751.9 miles per gallon for its MY 2020 domestic passenger and light truck fleets as compared to the 43.4 and 30.2 miles per gallon overall performance of the same fleets for all manufacturers.

a more accurate understanding of the effects of the final rule.'' [462] However, the inclusion of dedicated vehicles in NHTSA's previous analysis impacted materially the standards that ultimately were promulgated.

The following chart shows the stringency of the existing CAFE standards for MYs 2022–2026 passenger cars and light trucks as estimated in the 2020 and 2022 final rules and compares those standards to the provisional (*i.e.,* not based on EPA final compliance data) fuel economy performance levels of gas-powered vehicles manufactured for sale in MYs 2022–2024.[463]

Table V-2: CAFE Standards Estimated in the 2020 and 2022 Rules and Provisional Gasoline- and Diesel-Powered Vehicle Fuel Economy Performance, MYs 2022-2026

	2022	2023	2024	2025	2026
Passenger Cars					
2020 Estimated Stds.	44.9	45.6	46.3	47.0	47.7
2022 Estimated Stds.	44.6	45.2	49.2	53.4	59.4
Provisional Performance	39.5	39.2	41.2	-	-
Light Trucks					
2020 Estimated Stds.	32.1	32.6	33.1	33.6	34.1
2022 Estimated Stds.	31.9	32.4	35.1	38.2	42.4
Provisional Performance	29.8	29.7	30.5	-	-

The gasoline- and diesel-powered vehicle fleet—the only fleet that NHTSA is allowed to consider in setting standards—is unable to comply with the previously estimated standards in all model years and all regulatory classes for which the agency has provisional gasoline- and diesel-powered vehicle fuel economy performance data; the noncompliance increases in each successive model year because the baseline fleet upon which the current standards continuously apply stringency increases is inclusive of EVs that inflate overall fleet fuel economy performance. Indeed, compared to the provisional performance data for the 2022, 2023, and 2024 passenger car fleets, the 2022 standards are 12.9 percent, 15.3 percent, and 19.4 percent higher, respectively. Compared to the provisional performance data for the 2022, 2023, and 2024 light truck fleet, the 2022 standards are 7.0 percent, 9.1 percent, and 15.1 percent higher, respectively. While some may argue that such an analysis is not relevant when conducted across the entire U.S. fleet, because fuel economy standards apply to individual manufacturer fleets, the conclusion that the 2022 standards exceeded maximum feasibility is confirmed on a manufacturer-by-manufacturer fleet level analysis as well. On an individual manufacturer basis, only a single manufacturer's passenger car fleet can meet the MY 2022 standard with gasoline- or diesel-fueled vehicles (Hyundai's domestic passenger car fleet), and only a single manufacturer's gasoline- or diesel-fueled light truck fleet meets their standard (Subaru). This information confirms that the existing standards were set in a way that considered factors beyond the capability of gasoline- and diesel-powered vehicle fleets at the time the standards were promulgated.

NHTSA also recognizes that its tentative conclusion that MYs 2022–2023 standards are legally impermissible differs from NHTSA's and EPA's joint 2020 final rule.[464] However, that final rule also suffered from some of the same deficiencies as the 2022 and 2024 final rules by including consideration of the section 32902(h) factors, though to a lesser extent than the 2022 and 2024 final rules because of the inclusion of CARB's ZEV standards in the baseline used for those later rules. Furthermore, the annual 1.5-percent rate of increase applied in the 2020 final rule, which reflected consideration of input provided by several major automakers and other interested parties, has not proven to reflect the real-world year-over-year fuel economy improvements feasible for gasoline- and diesel-powered vehicles. Indeed, compared to the provisional performance data for the 2022, 2023, and 2024 passenger car fleets, the 2020 standards are 13.7 percent, 16.3 percent, and 12.4 percent higher, respectively. Compared to the provisional performance data for the 2022, 2023, and 2024 light truck fleet, the 2020 standards are 7.7 percent, 9.8 percent, and 8.5 percent higher, respectively.

The same faults apply to the existing standards for MY 2027 and beyond. For passenger cars, based on NHTSA's updated estimates of manufacturer compliance with the No-Action Alternative, approximately 77 percent of the MY 2027 fleet will not be able to comply with the standard and only three individual manufacturers' fleets will comply.[465] This is likely based on the significant (8 percent, 8 percent, and 10 percent) stringency increases in MYs 2024–2026, which, as discussed in Section III, greatly outweigh manufacturers' ability to improve the fuel economy of their ICE fleets.[466] In fact, NHTSA estimates that the gasoline- and diesel-fueled passenger car fleet will not be able to comply with the standard in any year from MYs 2027–2031, with anywhere from 47 to 77

[462] 89 FR 52540, 52611 (June 24, 2024).

[463] Provisional performance values are based on non-final fuel economy performance (*i.e.,* submitted to NHTSA as part of manufacturers' pre- and mid-model year reports, but not EPA final compliance data) and are subject to change based on final verified fuel economy values and sales volumes.

[464] 85 FR 24174 (Apr. 30, 2020).

[465] Manufacturers that are projected to comply are Mazda, Mitsubishi, and Toyota.

[466] The stringency of the MYs 2024–2026 standards were one reason why NHTSA held non-passenger automobile standards flat in MYs 2027–2028 in the 2024 final rule. *See* 89 FR 52540, 52848 (June 24, 2024) (''Further stringency increases at a comparable rate, immediately on the heels of the increases for model years 2024–2026, may therefore be beyond maximum feasible for model years 2027–2032.'').

percent of the fleet out of compliance during those years. Similarly, NHTSA estimates that 91 percent of the gasoline- and diesel-fueled light truck fleet will not be able to comply with the MY 2027 standards, again most likely because of the overly stringent standards in MYs 2024–2026. By MY 2031, the projected disparity between the standards and compliance decreases, more so for non-passenger automobiles, likely again because of the 2 years of flat standards. However, the gasoline- and diesel-fueled passenger car fleet is projected to miss the No-Action Alternative standards by more than 3 miles per gallon in MY 2031.

It is apparent that the existing standards depended upon the imputed fuel economy performance of EVs and PHEVs that NHTSA assumed would be manufactured in the relevant model years in contravention of both section 32902(h) and of the design and purposes of the CAFE program to avoid setting standards that cannot be met feasibly with gasoline- and diesel-fueled vehicles as part of a push toward alternative powertrains. The above results confirm that automakers are unable to meet the current standards without shifting significant capacity to EVs or purchasing credits from EV manufacturers, and without producing at volume the full range of ICE-driven passenger cars and light trucks that American consumers continue to want and need. Many of the gasoline- and diesel-powered vehicle models most popular with American families would be unsustainable for manufacturers to produce under the existing standards, and it is unlikely that an EV alternative could provide the same performance, utility, or recreational value at a comparable price (or at all). Thus, the existing CAFE standards do not preserve market demand, consumer choice, and the economic realities of the auto industry. Of course, automakers are free to invest in the production of EVs in response to market demand, but they should not be compelled to do so by NHTSA's fuel economy standards; such industry-transforming regulatory compulsion is inconsistent with EPCA.

In the analyses supporting the existing standards, NHTSA also failed to consider countervailing costs to manufacturers, consumers, and society that may have led the agency to conclude that such stringent standards were in fact not feasible. NHTSA substantially underestimated the technological costs the standards are expected to impose on manufacturers, including the direct expenditures made to redesign and reconfigure gasoline- and diesel-powered vehicles attributable to the acceleration in EV production caused by the regulatory forcing of the CAFE standards.[467] Nor did the agency's economic analysis adequately consider the dramatically different supply chain and manufacturing implications of such an acceleration.[468] NHTSA also underestimated the costs that the typical American would incur in owning and operating an EV (including, among others, charging costs, repair costs, battery-replacement costs, and insurance costs) as compared to the costs of owning and operating a gasoline- or diesel-powered vehicle. And NHTSA failed to quantify in its main analysis of maximum feasible standards costs to consumers from forgone features, including vehicle performance.

Additional costs to society more generally (not borne just by EV purchasers) include the costs associated with the massive and rapid national buildout of charging infrastructure and electricity generation and transmission capacity necessary to accommodate the anticipated ramp up in EV sales,[469] and the safety concerns accompanying lithium battery fires,[470] specifically including costs incurred by state and local governments and first responders to prepare for and respond to the predicted spike in battery-related fires and emergency situations that will follow from more EVs on the road.[471] Most importantly, using the CAFE program to push automakers into producing EVs more rapidly than market demand would otherwise support undermines the national security goal behind EPCA because it moves the United States into a position of greater strategic dependence on foreign suppliers of critical automotive inputs, including the processed minerals needed for the manufacture of EV batteries. Such additional societal costs are avoided in the present proposed rulemaking, which is based on a faithful implementation of EPCA's text and design without improperly considering the factors prohibited by section 32902(h).

For the reasons laid out above, the existing fuel economy standards promulgated by NHTSA for each of the model years covered by these proposed rules do not comply with the requirements of EPCA and the goals in EPCA for the CAFE program. Indeed, the existing standards have undermined those goals, harming the freedom and economic interests of America's

[467] See, *e.g.,* Chris Isidore, Ford just reported a massive loss on every electric vehicle it sold, CNN (Apr. 25, 2024), available at *https://www.cnn.com/2024/04/24/business/ford-earnings-ev-losses;* Caleb Miller, GM's Electric Vehicles Finally Earned More Than They Cost to Make, Car and Driver (Jan. 29, 2025), available at *https://www.caranddriver.com/news/a63608612/gm-stops-losing-money-on-evs/* (noting that GM's ''variable profit positive'' metric does not include ''fixed costs such as creating new assembly lines, so GM's massive investments in its EV factories and the engineering of the new models are taken out of the equation.''). The production costs of EVs greatly exceed the manufacturers' current EV sales revenues and are cross-subsidized by the sale of gasoline- and diesel-powered vehicles. If the production of EVs actually did increase at the rate previously projected by NHTSA and EPA, which would require an unrealistic jump in consumer demand for EVs, automakers would no longer be able to subsidize the full extent of their losses on EVs through price increases on gasoline- and diesel-powered vehicles.

[468] Manufacturers cannot easily add a new production line to an existing assembly facility to produce an EV, given differences in manufacturing processes and facility needs. Instead, manufacturers generally either convert an existing facility away from internal combustion vehicle assembly or build a new facility—adding to overall costs and reducing production capacity for internal combustion vehicles. Similarly, suppliers cannot simply add a propulsion battery production line to an existing facility, and much of the expertise and intellectual property for such technologies exists overseas—especially in China. These all add substantial expense for manufacturers, which is passed along to consumers in the form of higher prices.

[469] 87 FR 25888 (May 2, 2022). As the agency conceded in the previous rulemaking, there are massive costs involved with not only converting the fleets, but also the ''ancillary costs of electric vehicles, such as building additional charging stations [and] improving the grid.'' This includes costs borne by utility companies, and passed on to rate payers, to expand infrastructure to support an increased number of households charging vehicles at home or charging locations at private businesses or public locations—including high-powered DC fast charge equipment.

[470] While internal combustion vehicles are also susceptible to fire risks (generally after a very severe high-speed crash), the risks presented by electric vehicle battery fires is on a significantly higher scale and can be presented in surprising situations. See, *e.g.,* IER, Hurricane Ian Is not a Friend of Electric Vehicles, Institute for Energy Research: Washington, DC, Last revised: Oct. 20, 2022, available at: *https://www.instituteforenergyresearch.org/renewable/hurricane-ian-is-not-a-friend-of-electric-vehicles/* (accessed: Sept. 10, 2025). As happened in Hurricane Ian, during emergencies, these battery fires can force ''local fire departments to divert resources away from hurricane recovery to control and contain the fires.'' And these ''fires can become life-threatening if water-damaged electric cars are parked near houses or in garages. Some Florida homes were lost to fires caused by flooded electric vehicles.''

[471] See Larsson, F. et al., Toxic Fluoride Gas Emissions from Lithium-Ion Battery Fires, *Scientific Reports,* Vol. 7: 10018 (2017), available at: *https://doi.org/10.1038/s41598-017-09784-z* (accessed: Sept. 10, 2025). Lithium-ion battery fires are a common occurrence with EVs, and these fires generate intense heat and toxic fluoride gas emissions, making them more difficult to extinguish than conventional vehicle fires and increasing the costs and management challenges of maintaining effective first responder capabilities. See also IAFC, IAFC's Fire Department Response to Electric Vehicle Fire's Bulletin, available at: *https://www.iafc.org/topics-and-tools/resources/resource/iafc-s-fire-department-response-to-electric-vehicle-fires-bulletin* (accessed: Sept. 10, 2025). The dangers from these batteries are forcing fire departments around the country to expend significant resources to purchase equipment that can deal with unstoppable battery fires.

families, significantly degrading highway safety in all regions of the country, weakening the vitality of the U.S. auto industry, lessening the Nation's security by increasing America's strategic dependence on other countries for EV battery materials, and exacerbating the vulnerabilities of America's electricity grid. NHTSA preliminarily determines that each of the factors discussed above in isolation would warrant the amendment of the prior standards. Accordingly, NHTSA proposes to set aside the previous light-duty fuel economy standards established for MY 2022 and following. NHTSA proposes to consider anew the ''maximum feasible'' replacement standards for the model years in question.

2. Considerations Justifying the Proposed Standards

EPCA conferred on the Secretary of Transportation (and NHTSA by delegation) the authority to prescribe maximum feasible fuel economy standards for the light-duty vehicle fleet, and to exercise discretion in weighing the factors of technological feasibility, economic practicability, the need of the Nation to conserve energy, and the effect of other motor vehicle standards of the Government on fuel economy. In exercising its authority, NHTSA has examined three regulatory alternatives that represent different ways the agency could balance the four section 32902(f) factors, consistent with the section 32902(h) prohibition on considering certain factors when setting maximum feasible standards.

NHTSA has also considered other contextual aspects of the statutory scheme in formulating the three regulatory alternatives the agency examined for this proposal. One original aspect of the CAFE program that was abandoned thematically in the development of existing standards is the concept of ''steady progress.'' EPCA's original provision for the MYs 1981–1984 standards included a requirement that the agency's standards ''will result in steady progress toward meeting'' the statutorily established ''standard . . . for model year 1985.'' [472] EISA included a similar provision for MYs 2011–2020 standards to ''increase ratably'' to the statutorily prescribed 2020 level.[473] While EPCA does not include the same requirement for standards applicable to MYs 2021–2030, EPCA does not prohibit NHTSA from providing for the same steady progress in its development of the maximum feasible standards considering the four factors in 32902(f). Given this context, and particularly in light of prior standards that failed to track gasoline- and diesel-fueled vehicle capabilities, NHTSA believes that small, steady, incremental increases in fuel economy standards over time, while preserving the ability for manufacturers to focus on safety, affordability, and consumer choice, are reasonable and balance EPCA's priorities appropriately. Further, while NHTSA is not considering the availability of credits or credit trading in establishing standards, the agency believes that eliminating the credit trading system beginning with MY 2028 will encourage manufacturers to provide for steady improvement in fuel economy across their fleets over time, as opposed to relying upon credits acquired by third-party EV manufacturers. The following discussion presents NHTSA's tentative conclusion about why the proposed standards are maximum feasible.

a. Technological Feasibility and the Effect of Other Motor Vehicle Standards of the Government on Fuel Economy

As in all recent fuel economy rules, technological feasibility and the effect of other motor vehicle standards of the Government on fuel economy are considered in NHTSA's balancing of the relevant factors, but they continue to play a less significant role.

Regarding technological feasibility, that factor continues to be less constraining than in the past: manufacturers can comply with standards under each regulatory alternative by applying existing technology to their vehicles. Whether that technology can be applied to vehicles in the rulemaking timeframe and at what cost is a question of economic practicability; as NHTSA stated in 2020, all alternatives could be considered technologically feasible, but that does not mean that any of them could be maximum feasible.[474] Put another way, ''[a]ny of the alternatives could thus be achieved on a technical basis alone if the level of resources that might be required to implement the technologies is not considered.'' [475] However, the level of resources needed to apply those technologies and whether consumers will purchase vehicles equipped with those technologies are still prescient factors to consider and are discussed below in more detail with regard to the economic practicability of the standards.

Regarding the effect of other motor vehicle standards of the Government on fuel economy, NHTSA has considered both the agency's own safety standards and EPA's criteria pollutant emissions standards in various aspects of the technical modeling. Neither presents a barrier nor a reason why the agency would select a different regulatory alternative than the proposed alternative. In addition, as discussed above, to the extent that non-Federal vehicle standards played a role in the agency's prior consideration of the effect of other motor vehicle standards of the Government on fuel economy, NHTSA now proposes to reject such consideration. NHTSA also recognizes that EPA has recently proposed to rescind all greenhouse gas emission standards for all categories of new motor vehicles and engines, including light-duty vehicles, to effectuate its reading of CAA section 202(a).[476] NHTSA will continue to monitor EPA's actions in this area as this CAFE rulemaking progresses.

b. Economic Practicability and Safety (Both Independently and as a Subset of Economic Practicability)

Economic practicability remains a complex yet critical factor to consider and balance. As discussed above, NHTSA's consideration of economic practicability encompasses several elements, including the available technology and cadence for each manufacturer to apply that technology in the rulemaking timeframe, manufacturers' compliance shortfalls due to constraints that limit their ability to apply the required technology, increases in vehicle costs attributable to technology application that consumers may see, and the resulting consumer demand for those technologies. As such, NHTSA considered how manufacturers might weigh offering and improving vehicle attributes that consumers want against how manufacturers may change different attributes in response to fuel economy standards. In accordance with EPCA's purpose and design, and with case law affirming NHTSA's consideration of consumer demand as an element of economic practicability,[477] that consideration is appropriately included in NHTSA's analysis. The economic practicability factor also encompasses estimated sales and employment impacts; consumer cost impacts, which include changes in

[472] Public Law 94–163, sec. 502(a)(3)(B), 89 Stat. 871 (Dec. 22, 1975). *https://www.govinfo.gov/content/pkg/STATUTE-89/pdf/STATUTE-89-Pg871.pdf.*

[473] 49 U.S.C. 32902(b)(2).

[474] 85 FR 24174, 25174 (Apr. 30, 2020).

[475] 77 FR 62624, 63037 (Oct. 15, 2012).

[476] 90 FR 36288 (Aug. 1, 2025).

[477] *Ctr. for Auto Safety v. Nat'l Highway Traffic Safety Admin.*, 793 F.2d 1322 (D.C. Cir. 1986).

fuel expenditures and other vehicle-related costs like registration and insurance; and safety impacts. Each of these is evaluated in turn.

NHTSA discussed above that technological feasibility is not a limiting factor for this proposal, as manufacturers can comply with standards under each regulatory alternative by applying to their vehicles technology that currently exists. However, ''whether a fuel-economy-improving technology does or will exist (technological feasibility) is a different question from what economic consequences could ensue if NHTSA effectively requires that technology to become widespread in the fleet and the economic consequences of the absence of consumer demand for technology that are projected to be required (economic practicability).'' [478]

In the face of increasing fuel economy standards under the existing rules, vehicle manufacturers have taken different approaches to adding fuel-economy-improving technology to their vehicles. Some manufacturers that invested heavily in early deployment of EVs to meet the technology forcing (rather than performance-based) standards set in 2024 likely conserved scarce resources by not investing in improvements to their ICE fleets and will find themselves with gasoline- and diesel-fueled fleets with lower fleet fuel economy values. Manufacturers that invested heavily in bridge technologies like non-plug-in hybrid powertrains and complied only marginally with 2024's technology-forcing standards presumably have ICE fleets with higher fleet fuel economy values. EPCA's command—to set maximum feasible fleet average fuel economy values for vehicles that run on ''fuel'' as defined in the statute—becomes somewhat more difficult as the fleet bifurcates and manufacturers find themselves in very different competitive postures. Analyzing whether technology can feasibly be applied to vehicles during the rulemaking timeframe, and at what cost, requires careful consideration of each individual manufacturer's technology levels and the potential economic consequences resulting from manufacturers efforts to comply with different levels of standards.

Although, as discussed above, manufacturers have used a range of technologies to improve the fuel economy of their gasoline and diesel vehicles, only one manufacturer's gasoline- and diesel-based passenger automobile fleet met the existing MY 2022 standard (Hyundai's domestic passenger automobile fleet), and only one manufacturer's gasoline- and diesel-based non-passenger automobile fleet met that standard (Subaru). While manufacturers are free to use any available compliance solutions to meet CAFE standards, NHTSA is subject to statutory constraints when setting standards, which, therefore, should not drive the use of particular compliance solutions. Because the prior rules violated EPCA's prohibition on considering these factors, NHTSA is resetting standards based only on consideration of what is achievable with gasoline- and diesel-powered vehicles; necessarily, the starting point for setting these new standards is the most recently produced fleet of gasoline- and diesel-powered vehicles for which the agency has data.

The amount of under-compliance in the gasoline- and diesel-based fleet relative to the standards shown above indicates that the prior standards exceeded maximum feasibility. While NHTSA is not considering the availability of dedicated vehicles, dual-fuel vehicles operating with electric propulsion, or credit transfers or trading, one would reasonably expect the real-world gasoline- and diesel-powered fleet to under-comply relative to the standards, to the extent that manufacturers apply compliance flexibilities the agency cannot consider when setting standards (*e.g.,* producing alternative fueled vehicles or using credits earned in other years or fleets). That said, any fuel economy improvements required by NHTSA's standards must be feasible to achieve by vehicles powered by ''fuel'' as defined in 49 U.S.C. 32901. That is what EPCA requires, and the agency is accordingly limiting its role to ensuring that, whatever technological pathway manufacturers choose to increase the fuel economy of the vehicle fleet, fleet fuel economy does in fact increase over time in accordance with EPCA's design and purpose (including the constraints it imposes on factors that may be considered in setting standards).

NHTSA does not intend for its proposed reset standards to penalize manufacturers that increased their fleet fuel economy values using EV technology. Rather, NHTSA recognizes that resetting standards at a level where all manufacturers can respond to market demand, consider affordability, and consider safety, would effectuate EPCA's structure and purpose by letting technology equalize as a baseline for further increases that better reflect consumer needs and preferences.

Besides the obvious effects of considering the section 32902(h) technologies in the prior standards, the stringency and pace of prior standards may have driven technology application in other ways that the agency's analysis could not capture. To the extent that NHTSA previously overestimated manufacturers' abilities to apply technologies based on incongruent product design cycles and manufacturing capabilities, or underestimated manufacturers' needs to deploy capital for necessary reasons unrelated to fuel economy (like safety technology) the agency believes it is reasonable to reset standards at levels that do not artificially inflate vehicles' fuel economy capabilities.

Consistent with the above discussion, NHTSA recognizes that vehicle manufacturers have had to incur significant costs from adding technology to vehicles subject to prior standards for MYs 2022–2026; however, it is impossible for the agency to quantify those costs. What the agency *can* quantify is the technology levels present in the fleet in MY 2022, the first year for which NHTSA is proposing to reset standards, and MY 2024, the model year for which NHTSA had relatively complete fuel economy data from which to build the Market Data Input File used as a starting point for the CAFE Model analysis. The agency cannot conclude, however, that those levels were economically practicable such that the no-action standards could be sustained. Table V–3 shows powertrain technology penetration rates in the MY 2022 and MY 2024 fleet.[479] The table shows that as basic naturally aspirated engine technology penetration rates have decreased, there has been a concurrent increase in rates of advanced powertrain technology, in addition to increases in the rates of mild and strong hybrid technology.

[478] 85 FR 24174, 25130 (Apr. 30, 2020).

[479] Manufacturers might pair multiple powertrain technologies in a vehicle, such as a turbo engine with a mild hybrid stop/start technology. This will result in the technology penetration rates adding up to more than 100 percent.

Table V-3: Technology Penetration Differences in MY 2022 and MY 2024

Powertrain Technology	MY 2022	MY 2024
Basic Naturally Aspirated	37.9%	22.0%
Turbo Engines	36.0%	46.3%
Advanced Cylinder Deactivation	3.5%	4.3%
High Compression Ratio	18.1%	23.4%
Other Advanced Engines	4.5%	4.0%
Mild Hybrids	59.8%	67.2%
Strong Hybrids	7.3%	10.4%
Plug-in Hybrids	1.8%	2.9%

The relevant questions for the agency then become whether these increases in technology penetration rates would have occurred absent unlawfully stringent vehicle fuel economy standards and what sacrifices manufacturers and consumers had to make in response. While NHTSA cannot know whether manufacturers would have, for example, created such things as 4-cylinder turbocharged pickup trucks absent regulatory obligations, NHTSA does know that for some vehicle technologies ostensibly applied solely in response to increasing regulatory requirements, like stop-start technology (referred to in the agency's analysis as SS12V technology), consumers frequently opt to deactivate the technology when able to do so,[480] negating any potential fuel economy benefit. Similarly, manufacturers must make trade-offs regarding how to shift capital investments between safety and fuel economy. Manufacturers have limited supplies of capital for technological advancement and are constrained in recovering those investments by what consumers can afford to pay for technological innovations in new vehicles. Maximum feasible fuel economy standards, when appropriately weighing economic practicability, should never incentivize manufacturers to add technology that consumers reject at the cost of investments in, or application of, vehicle safety technologies. Instead, when truly maximum feasible standards apply, manufacturers should be able continually to develop, and apply, both proven fuel-saving and safety-enhancing technologies in such a manner that allows consumers both to desire and to afford the new vehicle.

For MYs 2027–2031, the CAFE Model estimates a significant amount of technology application in the vehicle fleet in all simulated scenarios by assuming the prior MYs 2024–2026 standards exist in the regulatory baseline. The CAFE Model does not remove technology from vehicles in the face of less stringent standards, meaning that any technology applied by the model to reach the existing stringent MYs 2024–2026 standards modeled as such in accordance with Circular A–4's definition of a ''no-action baseline'' will continue to exist in the fleet in the model for MYs 2027–2031. While manufacturers invest significant capital in developing new vehicle technologies and may try to recoup their investments, it is entirely possible that manufacturers may choose to discontinue employing particular technologies earlier than anticipated or may price their vehicles in a way that would shift sales from a vehicle model using one technology to a vehicle model using another when faced with the proposed standards. NHTSA presents technology penetration rates for MYs 2027–2031 below but recognizes that manufacturers' responses to standards will be different in ways that the simulated analysis likely cannot capture.

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[480] See Ford, How does Auto Start-Stop Technology Work in My Ford?, available at: *https://www.ford.com/support/how-tos/more-vehicle-topics/engine-and-transmission/how-does-auto-start-stop-technology-work-in-my-ford/* (accessed: Sept. 10, 2025); Autostop Eliminator, Don't Let the Auto Start-Stop Embarrass You, available at: *https://www.autostopeliminator.com/?srsltid=AfmBOoqNh1ZBMJe-3ZN-DMV9LHsarkgT_Vb4lT4r0l042uq6DdWml59i* (accessed: Sept. 10, 2025).

Table V-4: Fleetwide Penetration Levels for Selected Technologies, MYs 2024-2031

	2024	2025	2026	2027	2028	2029	2030	2031
Advanced gasoline engines								
No Action	37.0	28.4	22.9	17.7	12.9	6.7	2.7	1.9
Alt. 1	-	-	-	+2.0	+5.1	+8.9	+11.5	+12.4
Alt. 2	-	-	-	+2.0	+5.1	+8.9	+11.5	+12.4
Alt. 3	-	-	-	+1.9	+5.0	+7.9	+10.4	+11.1
12V Micro Hybrid (SS12V)								
No Action	63.0	52.6	38.7	27.8	17.9	12.8	8.4	6.2
Alt. 1	-	-	-	+5.9	+13.9	+18.9	+22.6	+24.5
Alt. 2	-	-	-	+5.9	+13.9	+18.9	+22.6	+24.5
Alt. 3	-	-	-	+4.2	+12.2	+16.3	+20.0	+21.8
SHEV								
No Action	10.4	24.5	40.6	53.3	62.4	71.7	76.7	80.2
Alt. 1	-	-	-	-7.1	-13.9	-21.3	-25.4	-27.8
Alt. 2	-	-	-	-7.1	-13.9	-21.3	-25.4	-27.8
Alt. 3	-	-	-	-5.4	-12.1	-18.5	-22.6	-24.9
PHEV								
No Action	2.9	2.8	5.4	5.5	7.3	7.3	7.3	7.3
Alt. 1	-	-	-	0.0	-1.8	-1.8	-1.8	-1.8
Alt. 2	-	-	-	0.0	-1.8	-1.8	-1.8	-1.8
Alt. 3	-	-	-	0.0	-1.8	-1.8	-1.8	-1.8

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As the table shows, the analysis projects that manufacturers attempting to meet the No-Action Alternative standards without the use of EVs or PHEVs in charge-depleting mode results in a significant penetration of strong hybrid vehicles. Even then, the CAFE Model shows that manufacturers will fail to comply with the No-Action Alternative standards at the fleet level by more than 1 mile per gallon. Under all three alternatives, manufacturers can continue using gasoline engines throughout the years covered by the standards compared to the baseline, and the strong hybrid vehicle penetration rate drops by almost 28 percent by 2031 compared to the baseline. There is still some PHEV penetration by 2031, as those vehicles' gas-only (charge-sustaining) fuel economy values essentially amount to a strong hybrid vehicles' fuel economy value, but the penetration rate decreases marginally in each regulatory alternative compared to the baseline. NHTSA expects that the penetration of SS12V technology will drop from its high in MY 2024 as more effective hybridization technology can be applied in response to the standards and as manufacturers respond to revised standards set without considering OC technologies.

Given that NHTSA's analysis shows significant penetration rates for strong hybrid vehicles by MY 2031, the agency also believes it is appropriate to consider not just potential consumer acceptance issues associated with that technology, but also the technologies that may be set aside by manufacturers to pursue additional technology that consumers would prefer. NHTSA has performed this same analysis in prior rules. Because NHTSA has again determined that no consumer choice model satisfactorily predicts future behavior for the agency's purposes (see the detailed discussion of this in Section II.E), the following analysis remains a qualitative one.

It is important to note that NHTSA's consideration of consumer demand as relevant to economic practicability has been upheld by the D.C. Circuit in *Center for Auto Safety* v. *NHTSA,*[481] in which the court highlighted the broad discretion that Congress granted the agency in setting fuel economy standards. In the court's assessment, ''Congress clearly contemplated that consumers would benefit from the flexibility accorded to the manufacturer by a system of fuel economy standards, which [Senate Report 94–179] predicted 'should result in a more diverse product mix and wide consumer choice.' '' [482] The court also identified what might be deemed guardrails to NHTSA's consideration of consumer demand: ''it would clearly be impermissible for NHTSA to rely on consumer demand to such an extent that it ignored the overarching goal of fuel conservation. At the other extreme, a standard with harsh economic consequences for the auto industry also would represent an unreasonable balancing of EPCA's policies.'' [483]

NHTSA's last assessment of consumer demand for strong hybrid vehicles occurred in the 2020 final rule, when the agency determined that demand for

[481] *Ctr. for Auto Safety* v. *Nat'l Highway Traffic Safety Admin.,* 793 F.2d 1322 (D.C. Cir. 1986).

[482] *Ctr. for Auto Safety* v. *Nat'l Highway Traffic Safety Admin.,* 793 F.2d 1322, 1338 (D.C. Cir. 1986).

[483] *Ctr. for Auto Safety* v. *Nat'l Highway Traffic Safety Admin.,* 793 F.2d 1322, 1340 (D.C. Cir. 1986).

strong hybrid vehicles was closely linked to fuel prices.[484] In 2020, the agency observed that strong hybrids were able to capture additional market share when fuel prices were at or above $3.50 per gallon, but the agency did not expect fuel prices to return to that level for quite some time pursuant to then-current projections. At that point, the agency determined that the significant levels of strong hybrid penetration rates were dependent on consumer acceptance, and for manufacturers to achieve similar fuel economy levels with non-hybrid technologies would increase compliance costs. NHTSA concluded that those higher costs could have implications for the vehicle sales response, vehicle retirement rates in the existing vehicle population, and the penetration rates of emerging safety features.

Since 2020, the production share of strong hybrid vehicles has more than doubled,[485] while gasoline prices have also increased. In April 2020, when NHTSA published the 2020 final rule retail gasoline prices averaged $1.94 a gallon; prices peaked in summer 2022 at $5.03 a gallon and have stabilized around $3.00 to $3.20 per gallon since October 2024.[486] NHTSA's fuel price projection assumes that prices will generally remain around that level through 2050, briefly dipping below $3.00 per gallon in 2028 but rising again by 2033. Whether those prices remain correlated with strong hybrid market share in the real world remains to be seen. NHTSA's central analysis shows strong hybrid penetration rates more than doubling from MY 2024 to MY 2025 and then increasing by another 16 percentage points from MY 2025 to MY 2026. As discussed above, this modeling result is driven by the extremely aggressive MYs 2024–2026 standards in the baseline that occur prior to the proposed reset standards beginning in MY 2027. From MYs 2027–2031, strong hybrid penetration rates increase slightly and essentially plateau by MY 2031. That said, NHTSA's analysis describes just one potential pathway that manufacturers could use to comply with the proposed standards, and the agency expects actual compliance pathways will likely be different. Data shows that strong hybrid penetration rates have yet to increase at greater than approximately 5 percentage points year over year.[487] Accordingly, NHTSA intends that strong hybrid vehicles remain an option but not a mandate; while the agency expects that manufacturers will continue providing strong hybrids to gasoline-price-conscious consumers, manufacturers should ultimately comply with standards in the way that they see fit, consistent with responding to the needs and preferences of consumers.

While the differences in technology penetration rates between the alternatives are small compared to changes between the baseline and alternatives, examining the effect of the technology required by different regulatory alternatives on manufacturers' compliance positions is more instructive. In terms of how this technology application in response to standards influences manufacturer compliance positions, this action is unique in that the 2022 and 2024 standards incorporated into the baseline result in excessive fuel economy technology application in years prior to the standard setting years, and that technology carries through to MY 2031. This results in over-compliance for some manufacturers' fleets; however, over-compliance for some manufacturers' fleets is not indicative that the proposed standard is not maximum feasible. NHTSA must set industry-wide standards, considering the capabilities of all manufacturers. All manufacturers struggle to comply with the baseline MYs 2024–2026 standards that increase at rates of 8 percent and 10 percent per year with their gasoline- and diesel-powered vehicle fleets. That is because those rates of increase are significantly higher than historic rates of gasoline- and diesel-powered technology improvement and is significantly higher than the gasoline- and diesel-based fleet can manage based on the most up-to-date data available for those years. On an industry-wide basis, NHTSA's MY 2024 analysis fleet used as an input to the CAFE Model show the MY 2024 gasoline- and diesel-powered passenger car fleet under-complying by over 6 miles per gallon with the baseline standard, and the gasoline- and diesel-powered light truck fleet under-complying by 2.7 miles per gallon with the baseline standard. NHTSA proposes to reset the CAFE program consistent with EPCA to address this significant, industry-wide compliance concern. Leaving in place standards for which compliance is not possible does nothing to improve the fuel economy of gasoline- and diesel-powered vehicles.

This action is also unique in that, in MY 2028, NHTSA is proposing to update the regulatory definitions for passenger cars and light trucks (referred to as passenger automobiles and non-passenger automobiles in EPCA), which would result in moving many models of what are currently considered lower fuel economy light trucks into the passenger car fleet, leaving the light truck fleet to consist of vehicles with attributes originally contemplated by the statute to be put towards non-passenger capabilities, thereby reducing the overall average fuel economy levels of the non-passenger fleet accordingly. This reclassification will have the effect of significantly lowering the average fuel economy values of both fleets, leaving all else equal, but maintaining the overall combined fleet fuel economy standards at the same level as MY 2027. This will have a dramatic effect on all manufacturers with both passenger cars and light truck fleets. To anticipate the reclassification change, NHTSA proposed to set MY 2027 standards in such a way as to bridge the gap between the amended MY 2026 standards (reflecting technology decisions that have been locked in at the time of publication), and the MY 2028 reclassification.[488] This transition adjustment is estimated to result in over-compliance in MY 2027. Manufacturers' estimated compliance positions relative to the standards are displayed in Table V–5 and Table V–6, which report over-compliance or shortfall in mpg (cell shading indicates shortfalls):

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[484] 85 FR 24174, 25181 (Apr. 30, 2020).

[485] 2024 EPA Automotive Trends Report, Figure 4.14. Gasoline Hybrid Engine Production Share Hybrid Type.

[486] EIA, U.S. All Grades All Formulations Retail Gasoline Prices (Dollars per Gallon), Last revised: Sept. 16, 2025, available at: *https://www.eia.gov/dnav/pet/hist/leafhandler.ashx?f=m&n=pet&s=emm_epm0_pte_nus_dpg* (accessed: Sept. 10, 2025).

[487] EIA, Hybrid vehicle sales continue to rise as electric and plug-in vehicle shares remain flat, Last revised: May 30, 2025, available at: *https://www.eia.gov/todayinenergy/detail.php?id=65384#:~:text=About%2022%25%20of%20light%2Dduty,the%20first%20quarter%20of%202024* (accessed: Sept. 10, 2025).

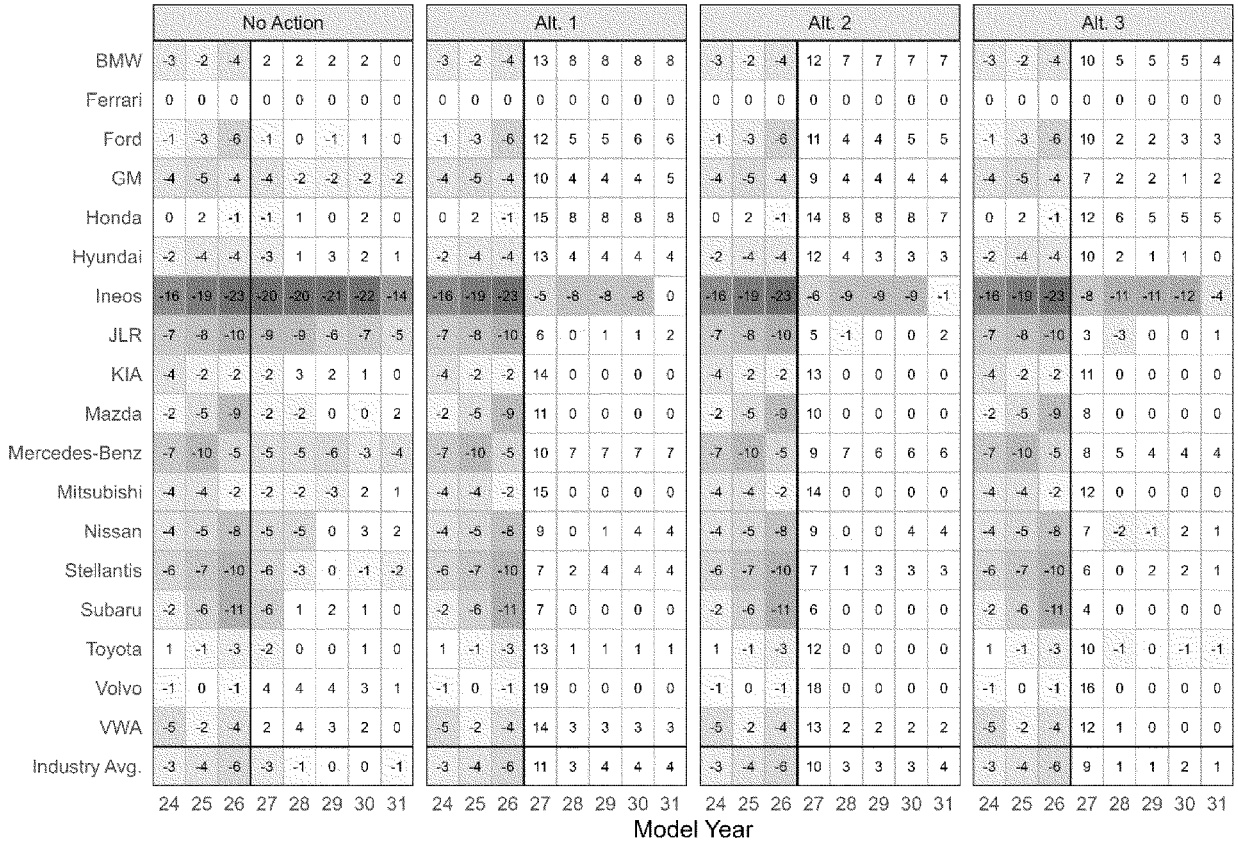
[488] For additional discussion of how NHTSA developed the regulatory alternatives for this proposal see preamble Section III.

Table V-5: Achieved Fuel Economy in MPG Relative to Required Levels Under Regulatory Alternatives, Passenger Cars

	No Action								Alt. 1								Alt. 2								Alt. 3							
	24	25	26	27	28	29	30	31	24	25	26	27	28	29	30	31	24	25	26	27	28	29	30	31	24	25	26	27	28	29	30	31
BMW	-12	-12	-13	-13	-10	-11	-12	-11	-12	-12	-13	10	7	7	7	8	-12	-12	-13	9	6	6	6	7	-12	-12	-13	7	4	4	3	4
Ferrari	-26	-30	-36	-37	-38	-39	-39	-39	-26	-30	-36	-14	-14	-14	-13	-12	-26	-30	-36	-15	-15	-15	-14	-13	-26	-30	-36	-16	-17	-18	-17	-16
Ford	-14	-19	-22	-20	-21	-23	-24	-25	-14	-19	-22	3	5	5	5	5	-14	-19	-22	2	4	4	4	4	-14	-19	-22	1	3	3	3	2
GM	-9	-10	-8	-6	-7	-3	-4	-5	-9	-10	-8	17	10	10	10	10	-9	-10	-8	16	9	9	9	9	-9	-10	-8	14	7	6	6	6
Honda	-1	-5	-4	-4	0	7	6	5	-1	-5	-4	20	10	11	12	11	-1	-5	-4	19	9	10	10	10	-1	-5	-4	17	7	7	7	7
Hyundai	-6	-9	-11	-4	1	4	2	1	-6	-9	-11	13	8	8	8	8	-6	-9	-11	12	7	7	7	7	-6	-9	-11	10	4	4	4	3
Ineos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JLR	-18	-22	-12	-14	-15	-16	-17	-18	-18	-22	-12	10	6	6	6	6	-18	-22	-12	9	5	5	5	5	-18	-22	-12	7	3	2	2	2
KIA	-5	-4	-6	-6	-4	6	4	3	-5	-4	-6	19	10	10	10	10	-5	-4	-6	18	9	9	9	9	-5	-4	-6	16	7	7	6	6
Mazda	-9	-10	3	2	1	0	-2	-3	-9	-10	3	28	4	4	4	6	-9	-10	3	27	3	3	3	5	-9	-10	3	25	1	1	0	2
Mercedes-Benz	-11	-14	-18	-17	-17	-14	-13	-13	-11	-14	-18	5	2	3	4	5	-11	-14	-18	4	1	2	3	4	-11	-14	-18	3	0	1	2	2
Mitsubishi	0	-5	13	12	10	9	8	6	0	-5	13	42	12	12	15	14	0	-5	13	41	11	11	13	13	0	-5	13	39	8	8	10	10
Nissan	-4	0	-3	2	1	0	-1	-2	-4	0	-3	26	14	16	16	16	-4	0	-3	24	13	15	15	15	-4	0	-3	23	10	12	12	12
Stellantis	-10	-14	-20	-15	-16	-18	-18	-20	-10	-14	-20	10	5	5	5	5	-10	-14	-20	8	4	4	4	4	-10	-14	-20	8	2	2	2	1
Subaru	-13	-14	-20	-10	0	-1	-2	-4	-13	-14	-20	7	3	4	3	3	-13	-14	-20	6	2	2	2	2	-13	-14	-20	4	0	1	0	0
Toyota	-2	-2	4	4	3	2	2	2	-2	-2	4	28	18	18	19	19	-2	-2	4	27	17	17	18	18	-2	-2	4	26	14	14	14	14
Volvo	-8	-12	-7	-8	-6	-7	-8	-9	-8	-12	-7	16	11	11	10	10	-8	-12	-7	15	10	10	10	9	-8	-12	-7	13	8	7	7	6
VWA	-13	-13	-12	-12	-8	-10	-11	-11	-13	-13	-12	13	6	6	6	6	-13	-13	-12	12	5	5	5	5	-13	-13	-12	10	4	3	3	3
Industry Avg.	-6	-7	-7	-5	-4	-1	-2	-3	-6	-7	-7	18	10	10	10	10	-6	-7	-7	17	8	9	9	9	-6	-7	-7	16	6	6	6	6

Model Year

Table V-6: Achieved Fuel Economy in MPG Relative to Required Levels Under Regulatory Alternatives, Light Trucks



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Consistent with the above discussion, the tables show most manufacturers under-complying significantly in each fleet under the baseline standards. And manufacturers that seemingly comply with baseline standards do so at an extreme cost, as discussed in more detail below. Under the regulatory alternatives, different manufacturers would have difficulties complying depending upon fleet. While NHTSA proposes to amend the baseline standards to a lower level, several manufacturers fail to meet the standards in particular model years with their gasoline- and diesel-powered fleets. In somewhat of a reversal of historical trends, when the proposed fleet reclassification occurs in MY 2028, the manufacturers' fleets with projected achieved fuel economy values closest to the standards include Toyota's light truck fleet, which just complies with the proposed standards in Alternative 2 yet under-complies in Alternative 3. On the other hand, the GM, Ford, and Stellantis light truck fleets range from higher over-compliance to slight over-compliance between the three regulatory alternatives considered in this proposal.

NHTSA also considered with the MY 2028 reclassification proposal that manufacturers may comply with the new standards by changing product offerings or vehicle attributes, which NHTSA's analysis cannot capture. Manufacturers may choose to optimize their compliance pathway by making changes to the mix of vehicles they produce in several ways: instead of adding fuel economy-improving technology, a manufacturer could instead choose to change their product offerings to sell more vehicles that meet or exceed the new fuel economy targets while discontinuing other, less efficient vehicles. Alternatively, they may change a vehicle's attributes (*e.g.,* to meet off-road vehicle requirements) such that the vehicle would have a lower fuel economy target.

The CAFE Model does not simulate changes in product offerings or changes in particular vehicle attributes in response to CAFE standards because NHTSA does not intend for manufacturers to need to change those offerings or attributes to comply with standards. However, to the extent that NHTSA's standards may disincentivize the production of particular types of vehicles, NHTSA believes it is appropriate to consider this factor when considering economic practicability. Specifically, NHTSA believes that past CAFE standards may have disincentivized the production of passenger automobiles in favor of non-passenger automobiles.

EPCA's CAFE framework recognizes that certain automobiles inherently have features that make them less fuel efficient, such as high ground clearances for off-highway operation, 4WD, reinforced frames, suspensions, and axles for transporting heavy loads, or certain cargo-transporting body styles and configurations, as in cargo vans or pickup trucks. By separating the automobiles into two categories, CAFE standards aim to avoid penalizing automobiles with these non-passenger features, thus preserving consumer choice. However, because non-passenger automobiles and passenger automobiles are subject to different fuel

economy standards, it is possible that NHTSA's standards could implicitly favor either the production of non-passenger automobiles or passenger automobiles, creating an incentive for manufacturers to change their vehicles' characteristics to reclassify them.[489] The incentive to reclassify a vehicle would exist if there were a mismatch between the amount a standard is lower for a non-passenger automobile, compared to a passenger automobile of the same footprint, and the additional fuel usage and costs associated with adding a particular qualifying non-passenger characteristic or feature to the automobile.

Available information indicates that past CAFE standards have caused a market distortion by disincentivizing the production of passenger automobiles relative to non-passenger automobiles.[490] As explained in more detail in Section VI, there has been a significant shift in the proportions of passenger and non-passenger automobiles in the light-duty fleet. Under NHTSA's proposed changes to vehicle classification, a significant portion of non-passenger automobiles would be reclassified as passenger automobiles. These proposed changes, if finalized, would realign the CAFE program with EPCA and ensure that vehicles are properly classified based upon their intended real-world usage. NHTSA believes that these changes, coupled with the proposed standards, also would remove much of the incentive for manufacturers to change vehicle attributes to allow a vehicle that primarily functions as a passenger automobile to be classified as a non-passenger automobile. Specifically, NHTSA believes the proposed CAFE standards reset, including a new curve fitting analysis to reshape the coefficient curves and the small, incremental increases proposed in this NPRM that increase the passenger automobile and non-passenger automobile standards at rates sustainable for each respective regulatory fleet, would further reduce any incentive to change vehicle attributes or offerings in response to CAFE standards. Such assessment also reflects the agency's longstanding position that revisiting the vehicle classification regulations likely would need to be accompanied by changes to the shapes of the footprint curves or the stringency of the standards to ensure the standards still reflect maximum feasibility for the adjusted fleets.[491]

While consumer preferences change over time, the CAFE program should not set standards that drive changes in market offerings, particularly if it drives changes that decrease market offerings that are more affordable to consumers. NHTSA tentatively concludes that the proposed standards would neither limit manufacturers' product offerings inconsistent with market demand, nor provide a reduction in attributes that consumers value.

Returning to the results of the analysis, at the individual manufacturer level, the No-Action Alternative imposes large annual technology cost increases on manufacturers but still leads to significant under-compliance with their gasoline- and diesel fueled fleets. Under each of the action alternatives, all manufacturers see a significant reduction in vehicle technology costs. Given fierce price competition in the automotive industry, NHTSA expects these cost reductions will be passed on to consumers. With a few outliers (*e.g.,* Ferrari and INEOS), Figure V–1 shows significant technology cost decreases for all manufacturers relative to the No-Action Alternative. These technology cost decreases would have significant ripple effects in the new vehicle market, including increasing sales and fleet turnover, as discussed in more detail below.

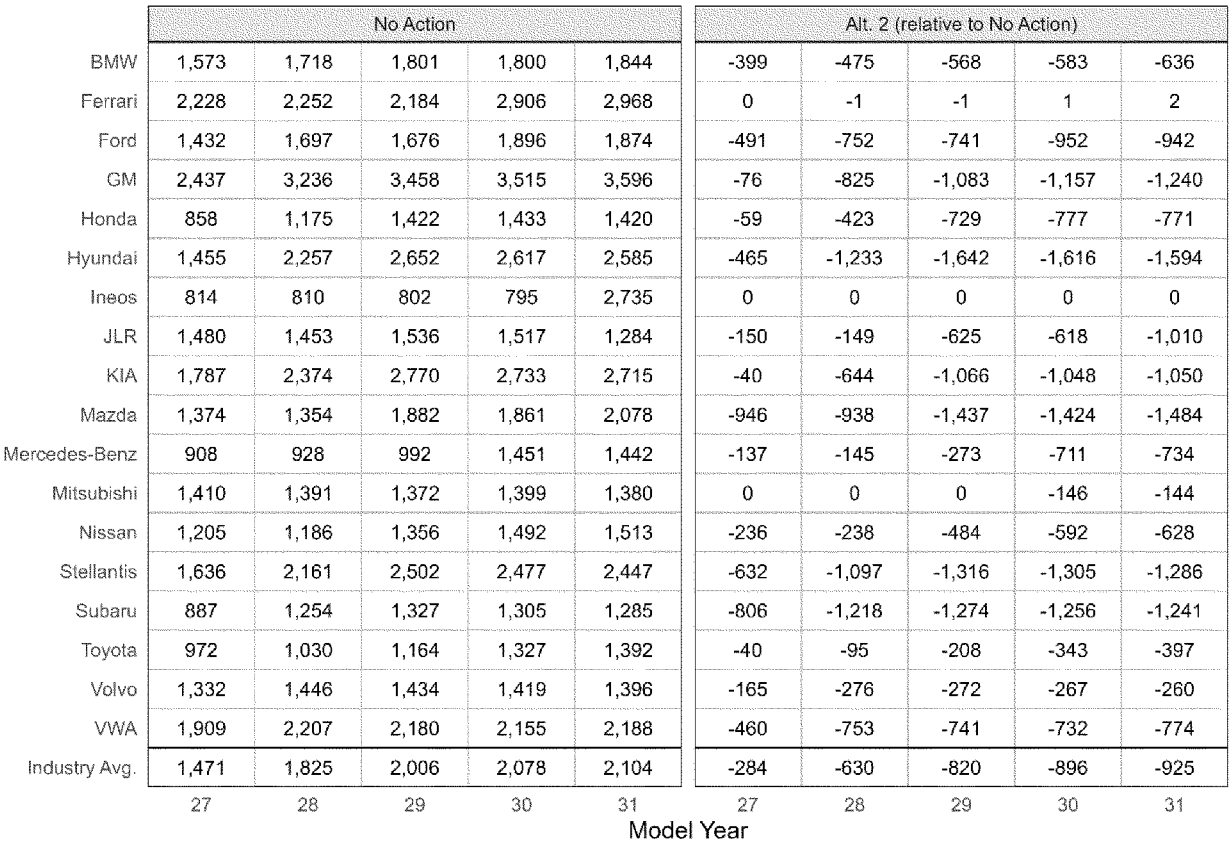
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[489] In NHTSA's 2012 final rule setting standards for 2017–2025, NHTSA recognized that ''manufacturers may have an incentive to classify vehicles as light trucks if the fuel economy target for light trucks with a given footprint is less stringent than the target for passenger cars with the same footprint.'' (77 FR 62624, Oct. 15, 2012).

[490] As an example, when NHTSA properly reclassified over 1 million FWD automobiles as passenger automobiles in line with EPCA, manufacturers opted to discontinue the FWD variant of vehicle lines to keep more of their products in the non-passenger automobile fleets (74 FR 14196, Mar. 30, 2009).

[491] 90 FR 24518, 24524 (June 11, 2025) (citing 77 FR 62624, 63123).

Figure V-1: Per-Vehicle Technology Costs Relative to No-Action Alternative (2024$)



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One of the most important aspects of resetting CAFE standards is to reduce the up-front costs that consumers must pay for new vehicles due to CAFE standards. NHTSA assumes that technology costs due to increased or decreased CAFE standards are passed on to the consumer in the form of higher or lower new vehicle prices. For this proposed reset, all regulatory alternatives considered reduce the technology costs attributable to CAFE standards by half compared to the baseline. These technology cost reductions result in reducing the average price of a vehicle by more than $900 by MY 2031, which represents a significant up-front cost savings for consumers and results in significant cascading cost savings for insurance, registration, taxes, and finance charges. NHTSA believes that vehicle affordability is an important aspect to consider when setting CAFE standards under the economic practicability factor; while the agency attempts to quantify multiple aspects related to vehicle affordability in its analysis both quantitatively and qualitatively, NHTSA seeks comment on additional ways that affordability could be included in the agency's assessment of maximum feasible standards. Aside from the cascading benefits mentioned above, consumers also would receive a benefit from reset standards in the form of manufacturers' ability to improve vehicle attributes that they were not able to improve given the former overly aggressive imperative to improve vehicle fuel economy. That value is a tangible monetized benefit for each regulatory alternative compared to the baseline and is quantified as an opportunity cost in this analysis.

Consumers would see marginally higher fuel costs in all alternatives relative to the baseline, with a difference of approximately $200 between the lowest and highest stringency alternatives, spread out over the life of the vehicle. However, large up-front vehicle cost savings can make the purchase of a new vehicle affordable for more consumers in the nearer term, while higher fuel costs likely are realized over the decades-long life of the vehicle and depend on future fuel prices, which are uncertain. Manufacturers are also free to produce more fuel-efficient vehicles for those consumers who wish to purchase them. Accordingly, NHTSA seeks comment—as discussed in more detail in Section IV—on alternative presentations of the fuel savings that accrue to the different owners over a vehicle's life.

Another intended benefit of the proposed reset standards is that vehicle sales will increase as a result of lower vehicle prices, getting Americans into newer, safer, and less polluting vehicles more quickly. While the regulatory alternatives do not differ meaningfully in projected sales effects, they all increase vehicle sales relative to the baseline standards. NHTSA recognizes that there are several macroeconomic factors that influence vehicle purchasing decisions and that changes in vehicle prices are based on significantly more factors than the lowering or increasing of CAFE standards and a subsequent addition or re-evaluation of technology applications. Regardless, any standards set by the agency should not impede the ability of manufacturers and dealers to sell vehicles.

Table V-7: Industry-Wide Sales Effects (in thousands of vehicles)

Model Year	No-Action Alternative	Difference from No-Action		
		Alt. 1	Alt. 2	Alt. 3
2024	13,706	0	0	0
2025	13,360	0	0	0
2026	13,241	0	0	0
2027	13,115	16	16	15
2028	12,588	38	38	36
2029	12,393	47	47	44
2030	12,222	49	49	46
2031	11,816	47	47	45

NHTSA also estimates employment effects as a result of the different regulatory alternatives. The agency's model for estimating labor impacts in the parts supply space is fairly simplistic: any reduction in costs translates directly to an assumption of reduced labor hours into a metric called ''person years.'' The agency's methodology does not account for a diversion of such labor into development or production of different technologies. Based on the agency's method for calculating labor effects, NHTSA's analysis shows a decrease in cumulative person years from less stringent standards relative to the baseline, in part because of the decreased need for development and application of additional fuel-economy-improving technology. However, as Table V–8 shows, the relative changes between the No-Action and Action Alternatives are less than 1 percent.

Table V-8: Industry-Wide Labor Utilization Effects (Percent Change in Person Years From No-Action)

Model Year	Alt. 1	Alt. 2	Alt. 3
2024	0.0	0.0	0.0
2025	0.0	0.0	0.0
2026	0.0	0.0	0.0
2027	-0.2	-0.2	-0.1
2028	-0.5	-0.5	-0.4
2029	-0.8	-0.8	-0.7
2030	-0.8	-0.8	-0.7
2031	-0.9	-0.9	-0.8

While NHTSA's quantitative estimates of changes in employment effects capture some factors related to how the automotive industry may respond to lower fuel economy standards, there are a number of potential employment impacts from lower fuel economy standards that have not been captured in the analysis. As an example, the analysis does not capture the effects of manufacturers' shifting vehicle and powertrain production to the United States in response to factors other than the agency's CAFE standards.[492] Given a range of potential industry responses, not only to new fuel economy standards, but also to the larger macroeconomic context, NHTSA cannot conclude that its estimates of changes in employment effects would lead it to changing its proposed determination on maximum feasible standards.

NHTSA also considers safety effects in determining maximum feasible CAFE standards, both because of its expertise as a safety agency and also as an element of economic practicability.[493]

[492] See The White House, TRUMP EFFECT: Mercedes to Shift More Vehicle Production to U.S., Last revised: May 1, 2025, available at: *https://www.whitehouse.gov/articles/2025/05/trump-effect-mercedes-to-shift-more-vehicle-production-to-u-s/* (accessed: Sept. 10, 2025); The White House, Fact Sheet: President Donald J. Trump Incentivizes Domestic Automobile Production, Last revised: Apr. 29, 2025, available at: *https://www.whitehouse.gov/fact-sheets/2025/04/fact-sheet-president-donald-j-trump-incentivizes-domestic-automobile-production/* (accessed: Sept. 10, 2025).

[493] *See* 88 FR 56256 (Aug. 17, 2023) (''As a safety agency, NHTSA has long considered the potential for adverse or positive safety consequences when establishing CAFE and fuel efficiency standards.''). *See also Competitive Enterprise Institute* v. *NHTSA,* 901 F.2d 107, 120 n.11 (D.C. Cir. 1990) (''Petitioners

As the Nation's primary vehicle safety regulator, NHTSA, acting in accordance with EPCA, endeavors to avoid the adoption of fuel economy standards that are likely to result in a significant increase in roadway deaths and serious injuries. As new vehicle models become unaffordable or unappealing, many American families will be left driving older and older used cars, and the age of the Nation's auto fleet will persistently rise. Already, the average age of a car on the road in the United States is approaching 13 years, and many cars are on their fifth or sixth owners.[494] The aging of the American fleet has negative safety consequences, as NHTSA's studies show that older vehicles are much less safe than newer models in an accident.[495] In addition to examining the effects of its proposed standards on fleet turnover, NHTSA also examines the effects of the proposed standards on safety due to changes in vehicle-miles traveled (VMT) caused by the rebound effect and changes in mass disparities in the vehicle fleet, as discussed in more detail below.

Safety issues related to vehicle size and mass existed prior to the introduction of attribute-based CAFE standards. Manufacturers' responses to the early one-dimensional mpg-based standards included dramatic reductions in vehicle size and mass in a way that resulted in lighter vehicles that failed to protect occupants in crashes as effectively as larger, heavier vehicles. Under attribute-based standards, NHTSA's modern CAFE safety assessment has since evolved to include three elements: changes in vehicle mass, the impacts of vehicle prices on fleet turnover, and changes in exposure to risks associated with motor vehicle travel due to changes in VMT because of the standards, which are associated in this case primarily with changes due to the rebound effect. NHTSA examines how the proposed standards could impact fatalities, non-fatal injuries, and property damage from crashes for both vehicle occupants and non-occupants (*e.g.,* pedestrians and cyclists) for each of those elements.

Table V–9 and Table V–10 show the following trends relevant to inform NHTSA's standard-setting decision. First, effects from mass changes are expected to increase incrementally compared to the No-Action Alternative, as less MR is expected to be applied in the heaviest vehicles in response to lower standards, negating some of what would otherwise result in a lessening of mass disparity between the smallest and largest vehicles in the fleet. Appropriate caveats about the safety module's confidence with regards to projecting results are discussed in Draft TSD Chapter 7 and PRIA Chapter 8 and warrant discussion here as well. While the mass-safety parameters estimated from the statistical models used in the CAFE analysis are statistically indistinguishable from zero, the point estimates are in expected directions based on the agency's own safety studies and other outside studies, which helps support the agency's conclusions about the general levels of effects between the No-Action Alternative standards and the alternatives. In addition, to the extent vehicle manufacturers can adopt updated approaches to their product offerings better in line with market demand, once the proposed reclassification diminishes manufacturers' incentives to add features to place passenger-oriented vehicles in the light truck regulatory class (with its lower fuel economy standards), there may be additional lessening of the mass disparity between vehicles, and consequently the associated effects, in the light-duty fleet.

Next, NHTSA acknowledges that, as has been the case for the past several rulemakings, the magnitude of the rebound effect on vehicle safety dominates the overall safety picture across the three alternatives. For this rulemaking, the projected decrease in VMT under the reset standards leads to a significant projected decrease in fatalities, injuries, and property damage only (PDO) crashes.

Finally, regarding safety, NHTSA estimates an increase in safety effects in the action alternatives compared to the No-Action Alternative as newer, safer vehicles enter the fleet more quickly than they would have in the No-Action Alternative because of reduced vehicle prices. As vehicles become safer, many crashes that would otherwise result in death or injury do not result in such harms, leading to an increase in PDO crashes and the related sales/scrappage cost estimates but a decrease in the more severe types of crashes and an overall safety benefit for the proposal in terms of lives saved and injuries avoided.

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have never clearly identified the precise statutory basis on which safety concerns should be factored into the CAFE scheme, although they alluded to occupant safety as part of the 'economic practicability' criterion in their MY 1989 petition to NHTSA and at oral argument. We do not find this failure fatal, however, because NHTSA has always examined the safety consequences of the CAFE standards in its overall consideration of relevant factors since its earliest rulemaking under the CAFE program (citations omitted). Moreover, NHTSA itself believes that Congress was cognizant of safety issues when it enacted the CAFE program. As evidence, NHTSA discusses a congressional report that dealt with the safety consequences of a downsized fleet of cars which had been considered by Congress during its enactment of the CAFE program.'').

[494] S&P Global Mobility., Average Age of Light Vehicles in the U.S. Hits Record High 12.5 years, according to S&P Global Mobility, (2023), available at: *https://press.spglobal.com/2023-05-15-Average-Age-of-Light-Vehicles-in-the-US-Hits-Record-High-12-5-years,-according-to-S-P-Global-Mobility* (accessed: Sept. 10, 2025).

[495] See NHTSA, Learn the Facts about New Cars: Why newer cars are safer than ever before, available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/newer-cars-safer-cars_fact-sheet_010320-tag.pdf* (accessed: Sept. 10, 2025).

Table V-9: Change in Safety Costs from the No-Action Alternative, CYs 2024-2050, 3% Discount Rate

	Alt 1	Alt 2	Alt 3
Fatality Costs ($b)			
Fatality Costs From Mass Changes	0.2	0.2	0.2
Fatality Costs From Rebound Effect Driving	-12.8	-12.8	-11.4
Fatality Costs From Sales/Scrappage	-0.7	-0.7	-0.7
Total - Fatality Costs	-13.4	-13.4	-11.9
Non-Fatal Crash Costs ($b)			
Non-Fatal Crash Costs From Mass Changes	0.8	0.8	0.6
Non-Fatal Crash Costs From Rebound Effect Driving	-49.5	-49.5	-43.8
Non-Fatal Crash Costs From Sales/Scrappage	-1.6	-1.6	-1.6
Total - Non-Fatal Crash Costs	-50.3	-50.3	-44.8
Property Damage Costs ($b)			
Property Damage Costs From Mass Changes	0.1	0.1	0.1
Property Damage Costs From Rebound Effect Driving	-4.9	-4.9	-4.3
Property Damage Costs From Sales/Scrappage	0.2	0.4	0.4
Total - Property Damage Costs	-4.7	-4.7	-4.7
Societal Crash Costs ($b)			
Crash Costs From Mass Changes	1.1	1.1	0.8
Crash Costs From Rebound Effect Driving	-67.2	-67.2	-59.5
Crash Costs From Sales/Scrappage	-2.2	-2.0	-1.9
Total - Societal Crash Costs	-68.4	-68.4	-61.4

Table V-10: Change in Safety Effects from the No-Action Alternative for CYs 2024-2050

	Alt 1	Alt 2	Alt 3
Fatalities			
Fatalities From Mass Changes	27	27	20
Fatalities From Rebound Effect Driving	-1,528	-1,528	-1,354
Fatalities From Sales/Scrappage	-66	-66	-64
Total - Fatalities	-1,568	-1,567	-1,398
Non-Fatal Injuries			
Non-Fatal Injuries From Mass Changes	4,264	4,264	3,221
Non-Fatal Injuries From Rebound Effect Driving	-245,022	-244,963	-217,158
Non-Fatal Injuries From Sales/Scrappage	-5,709	-5,709	-5,564
Total - Non-Fatal Injuries	-246,467	-246,408	-219,501
Property Damage Crashes			
Property Damage Crashes From Mass Changes	13,629	13,629	10,379
Property Damage Crashes From Rebound Effect Driving	-835,103	-834,915	-740,855
Property Damage Crashes From Sales/Scrappage	26,991	26,989	25,437
Total - Property Damage Crashes	-794,482	-794,297	-705,039

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To conclude, NHTSA's safety analysis reinforces that the reset standards (and all regulatory alternatives considered) would improve safety outcomes relative to the No-Action Alternative. While the magnitude of positive benefits may be small in terms of measurability with NHTSA's current modeling capabilities, the directionality is consistent with what NHTSA's research shows: getting Americans into newer, safer vehicles is beneficial for safety.[496]

c. The Need of the United States To Conserve Energy

In the past decade, the consumer costs (via fuel prices), national balance of payments, and foreign policy implications of the need for large quantities of petroleum in the United States, especially imported petroleum, have shaped the consideration of this factor in ways that Congress could not have foreseen in the 1970s when EPCA was originally passed. As NHTSA acknowledged in the 2020 final rule, there are two approaches to increasing petroleum independence: the first is simply to use less petroleum, and the second is for the United States to produce more of its own petroleum and to use less petroleum purchased from abroad. The United States has recently excelled at the second approach; our Nation became a net exporter of petroleum on an annual basis in 2020 (and on a monthly basis for the first time in September 2019) for the first time since at least 1949 and continued to export more petroleum than it imported in 2021, 2022, and 2023.[497] In fact, the United States currently produces the most oil (particularly shale oil) of any country.[498] The sources of imports to the U.S. have also changed significantly since EPCA's passage; whereas OPEC nations were the source of 70 percent of U.S. total petroleum imports in 1977, Canada now represents the largest source at 52 percent of gross total petroleum imports, and imports from OPEC nations represent only 16 percent.[499] This shift helps insulate the U.S. from supply shocks attributable to imports from the most volatile regions. A concurrent change in global oil market dynamics has helped steady the fuel prices that consumers experience in the wake of potential impacts to supply from foreign oil-producing countries: the oil market is simply less reactive to global events.[500] Isolated subnational events, like the 2021 Colonial Pipeline ransomware attack, still have the potential to cause short-term price spikes in specific areas of the country,[501] but that national-level gasoline prices have held steady and have even modestly decreased through

[496] NHTSA, How Vehicle Safety Has Improved Over the Decades, available at: *https://www.nhtsa.gov/how-vehicle-safety-has-improved-over-decades* (accessed: Sept. 10, 2025); NHTSA, Learn the Facts About New Cars: Why newer cars are safer than ever before, available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/newer-cars-safer-cars_fact-sheet_010320-tag.pdf* (accessed: Sept. 10, 2025); NHTSA, Learn the Facts About New Cars: Why newer cars are safer than ever before, Version 2, available at: *https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/newer-cars-safer-cars_infographic_010320_2-tag.pdf* (accessed: Sept. 10, 2025).

[497] EIA, Oil and Petroleum Products Explained, Last revised: Jan. 19, 2024, available at: *https://www.eia.gov/energyexplained/oil-and-petroleum-products/imports-and-exports.php* (accessed: Sept. 10, 2025); EIA, Frequently Asked Questions (FAQs): How Much Petroleum Does the United States Import and Export?, Last revised: Mar. 29, 2024, available at *https://www.eia.gov/tools/faqs/faq.php?id=727&t=6* (accessed: Sept. 10, 2025).

[498] EIA, Today in Energy: United States Produces More Crude Oil Than Any Country, Ever, Last revised: Mar. 11, 2024, available at: *https://www.eia.gov/todayinenergy/detail.php?id=61545#* (accessed: Sept. 10, 2025).

[499] *Id.*

[500] See, *e.g.,* Domonoske, C., Why a War in the Middle East Hasn't Sparked an Oil Crisis, Last revised: June 25, 2025, available at: *https://www.npr.org/2025/06/25/nx-s1-5444030/oil-prices-iran-israel* (accessed: Sept. 10, 2025).

[501] Thorbecke, C., Gas Hits Highest Price in 6 years, Fuel Outages Persist Despite Colonial Pipeline Restart, Last revised: May 17, 2021, available at: *https://abcnews.go.com/US/gas-hits-highest-price-years-fuel-outages-persist/story?id=77735010* (accessed: Sept. 10, 2025) (gas prices in Southern states jumped 18–21 cents, while the national average rose eight cents).

major global events evidences at least some decoupling of fuel prices and the concerns that led to EPCA's passage in 1975.

NHTSA's quantitative analysis of energy security benefits estimates that the level of standards the agency is proposing as maximum feasible to change the costs of petroleum market externalities only modestly relative to the No-Action Alternative. Specifically, the largest incremental change in energy security externalities is approximately 1.3 percent of the total petroleum market externality costs in the No-Action Alternative.

At the same time, even though fuel economy standards have increased dramatically over the past 15 years, fuel use has not decreased appreciably. Since the agency began setting fuel economy standards in the early 2010s that increased at significant rates, motor gasoline consumption in the United States has hovered in the realm of the upper 8 million to low 9 million barrels per day (with a brief decrease in 2020 to just 8 million barrels per day).[502] There are a number of reasons why fuel consumption may hold steady as vehicle fuel economy increases (*e.g.,* vehicle-miles traveled have increased substantially in response to the economy or the rebound effect), but the fact that even significantly increased vehicle fuel economy standards have not decreased fuel consumption at measurable levels in the real world should be considered by NHTSA in how heavily it weighs the need of the United States to conserve energy relative to other factors. This is particularly true given the diminishing effects attributable to fuel economy improvements: as fuel economy standards increase in stringency, the benefit of continuing to increase stringency decreases. In mpg terms, a vehicle owner who drives a light vehicle 15,000 miles per year (a typical assumption for analytical purposes) and trades in a vehicle with fuel economy of 15 mpg for one with fuel economy of 20 mpg, will reduce their annual fuel consumption from 1,000 gallons to 750 gallons—saving 250 gallons annually. If, however, that owner trades in a vehicle with fuel economy of 30 mpg for one with fuel economy of 40 mpg, then the owner's annual gasoline consumption would drop from 500 gallons/year to 375 gallons/year—a fuel savings of only 125 gallons even though the mpg improvement is twice as large. Going from 40 to 50 mpg would save only 75 gallons/year. Yet each additional fuel economy improvement becomes much more expensive as the easiest to achieve low-cost technological improvement options are exhausted. While fuel economy standards may support energy conservation, the agency must moderate its consideration of those impacts in setting maximum feasible standards, based on real-world effects, with the other three statutory factors.

Whether CAFE standards remain the most effective way to accomplish the goal of using less gasoline in the light-duty motor vehicle fleet to increase energy security is a decision for Congress, but for now, EPCA's directive to NHTSA is to set CAFE standards in each model year, and that is what the agency will continue to do. Within this framework, however, accounting for particular realities—specifically that oil consumption in the United States has remained steady or increased even in the face of significantly increased fuel economy standards while the country has simultaneously become a net petroleum exporter and the world's largest oil producer—leads the agency to conclude tentatively that the weight of these three facets of the need of the United States to conserve energy do not lead the agency to consider higher CAFE standards as maximum feasible.

Regarding environmental concerns, another factor historically considered as part of the need of the United States to conserve energy, the proposed reset standards decrease vehicle costs compared to the baseline, which results in incrementally more vehicle sales, particularly of vehicles that are modestly less fuel efficient compared to vehicles under the baseline standards. This would result in a modest increase in fuel consumption but also results in less driving demand than the baseline because the total cost-per-mile of driving is higher. The net result of these countervailing factors—increased vehicle sales of less fuel-efficient vehicles but subsequently fewer miles driven in those vehicles due to decreased rebound driving—is more fuel consumed from vehicles regulated under the proposed reset standards compared to the baseline standards. Emissions of various pollutants would increase relative to the No-Action Alternative as a result of both increased upstream emissions from the various fuel production processes and increased downstream emissions from fuel combustion as vehicles are driven commensurate with the fuel consumption increases. However, in the context of total emissions compared to the baseline, the incremental increases would be marginal. In addition, non-criteria emissions (NCEs) in all three action alternatives decrease over time, as newer vehicles enter the fleet. Criteria pollutant emissions similarly increase relative to the No-Action Alternative, but all three action alternatives result in decreased criteria pollutant emissions over time. PRIA Chapter 8 provides additional detail on the changes in emissions and, for criteria emissions specifically, associated calculated health outcomes. NHTSA's NEPA analysis similarly shows only marginal differences between the baseline and alternatives considered in this proposal. The results of that analysis are summarized below and in the Draft SEIS.

NHTSA does not believe that the magnitude of fuel consumption and emission increases over the baseline would lead the agency to conclude that standards set at higher levels than the agency analyzed are maximum feasible. The fact that the agency's proposed reset standards are so significantly different than the baseline standards and yet result in only marginal increases in fuel consumption as shown in Table V–11 (and associated emissions metrics, as shown in PRIA Chapter 8 and the Draft SEIS) confirms NHTSA's tentative conclusion that the environmental elements of the need of the Nation to conserve energy do not weigh heavily enough against the countervailing factors of technological feasibility and economic practicability to merit the adoption of more stringent standards. The following table shows the difference between the baseline and alternatives for changes in fuel consumption for the gasoline- and diesel-powered vehicle fleet; emissions outcomes are generally commensurate with these levels and are discussed further in PRIA Chapter 8 and the Draft SEIS.

[502] EIA, Petroleum & Other Liquids: U.S. Product Supplied of Finished Motor Gasoline, Last revised: Aug. 29, 2025, available at: *https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MGFUPUS2&f=A* (accessed: Sept. 10, 2025).

Table V-11: Fuel Consumption Levels and Changes From Baseline for Selected Calendar Years

	2027	2028	2029	2030	2031	2040	2050
Total Consumption (b. gal)							
No Action	125.7	121.5	117.4	113.4	109.4	83.9	72.1
Alt. 1	125.8	122.0	118.4	114.8	111.3	89.0	77.8
Alt. 2	125.8	122.0	118.4	114.8	111.3	89.0	77.8
Alt. 3	125.8	121.9	118.2	114.6	111.0	88.4	77.2
Change from No Action (b. gal)							
Alt. 1	0.2	0.5	0.9	1.4	1.9	5.1	5.7
Alt. 2	0.2	0.5	0.9	1.4	1.9	5.1	5.7
Alt. 3	0.2	0.4	0.8	1.2	1.6	4.5	5.1
Change from No Action (%)							
Alt. 1	0%	0%	1%	1%	2%	6%	8%
Alt. 2	0%	0%	1%	1%	2%	6%	8%
Alt. 3	0%	0%	1%	1%	1%	5%	7%

Regardless of the level of standards that NHTSA tentatively concludes is maximum feasible in this proposal, light-duty vehicle fuel consumption is still forecast to decline substantially in the long run as shown above in Table V–11, both as a result of NHTSA's standards and fleet turnover. The environmental effects related to fuel consumption, both because of NHTSA's standards and other light-duty transportation trends, will decrease proportionally based on effect or pollutant. NHTSA has accordingly determined that, at the time of this proposed rule, the need of the United States to conserve energy weighs in favor of fuel economy standards' acting as an insurance policy against risk, with standards that increase at steady, incremental, manageable rates for the light-duty gasoline- and diesel-powered fleets following their reset to align more closely with EPCA.

In sum, NHTSA has tentatively determined that a proper consideration of ''the need of the United States to conserve energy'' should result in fuel economy standards that become *less stringent* as America continues to tap into its proven oil reserves because the Nation's exposure to oil shocks is inherently diminished. This is especially true as the remaining petroleum imported into the U.S. has shifted dramatically away from volatile OPEC nations and toward Mexico and Canada since the passage of EPCA, and even EISA. The U.S. currently possesses a superabundance of domestic energy resources, especially petroleum and natural gas. Following the shale-oil boom, America has attained energy independence and does not have the same need to conserve liquid-fuel energy resources that it had in the wake of the Arab oil embargoes of the 1970s. United States energy independence was unthinkable when EPCA was enacted. Accordingly, NHTSA believes that it is both reasonable and congruent with EPCA's energy conservation goals to weigh the need of the United States to conserve energy such that vehicle fuel economy standards require continuous improvements over time, but at sustainable levels for manufacturers, consumers, and society at large.

Finally, as discussed above, NHTSA considers estimated net benefits as relevant to determining maximum feasible CAFE standards. The agency's analysis shows that all three regulatory alternatives would result in positive net benefits at both 3 percent and 7 percent discount rates, with the Preferred Alternative, Alternative 2, resulting in $24.0 billion in estimated net benefits using a 3-percent discount rate and $22.2 billion in net benefits using a 7-percent discount rate.[503] While the difference in net benefits between regulatory alternatives is small, NHTSA believes that the yearly stringency increases represented by the Alternative 2 standards best comport with the technological and economic capabilities of the gasoline- and diesel-powered vehicle fleets while still resulting in small, steady incremental increases in fleet fuel economy and positive benefits for society.

Balancing all factors and issues identified above, NHTSA is proposing to increase fuel economy standards from the newly proposed MY 2022 standards at a rate of 0.5 percent per year through MY 2026 followed by 0.25 percent per year through the remainder of the 10 model years covered by this proposal. NHTSA's preliminary conclusion is that this decision to increase the stringency of the standards at annual rates achievable by gasoline- and diesel-powered vehicles, coupled with a re-examination of the shape of the fuel economy target functions and the vehicle classification definitions, best comports with the substantive textual requirements of EPCA. Moreover, the level, shape, and applicability of the standards to the passenger and non-passenger automobile fleets, as reclassified under this proposal, is justified by the extraordinary distortions the existing regulations have caused in the marketplace. Imposing such market distortions is inconsistent with a proper application of EPCA and results only in unnecessary regulatory burden without insulating the United States from major disruptions in the global oil market. Consistent with the discussion above, NHTSA believes that small, steady, incremental increases in fuel economy standards over time, while preserving the ability of manufacturers to focus on

[503] As is discussed in Chapter 8 of the PRIA, NHTSA estimates the benefits and costs of the regulatory alternatives under consideration from both model year and calendar year perspectives. The estimates shown here are for the model year approach.

safety, affordability, and consumer choice, are reasonable and appropriate, and appropriately balance EPCA's priorities, including energy conservation goals.

3. Draft Supplemental Environmental Impact Statement Analysis Results

NHTSA described above that the agency's NEPA-related obligation is to ''take a 'hard look' at the environmental consequences'' of an action, as appropriate.[504] Significantly, ''[i]f the adverse environmental [impacts] of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs.'' [505] NHTSA considers the impacts reported in the Draft SEIS, in addition to the other information presented in this preamble, the Draft TSD, and the PRIA, as part of its decision-making process.

Per DOT Order 5610.1D, NHTSA considers a ''no action'' alternative in its NEPA analyses and presents the environmental impacts of the proposal and alternatives, including the No-Action Alternative, in comparative form.[506] The range of CAFE standard action alternatives, including the No-Action Alternative, encompasses a spectrum of possible fuel economy standards that NHTSA could determine is the maximum feasible based on the different ways NHTSA could weigh the applicable statutory factors. The agency's Draft SEIS describes the reasonably foreseeable impacts for all alternatives across a variety of environmental resources, including energy, air quality, emissions effects, and historic and cultural resources. The impacts of the Proposed Action are discussed in proportion to their significance, qualitatively and quantitatively, as applicable.[507] The findings of the analysis are summarized here, and more detailed discussion—in particular for any qualitative resource assessment—can be found in the Draft SEIS.

Reasonably foreseeable energy impacts from the Proposed Action include changes in vehicle fuel consumption. All three action alternatives would increase fuel consumption compared to the No-Action Alternative,[508] with fuel consumption increases that range from 71 billion gasoline gallon equivalents (GGE) under Alternative 3 to 77 billion GGE under Alternative 1 and Alternative 2 (the Preferred Alternative).

The relationship between CAFE standards and criteria pollutant and air toxics emissions is less straightforward than the relationship between CAFE standards and energy use, because the criteria pollutant and air toxics relationship reflects the complex interactions among many factors. In general, emissions of criteria air pollutants decrease with increasing stringency. However, the analysis shows that the action alternatives would result in different levels of emissions when measured against projected trends under the No-Action Alternative. These reductions and increases in emissions would vary by pollutant, calendar year, and action alternative. The differences in national emissions of criteria air pollutants among the action alternatives compared to the No-Action Alternative would range from less than 1 percent to about 4 percent. Adverse health outcomes from criteria pollutant emissions are expected to increase nationwide in 2035 and 2050 under all action alternatives relative to the No-Action Alternative. This is due primarily to increases in downstream emissions, particularly of $PM_{2.5}$. The increases in health effects would stay the same or get smaller from Alternatives 1 and 2 to Alternative 3 in 2035 and 2050, reflecting the generally greater stringency of Alternative 3. However, emissions still decrease over time with each action alternative.

Toxic air pollutant emissions would remain the same or increase in 2035 and 2050 for all action alternatives relative to the No-Action Alternative. The increases stay the same or get larger from Alternatives 1 and 2 to Alternative 3 for acetaldehyde (in 2050), acrolein (in 2035 and 2050), 1,3-butadiene (in 2035 and 2050), and formaldehyde (in 2050), but get smaller for acetaldehyde (in 2035), benzene (in 2035 and 2050), DPM (in 2035 and 2050), and formaldehyde (in 2035). The largest relative increases in emissions generally would occur for formaldehyde for which emissions would increase by as much as 3.8 percent under Alternatives 1 and 2 in 2050 compared to the No-Action Alternative. Percentage increases in emissions of acetaldehyde, acrolein, 1,3-butadiene, benzene, and DPM would be less. The smaller increases are not expected to lead to measurable changes in concentrations of toxic air pollutants in the ambient air. For such small changes, the impacts of those action alternatives would be essentially equivalent. The larger increases in emissions could lead to changes in ambient pollutant concentrations.

Overall changes in health effects due to air pollution are expected to be consistent with any resulting emissions trends. Higher emissions would be expected to lead to an overall increase in adverse health effects while lower emissions would be expected to lead to a decrease in adverse health effects. The changes in health effects due to changes in emissions also are dependent on geographic population distribution, meteorological and topographical conditions, and people's proximity to roadways and upstream facilities.

The Proposed Action and alternatives would result in slight increases in CO_2 concentrations, surface temperature, sea level, and precipitation, and a slight decrease in ocean pH compared to the No-Action Alternative, based on projections using a reduced-complexity climate model. They also could, to a small degree, increase the impacts and risks of climate trends. Uncertainty exists regarding the magnitude of impact on these climate variables, as well as to the impacts and risks of climate trends. The impacts of the Proposed Action and alternatives on global mean surface temperature, precipitation, sea level, and ocean acidification would be small in relation to global emissions trajectories. This is because of the global and multi-sectoral nature of climate trends. These impacts also would occur on a global scale and would not affect the United States disproportionately. To put these emissions changes in perspective, the emissions increase from all passenger cars and light trucks in 2035 compared with emissions under the No-Action Alternative are approximately equivalent to the annual emissions from 7,727,819 vehicles under Alternatives 1 and 2, and 7,143,671 vehicles under Alternative 3. For reference, a total of 252,733,312 passenger cars and light trucks are projected to be on the road in 2035 under the No-Action Alternative.[509]

In cases where quantitative impacts assessment was not possible, NHTSA presented the findings of a literature review of scientific studies for

[504] *Baltimore Gas & Elec. Co.* v. *Natural Resources Defense Council, Inc.,* 462 U.S. 87, 97 (1983).

[505] *Robertson* v. *Methow Valley Citizens Council,* 490 U.S. 332, 350 (1989).

[506] DOT Order 5610.1D, sec. 13.e.

[507] Section 13.g(2) of DOT Order 5610.1D.

[508] Total light-duty vehicle fuel consumption from 2024 to 2050 under the No-Action Alternative is projected to be 2,867 billion gasoline gallon equivalents (GGE).

[509] The light-duty vehicle equivalency is based on an average per-vehicle emissions estimate, which includes both tailpipe CO_2 emissions and associated upstream emissions from fuel production and distribution. The average light-duty vehicle is projected to account for 4.66 metric tons of CO_2 emissions in 2035 based on MOVES, the GREET model, and EPA analysis.

informational purposes in the Draft SEIS.

The SEIS is one factor in NHTSA's decision-making process to set CAFE standards. NHTSA evaluated the range of reasonable alternatives in the Draft SEIS, along with other factors during the rulemaking process and tentatively determined that Alternative 2 is the Preferred Alternative because it is maximum feasible. NHTSA is informed by the Draft SEIS in arriving at its conclusion that Alternative 2 is maximum feasible.

D. Severability

For the reasons discussed above, NHTSA believes that its authority to propose and implement CAFE standards for the MYs 2022–2026 and 2027–2031 is well-supported in law and practice and should be upheld in any legal challenge. NHTSA also believes that its exercise of authority reflects sound policy.

However, in the event that any portion of the proposed rule is declared invalid, NHTSA intends that the various aspects of the proposal be severable and, specifically, that each set of proposed standards, for MYs 2022–2026 and MYs 2027–2031, is severable, as well as the various compliance proposals discussed in the following section of this preamble. The proposed standards for MYs 2027–2031 could be implemented independently if any of the other proposed standards were struck down, and NHTSA firmly believes that it would be in the best interests of the Nation for the standards to be applicable to support EPCA's overarching purpose of energy conservation. Each proposed standard is justified independently on both legal and policy grounds and could be implemented effectively by NHTSA.

VI. Compliance and Enforcement

NHTSA is proposing changes to its CAFE enforcement program for light-duty automobiles. These changes include: (1) modifying the criteria for classification as a non-passenger automobile; (2) removing credit trading from the CAFE program beginning with MY 2028; (3) removing references to EPA's regulations regarding manufacturers' ability to generate AC efficiency and OC FCIVs; (4) modifying manufacturer reporting requirements; and (5) making other technical amendments. To provide context for these changes, Section VI.A first provides an overview of NHTSA's CAFE enforcement program. Section VI.B then discusses and explains the proposed changes to the CAFE program.

A. Background and Overview of Compliance and Enforcement

NHTSA's CAFE enforcement program is largely established by EPCA, as amended by EISA, and is prescriptive regarding enforcement. EPCA and EISA also establish a number of flexibilities and incentives that are available to manufacturers to help them comply with the CAFE standards. The statute also authorizes NHTSA to establish, at its discretion, additional flexibilities by regulation. The light-duty CAFE program includes all vehicles with a gross vehicle weight rating (GVWR) of 8,500 pounds or less as well as vehicles between 8,501 and 10,000 pounds that are classified as medium-duty passenger vehicles (MDPVs).[510] [511] Table VI–1 provides an overview of the CAFE program, including statutory and regulatory citations, and an overview of the changes proposed in this NPRM.

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[510] As prescribed in 49 U.S.C. 32901(a)(19)(B), an MDPV is ''defined in section 86.1803–01 of title 40, Code of Federal Regulations, as in effect on the date of the enactment of the Ten-in-Ten Fuel Economy Act.'' In accordance with the statutory definition, NHTSA defines MDPV at 49 CFR 523.2 as any complete or incomplete motor vehicle rated at more than 8,500 pounds GVWR and less than GVWR that is designed primarily to transport passengers, but does not include a vehicle that: (1) Is an ''incomplete truck'' meaning any truck that does not have the primary load carrying device or container attached; or (2) Has a seating capacity of more than 12 persons; or (3) Is designed for more than 9 persons in seating rearward of the driver's seat; or (4) Is equipped with an open cargo area (for example, a pickup truck box or bed) of 72.0 inches in interior length or more. A covered box not readily accessible from the passenger compartment will be considered an open cargo area for purposes of this definition.

[511] See ''heavy-duty vehicle'' definition in 40 CFR 86.1803–01. MDPVs are classified as either passenger automobiles or light trucks depending on whether they meet the criteria to be a non-passenger automobile under 49 CFR 523.5. If the MDPV is classified as a non-passenger automobile by meeting the requirements in 49 CFR 523.5, it is subject to the requirements in 49 CFR 533. If the MDPV does not meet the criteria in 49 CFR 523.5 to be a non-passenger automobile, then it is classified as a passenger automobile and subject to the requirements in 49 CFR 531.

Table VI-1: Overview of Compliance for the CAFE Program

Fleet Performance Requirements			
Component	**Applicable Regulation (Statutory Authority)**	**General Description**	**Proposed Changes in NPRM**
Fuel Economy Standards	49 CFR 531.5 and 49 CFR 533.5 (49 U.S.C. 32902)	Fuel economy standards are footprint-based fleet average standards for each of a manufacturer's compliance category (i.e., domestic passenger automobile, import passenger automobile, and non-passenger automobile), which are expressed in miles per gallon (mpg). NHTSA sets average fuel economy standards that are the maximum feasible for each compliance category and model year (i.e., passenger automobiles and non-passenger automobiles). In setting these standards, NHTSA considers technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the U.S. to conserve energy. NHTSA is precluded from considering the fuel economy of vehicles that operate only on alternative fuels, the portion of operation of a dual-fueled vehicle powered by alternative fuel, and the trading, transferring, or availability of credits.	Amendments to 49 CFR 531.5(a) and 49 CFR 533.5(a) to set standards for MYs 2022-2026 and MYs 2027-2031.
Vehicle Classification	49 CFR part 523	Standards are set for two regulatory categories (i.e., passenger automobiles and non-passenger automobiles). Vehicles are assigned to either the passenger automobile or non-passenger automobile categories based on definitions in EPCA, as implemented through definitions and specific criteria in NHTSA's regulations.	Amendments to 49 CFR part 523 to amend the criteria for non-passenger automobiles.
Minimum Domestic Passenger Car Standards	49 CFR 531.5 (49 U.S.C. 32902(b)(4))	Domestic passenger automobile fleets are required to meet the MDPCS. This standard applies in addition to the footprint-based standard.	Amendments to 49 CFR 531.5(b) to set MDPCS for MYs 2022-2026 and MYs 2027-2031.
Determining Average Fleet Performance			
Component	**Applicable Regulation (Statutory Authority)**	**General Description**	**Proposed Changes in NPRM**
2-Cycle Testing	49 CFR 531.6(a) citing 40 CFR part 600 and 49 CFR 533.6 citing 40 CFR part 600	Vehicle testing is conducted by EPA using the Federal Test Procedure (light-duty FTP or "city" test) and Highway Fuel Economy Test (HFET or "highway" test).	None

	(49 U.S.C. 32904)		
AC Efficiency FCIVs	49 CFR 531.6(b)(1) citing 40 CFR 86.1868-12 and 49 CFR 533.6(c)(1) citing 40 CFR 86.1868-12 (49 U.S.C. 32904)	This adjustment to the results of the 2-cycle testing for fuel consumption improvement from technologies that improve AC efficiency that are not accounted for in the 2-cycle testing. The AC efficiency FCIV program began in MY 2017 for NHTSA. Starting in MY 2027, AC efficiency FCIVs may only be generated by ICE vehicles.	Amendments to 49 CFR 531.6 and 533.6 to remove references to EPA's regulations for AC efficiency FCIVs.
OC FCIVs	49 CFR 531.6(b)(2) and (3) citing 40 CFR 86.1869-12 and 49 CFR 533.6(c)(3) and (4) citing 40 CFR 86.1869-12 (49 U.S.C. 32904)	This adjustment to the results of the 2-cycle testing for fuel consumption improvement from technologies that are not accounted for or not fully accounted for in the 2-cycle testing. The OC FCIV program began in MY 2017 for NHTSA. Starting in MY 2027, OC FCIVs may only be generated by ICE vehicles, with the program phasing out and ending with MY 2032 under EPA's current regulations.	Amendments to 49 CFR 531.6 and 533.6 to remove references to EPA's regulations for OC FCIVs.
Advanced Full-Size Pickup Truck FCIVs	49 CFR 533.6(c)(2) citing 40 CFR 86.1870-12 (49 U.S.C. 32904)	This adjustment increases a manufacturer's average fuel economy for full-size pickup trucks equipped with hybridized or other performance-based technologies. Manufacturers were eligible to earn these adjustments in MYs 2017-2021 and MYs 2023-2024.	None
Dedicated Alternative-Fueled Vehicles	49 CFR 536.10 citing 40 CFR 600.510-12(c) (49 U.S.C. 32905(a) and (c))	EPA calculates the fuel economy of dedicated alternative fueled vehicles assuming that a gallon of liquid/gaseous alternative fuel is equivalent to 0.15 gallons of gasoline per 49 U.S.C. 32905(a). For BEVs, EPA uses the petroleum equivalency factor as defined by the DOE (*see* 10 CFR 474.3) (per 49 U.S.C. 32904(a)(2)).	None
Dual-Fueled Vehicles	49 CFR 536.10 citing 40 CFR 600.510-12(c) (49 U.S.C. 32905(b), (d), and (c)) and (49 U.S.C. 32906(a))	EPA calculates the fuel economy of dual-fueled vehicles using a utility factor to account for the portion of power energy consumption from the different energy sources. For EVs, EPA uses DOE's petroleum equivalency factor for the electric portion of the vehicle's expected energy use (per 49 U.S.C. 32904(a)(2)). Starting in MY 2020 and subject to statutory limit, the average fuel economy of certain dual-fueled vehicles cannot increase a manufacturer's average fuel economy.	None
Earning and Using Credits for Over-compliance and Addressing Shortfalls			
Earning Credits	49 CFR 536.4 (49 U.S.C. 32903(a))	Manufacturers earn credits for each one tenth of mile by which the average fuel economy vehicles in a particular compliance category in a model year exceed the applicable fuel economy standard, multiplied by the number of vehicles sold in that compliance category (i.e., fleet).	None
Carry-Forward Credits	49 CFR part 536 (49 U.S.C. 32903(a)(2))	Manufacturers may carry forward credits up to five model years into the future.	None

Carry-Back Credits	49 CFR part 536 (49 U.S.C. 32903(a)(1))	Manufacturers may carry back credits up to three model years into the past.	None
Credit Transfers	49 CFR part 536 (49 U.S.C. 32903(g))	Manufacturers may transfer credits between their fleets to increase a fleet's average fuel economy by up to 2 mpg. Manufacturers may not use transferred credits to meet the MDPCS (*see* 49 U.S.C. 32903(g)(4) and 49 CFR 536.9).	None
Credit Trading	49 CFR 536.8 (49 U.S.C. 32903(f))	Manufacturers may trade over-compliance credits into fleets of the same compliance category. A manufacturer may then transfer those credits to a different compliance category, but only up to the 2-mpg limit for transfers. Manufacturers may not use traded credits to meet the (*see* 49 U.S.C. 32903(f)(2) and 49 CFR 536.9).	Amendments to 49 CFR 536.6 and 536.8 to reflect that beginning in MY 2028 credit trading will no longer be allowed.
Civil Penalties	49 CFR 578.6(h) (49 U.S.C. 32912)	Civil penalties may be assessed for CAFE credit shortfalls that are not resolved through credit flexibilities. Pub. L. 119-21 set civil penalties for the CAFE program to $0. This new value applies starting in MY 2022.	None[512]

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In general, as prescribed by Congress, NHTSA sets fleet average fuel economy standards for light-duty vehicles on an mpg basis. As specified in statute, light-duty vehicles are separated into three separate compliance categories: passenger automobiles manufactured domestically (referred to as domestic passenger cars), passenger automobiles not manufactured domestically (referred to as imported passenger cars), and non-passenger automobiles (which are also referred to as light trucks).[513] Each standard applies to a manufacturer's compliance category as a whole and not to individual vehicles, and a manufacturer can balance the performance of their vehicles (via the application of fuel-saving technology) in complying with standards. NHTSA sets standards based on vehicle footprint (*i.e.,* the area calculated by multiplying the wheelbase times the track width), and each manufacturer must comply with the fleet average standard derived from their vehicles' target standards. These target standards are taken from a set of mathematical functions for each fleet. While NHTSA sets the standards for light-duty vehicles, EPA, as authorized and directed by EPCA, establishes procedures for calculating a manufacturer's average fuel economy for CAFE compliance. Average fuel economy values are based on vehicle testing conducted using the FTP (or ''city'' test) and HFET (or ''highway'' test).[514]

At the end of each model year, EPA determines the fleet average fuel economy performance for the individual fleets as determined by procedures set forth in 40 CFR part 600. NHTSA then confirms whether a manufacturer's fleet average fuel economy performance for each of its compliance categories of light-duty vehicles meets the applicable target-based fleet standard. NHTSA makes its final determination of whether a manufacturer has met its CAFE compliance obligation based on official reported and verified CAFE data received from EPA. Pursuant to 49 U.S.C. 32904(e), EPA is responsible for calculating manufacturers' CAFE values so that NHTSA can determine compliance with its CAFE standards. A manufacturer's final model year report must be submitted to EPA no later than May 1st following the end of the model year.[515] EPA verifies the data submitted by manufacturers and issues final CAFE reports that are sent to manufacturers and to NHTSA electronically between April and October of the calendar year following the end of model year. NHTSA then assesses each manufacturer's compliance for each of their fleets and calculates each manufacturer's credit amounts (credits for vehicles exceeding the applicable CAFE standard) and shortfalls (amount by which a fleet fails to meet the applicable CAFE standards). A manufacturer meets NHTSA's fuel economy standard if its fleet average performance is greater than or equal to its required standard.

If one of a manufacturer's compliance categories fails to meet its fuel economy standard, NHTSA will provide written notification to the manufacturer that it has not met the standard. The written notification will also include the shortfall amount for each compliance category, which is calculated using the following equation: (Fuel Economy Achieved − Fuel Economy Standard) × 10 × Production Volume. To determine the civil penalty amount, NHTSA multiplies the total shortfall (in credits) by the applicable civil penalty rate.[516] When the manufacturer receives the written notification, it will be required to confirm the shortfall amount and submit a plan indicating how it will allocate existing credits or earn, transfer, and/or acquire credits to apply toward the shortfall, or inform NHTSA of its intention to pay a civil penalty to resolve the shortfall.[517] [518] The manufacturer must submit a plan or applicable civil penalty payment within

[512] Updating the CAFE civil penalties regulations in 49 CFR 578.6(h) to reflect the statutory amendment in Public Law 119–21 (OB3) will occur in the next DOT-wide annual civil penalties update rulemaking.

[513] 49 U.S.C. 32903(g)(6)(B).

[514] 40 CFR part 600.

[515] 40 CFR 600.512–12(b).

[516] For MY 2022 and beyond the applicable civil penalty rate is $0. Public Law 119–21 (OB3), 139 Stat. 72 (July 4, 2025). *https://www.congress.gov/119/plaws/publ21/PLAW-119publ21.pdf.*

[517] In accordance with 49 U.S.C. 32903(g)(3)(C), the maximum increase in any compliance category attributable to transferred credits is 2.0 mpg.

[518] In accordance with 49 U.S.C. 32903(f)(2) and (g)(4), manufacturers are restricted from using traded and transferred credits to resolve MDPCS shortfalls.

60 days of receiving the written notification from NHTSA. Credit allocation plans and carryback plans (*i.e.,* plans to use future earned or acquired credits to apply toward the shortfall) received from the manufacturer will be reviewed by NHTSA, and NHTSA will approve a credit allocation plan unless it finds the proposed credits are unavailable or that it is unlikely that the plan will result in the manufacturer earning sufficient credits to offset the shortfall. If a plan is rejected, NHTSA will notify the manufacturer and request a revised plan.

B. Proposed Changes to the CAFE Program

Consistent with the overall reset of the CAFE program discussed earlier in Section V, NHTSA is proposing two changes intended to align NHTSA's regulations with EPCA in a manner that will better effectuate the statutory purpose of the CAFE program. First, NHTSA is proposing to amend the criteria for classification as a non-passenger automobile to align NHTSA's regulations with the best reading of the statue.[519] Second, NHTSA is proposing to end credit trading between manufacturers in MY 2028 (*i.e.,* MY 2027 will be the last year in which manufacturers may use traded credits to satisfy shortfalls). NHTSA is also proposing technical amendments to its regulations to remove references to EPA's regulations for OC FCIVs, and proposing to make modifications to reporting requirements, and to make a few technical amendments. The proposed changes are discussed in detail in the following sections.

1. Modification of Vehicle Classification in the CAFE Program

NHTSA is proposing to amend the criteria for non-passenger automobiles. This proposal is informed by an examination of how NHTSA's vehicle classification criteria in 49 CFR part 523, *Vehicle Classification,* align with and implement the vehicle definitions in 49 U.S.C. 32901.

This is not the first time NHTSA has examined this issue. In its 2010 and 2012 final rules, NHTSA considered amending its vehicle classification regulations but ultimately decided to monitor and revisit them in future rulemakings.[520] [521] Notably, NHTSA stated that ''no one can predict with certainty how the market will change between now and 2025'' specifically regarding how vehicle manufacturers may ''make more deliberate redesign efforts to move vehicles out of the car fleet and into the truck fleet in order to obtain the lower target.'' [522] It is now 2025, and NHTSA has completed an updated analysis using current data.

The starting point of NHTSA's analysis was a recognition of the market shift from passenger automobiles to non-passenger automobiles (as currently classified) in the light-duty vehicle market. In 1975, non-passenger automobiles represented 19.3 percent of the light-duty automobile market,[523] and today they make up 64.7 percent.[524] Figure VI–1 below illustrates the year-over-year light-duty fleet shares of passenger automobiles and non-passenger automobiles over the last 50 model years (*i.e.,* from 1975 to 2024).

[519] 90 FR 24524 (June 11, 2025).

[520] 75 FR 25661 (May 7, 2010).

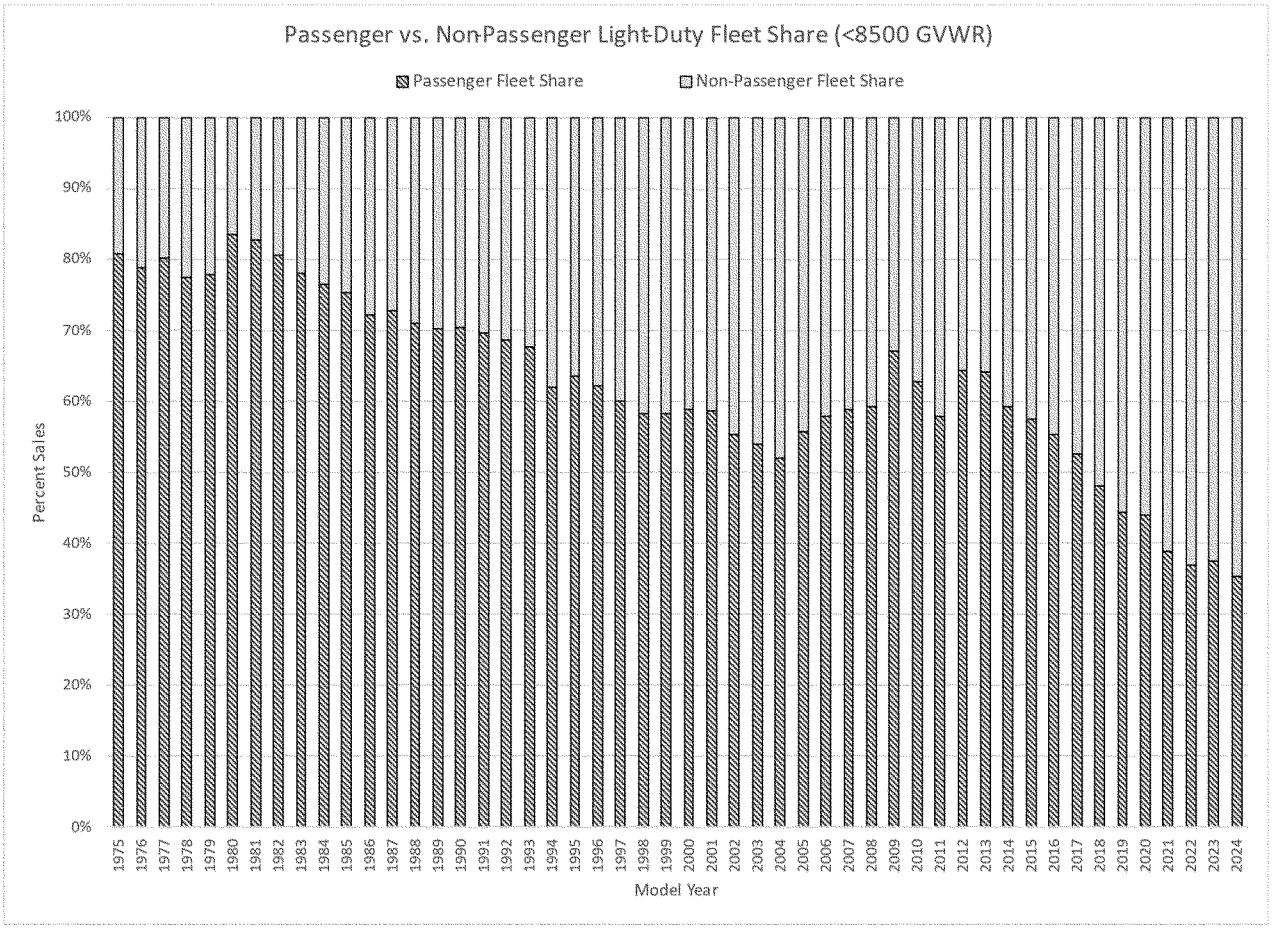
[521] 77 FR 63124 (Oct. 15, 2012).

[522] 77 FR 63122 (Oct. 15, 2012).

[523] DOE, Composition of New U.S. Light-Duty Vehicles by Vehicle Type, Last revised: Jan. 2024, available at: *https://afdc.energy.gov/data/10306* (accessed: Sept. 10, 2025).

[524] This is based on MY 2024 mid-model year reporting and includes dedicated alternative fuel automobiles. Considering only vehicles that are powered by internal combustion engines, the share of automobiles classified as non-passenger automobiles is 67.9 percent.

Figure VI-1: Passenger Versus Non-Passenger Automobile YoY Fleet Share



Leading up to the 2010 and 2012 final rules there was no clear year-over-year trend in the share of each fleet, but the fleet composition has since steadily and sharply continued the long-term trend towards non-passenger automobiles. As discussed in Draft TSD Chapter 1, multiple factors likely have contributed to this trend, including, of particular relevance, NHTSA's vehicle classification criteria. Based on its new analysis, NHTSA believes that the criteria it uses to delineate between the fleets need to be changed to ensure that the classification of the fleets meets the intent by Congress when it enacted EPCA. These changes and the processes by which they were evaluated are described in detail in the subsequent paragraphs and sections.

To assess how the current criteria in section 523.5 of NHTSA's regulations align with the statutory definitions and intent, NHTSA conducted an analysis beginning with the compiled classification data from manufacturers' MY 2024 mid-model year fuel economy compliance reports.[525] To supplement this information, NHTSA conducted extensive research using publicly available manufacturer publications, such as owner's manuals, marketing brochures, and specification sheets,[526] to develop a comprehensive dataset of vehicle models and any non-passenger automobile criteria that each vehicle model meets. This additional research was necessary, as manufacturers' mid-model year reports generally only provide the minimum data needed to demonstrate qualification as a non-passenger automobile. For example, for a three-row SUV that qualifies as a non-passenger automobile via 49 CFR 523.5(a)(5), the manufacturer may not provide data on off-highway angles and clearances specified in 49 CFR 523.5(b)(2). Incorporating this data made it possible for NHTSA to check all possible regulatory pathways that could qualify a vehicle as a non-passenger automobile. A detailed discussion of how the MY 2024 analysis fleet dataset was developed and used can be found in Draft TSD Chapter 2.7.[527] The agency seeks comment and supporting material from manufacturers and stakeholders for any vehicle in the dataset found to contain erroneous or missing data that would impact the outcome of this analysis.

Based on this analysis, NHTSA is proposing to amend the criteria for non-passenger automobiles to align with the best reading of the statute. These changes are discussed in detail in the following sections.

a. Non-Passenger Automobile Definition

EPCA requires NHTSA to set separate maximum feasible standards for ''passenger automobiles'' and ''non-

[525] As required in 49 CFR 537.7(c)(5).

[526] The catalog of reference specification sheets (broken down by manufacturer, by nameplate) used to populate and confirm missing information for vehicle reclassification is available on NHTSA's website. BMW Data, Ferrari Data, FCA Data, Ford Data, Hyundai Data, Ineos Data, Kia Data, Mazda Data, Mercedes Data, Mullen Data, Nissan Data, Subaru Data, Toyota Data, Volvo Data, GM Data, Honda Data, Mitsubishi Data, VW Data, Jaguar Land Rover (JLR) Data, and Vinfast Data.

[527] See Non-Passenger_Analysis.xlsx, Docket No. NHTSA–2025–0491 for the complete dataset used in the analysis.

passenger automobiles.'' All vehicles in the light-duty fleet are classified into one of these two categories based on the presence or lack of certain vehicle characteristics and features. EPCA defines, at 49 U.S.C. 32901(a)(17), a non-passenger automobile to mean ''an automobile that is not a passenger automobile or a work truck.'' By statute, the definition of non-passenger automobile is linked to the definition of passenger automobile found at 49 U.S.C. 32901(a)(18). A passenger automobile is a vehicle that NHTSA ''decides by regulation is manufactured primarily for transporting not more than 10 individuals, but does not include an automobile capable of off-highway operation'' that NHTSA decides by regulation ''has a significant feature (except 4-wheel drive) designed for off-highway operation'' and ''is a 4-wheel drive automobile or is rated at more than 6,000 pounds gross vehicle weight.'' In accordance with the statute, NHTSA has issued regulations at 49 CFR part 523 to establish criteria for determining whether a vehicle is a passenger automobile or non-passenger automobile. Under EPCA and NHTSA's regulations, there are three primary pathways for an automobile (*i.e.,* a vehicle under 10,000 pounds GVWR that is not a work truck) to be classified as a non-passenger automobile: (1) the automobile is designed to carry more than ten individuals; (2) the automobile is not manufactured primarily for transporting individuals; or (3) the automobile is capable of off-highway operation. NHTSA is proposing changes to the criteria used to classify non-passenger automobiles via the second and third pathways.[528] These proposed changes are discussed in detail in the following sections.

b. Proposed Changes to Criteria for Off-Highway Capability

The third pathway for classification as a non-passenger automobile includes automobiles ''capable of off-highway operation'' that NHTSA decides by regulation: (1) ''has a significant feature (except 4-wheel drive) designed for off-highway operation'' and (2) ''is a 4-wheel drive automobile or is rated at more than 6,000 pounds gross vehicle weight.'' [529] Through rulemaking, NHTSA determined that ''high ground clearance'' would constitute a feature designed for off-highway operation and derived a specific list of dimensions that comprise high ground clearance.[530] Specifically, the regulation requires automobiles to meet minimum prescribed values for four out of the following five dimensions: running clearance, axle clearance, approach angle, breakover angle, and departure angle. When issuing these criteria, NHTSA explained that the agency arrived at these values ''[a]fter comparing the ground clearance of automobiles used on highways only with automobiles used off as well as on the highway.'' [531] In the final rule, NHTSA noted that Ford and International Harvester commented that the five ground clearance measurements proposed in the NPRM would adequately serve to distinguish automobiles capable of off-highway operation from other automobiles. The agency also stated that ''[i]f a need arises in the future to establish additional criteria, the NHTSA will initiate rulemaking.'' [532] After almost 50 years, NHTSA is now re-evaluating whether the criteria appropriately differentiate between vehicles that are and are not capable of off-highway operation. After conducting a new analysis using the MY 2024 fleet, NHTSA is proposing two changes to the existing standard for determining high ground clearance, which are discussed in detail below. To provide adequate lead time, NHTSA is proposing that these changes take effect in MY 2028.

First, beginning in MY 2028, NHTSA proposes to eliminate axle clearance as a characteristic used to define a vehicle with high ground clearance, which is currently set 2 centimeters below the running clearance threshold. The objective of high ground clearance as an off-highway feature is to describe automobiles capable of off-highway operation. The axle configuration most impacted by the axle clearance characteristic is the solid axle, where the differential must be housed and vertically centered along a linear path between the center of the wheels on either side of the axle. In contrast, independent axles can vertically center the differential gears above the same linear path, effectively making running clearance the only constraining vertical measurement. Solid axles excel in off-highway operation at the expense of on-highway ride quality. NHTSA finds that creating an additional clearance characteristic that typically applies only to this axle type does not align with the statutory intent that the significant feature would indicate off-highway capability, and the agency therefore proposes to remove it.

Second, also beginning with MY 2028, NHTSA proposes that vehicles classified as non-passenger automobiles under the off-highway criteria meet the given thresholds for all four of the remaining characteristics that comprise the high ground clearance feature. NHTSA is not proposing to change the thresholds themselves, and they would thus remain the same. Using the MY 2024 fleet classification data, NHTSA determined the manufacturing volumes of vehicles that qualified as non-passenger automobiles based on the vehicle's having a high ground clearance, as determined by meeting at least four of the five factors, as well as the angle and clearance values of each of those vehicles. Of particular importance was determining the subset of vehicles that met both the GVWR or 4WD off-highway criteria described in 49 CFR 523.5(b)(1) and exactly four of the five existing off-highway criteria described in 49 CFR 523.5(b)(2). NHTSA found that within this subset of current off-highway classified automobiles: [533]

- 98.9 percent do not meet the approach angle minimum threshold of 28 degrees.
- The remaining 1.1 percent of vehicles are from a single nameplate.[534]
- 66.2 percent have an approach angle of less than the required departure angle of 20 degrees.[535]

After reviewing this data, NHTSA took a closer look at why so few vehicles in this category meet the approach angle requirement and whether this vehicle feature is necessary for off-highway operation. The vehicle attributes outlined in 49 CFR 523.5(b)(2) include approach angle, breakover angle, departure angle, and running clearance, which work together to define what NHTSA believes represents a vehicle designed with an off-highway capability intent, without having to define the off-highway environment explicitly. The approach angle attribute is of particular importance because it is the first feature of a vehicle to engage

[528] The first criterion is set in statute and NHTSA thus does not have authority to change it by regulation. While the third criterion is also set in statute, EPCA (as amended by EISA) provides the Secretary of Transportation with the flexibility to decide by regulation a significant feature (except 4-wheel drive) indicating that the automobile was designed for off-highway operation.

[529] 49 U.S.C. 32901(a)(18).

[530] 41 FR 55371 (Dec. 20, 1976).

[531] 41 FR 55371 (Dec. 20, 1976).

[532] 42 FR 38367 (July 28, 1977).

[533] All percentages described were evaluated using ''Non-Passenger_Analysis.xlsx'' in Docket No. NHTSA–2025–0491, tab ''Existing Reg Classification.''

[534] The Kia Seltos has a running clearance of 7.3 inches (~18.5 cm), below the 20 cm threshold. It has an approach angle of 28.0 degrees, meeting the minimum threshold.

[535] An approach angle less than the minimum required departure angle for off-highway capability would mean that the automobiles represented in this bullet are geometrically more capable off-highway when driven in reverse.

with an off-highway obstacle or grade and will determine whether the vehicle can navigate the obstacle. If the vehicle does not have the ability to approach the obstacle, then the other off-highway attributes become irrelevant. Because of the varying nature of off-highway environments and the equally varying ways to navigate them, the approach angle is set higher to maximize the capability of the other vehicle attributes. This higher approach angle feature can also be seen on vehicles in the 2024 fleet that are specifically designed with high levels of off-highway capability such as the Jeep Wrangler, Ford Bronco, and Land Rover Defender.[536] NHTSA determined in its analysis that manufacturers are significantly reducing the approach angle to as low as 14 degrees in pursuit of on-road aerodynamic improvements, ultimately degrading off-highway capability. NHTSA sees the approach angle as an important off-highway vehicle attribute, which is why it was originally and continues to be set at 28 degrees. The agency finds this approach angle observation as a clear indication that regulatory definitions have caused shifts in vehicle design characteristics, where manufacturers apply the remaining high ground clearance characteristics (breakover angle, departure angle, and running clearance) to vehicles otherwise not intended for off-highway operation. The passenger automobile fleet's fuel economy stringencies originated and evolved at a time when high-frontal area automobiles that consumers have shown a preference for were not present in the light-duty fleet. The gradual introduction of and accompanying consumer preference for high frontal area passenger-carrying automobiles made it difficult for manufacturers to meet the passenger automobile CAFE standards, which had originated and evolved prior to the widespread proliferation of this type of light-duty vehicle. Manufacturers, therefore, applied 4 out of the 5 high ground clearance characteristics, retaining aerodynamic (*i.e.,* low) approach angles that severely limit off-highway capability for the sole purpose of placing these vehicles in the non-passenger automobile fleet. NHTSA is proposing to correct this divergence between fleet composition and off-highway statutory intent by re-establishing the standard curves using a fleet allocation that better aligns with the statute. This proposed reclassification would eliminate the need for manufacturers to decide between unnecessary high ground clearance characteristics and achieving passenger automobile fuel economy standards.

As part of its evaluation of the criteria for off-highway capability, NHTSA also investigated the statute's ''4-wheel drive'' off-highway feature, specifically with regard to the differences between 4WD (4x4) and AWD drivetrains. Currently, 4WD and AWD technologies are both considered to meet the 4WD statutory directive in regulation.[537] The agency found that there is significant overlap in present-day 4WD and AWD peripheral technologies, such as axle differential locks, interaxle locks, low-range gearing and torque availability, and intelligent traction control systems that make it difficult, if not impossible, to assess off-highway ability based on the exclusively differentiating features of 4WD and AWD systems. NHTSA seeks comment on this assessment but is not currently proposing to change its position that any drivetrain capable of sending power to all four wheels, including both 4WD and AWD systems, meets the statute's intent.

c. Proposed Changes to Criteria for Functional Performance

A passenger automobile is defined, in part, as an automobile that is ''manufactured primarily for transporting not more than 10 individuals.'' [538] When the agency first issued vehicle classification regulations for the CAFE program in 1977, the agency grappled with the meaning of the lone word ''primarily'' in addition to the meaning of the phrase ''manufactured primarily for transporting not more than 10 individuals'' in the context of vehicle classification.[539] Ultimately, NHTSA determined that the phrase consisted of two criteria for passenger automobiles: (1) that passenger automobiles must be designed to carry 10 or fewer persons and (2) that passenger automobiles are ''chiefly'' for carrying persons. In the 1977 final rule, NHTSA noted that if ''primarily'' were interpreted to mean ''substantially,'' then almost every automobile would be a passenger automobile, because a substantial function of almost every automobile is to transport passengers. Because this was clearly not the intent of Congress, NHTSA instead interpreted the word ''primarily'' to mean ''chiefly'' or ''predominantly'' [540] and established criteria for the classification of an automobile as a non-passenger automobile based on the presence of certain chief characteristics. In the 1977 final rule, NHTSA stated its belief that Congress clearly intended that ''passenger automobile'' include only those vehicles traditionally regarded as passenger cars (*i.e.,* vehicles whose major design features, including body style, reflect the purpose of carrying persons). NHTSA also provided examples of design features that, singly or in combination, would indicate that an automobile is not a passenger automobile: an open bed for carrying cargo; heavy-duty suspension; and greater cargo-carrying than passenger-carrying volume.[541]

Under this interpretation, NHTSA created five different criteria of functional performance, any one of which would qualify the vehicle as a non-passenger automobile. The first, and most obvious type, is an automobile designed for transporting more than 10 individuals.[542] The four other criteria were used to identify automobiles designed primarily or chiefly for carrying property or a derivative of an automobile designed primarily for the transportation of property and included automobiles that: (1) provide temporary living quarters; (2) transport property on an open bed; (3) provide greater cargo-carrying than passenger-carrying volume; or (4) permit expanded use of the automobile for cargo-carrying purposes through the removal of seats by means installed for that purpose by the manufacturer or with simple tools, so as to create a flat, floor level surface extending from the forwardmost point of installation of those seats to the rear of the automobile's interior.[543] The first three of these criteria have remained static over time and are codified at 49 CFR 523.5(a)(2)–(4). The fourth criteria, for automobiles derived from an automobile designed primarily for the transportation of property, has expanded over time. Currently, section 523.5(a)(5) classifies as non-passenger any automobile with at least three rows of designated seating positions as standard equipment and has foldable or pivoting seats that can be removed, stowed, or folded to create a flat, leveled surface extending from the forward most point of installation (of the third-row seat) to the rear of the automobile's interior.

After conducting an analysis of the fleet and vehicle characteristics, NHTSA no longer believes that the criteria in

[536] See Non-Passenger_Analysis.xlsx, Docket No. NHTSA–2025–0491, tab ''Existing Reg Classification.''

[537] 75 FR 25659 (May 7, 2010), Footnote 750.

[538] 49 U.S.C. 32901(a)(18).

[539] 42 FR 38365 (July 28, 1977).

[540] *Id.*

[541] 42 FR 38362, 38365 (July 28, 1977).

[542] 49 CFR 523.5(a)(1).

[543] 42 FR 38367 (July 28, 1977).

section 523.5(a)(5) is in accordance with the best reading of the statute. NHTSA's analysis has indicated that many vehicles that qualify as non-passenger automobiles solely on this criterion (*i.e.,* the automobile does not meet any of the other criteria to be a non-passenger automobile) would be classified more appropriately as passenger automobiles: the presence of a foldable, stowable, or removable third row seat is not a significant design characteristic indicating that a chief purpose for the vehicle is to transport property. However, NHTSA's analysis also indicates that there is a subset of vehicles that are currently classified as non-passenger automobiles based on this criterion for vehicles with three or more rows of seating that NHTSA believes should remain in the non-passenger automobile category, as they have some chief design characteristics for transporting property that are not currently captured by section 523.5(a). To ensure that NHTSA's criteria for automobiles that are chiefly or significantly for transporting property effectuate the best reading of the statutory definitions, NHTSA is proposing two changes to the criteria in section 523.5(a). First, NHTSA is proposing to remove the current criteria in section 523.5(a)(5) for vehicles with three or more rows. Second, the agency is proposing to add a new criterion premised on a performance-based light-duty work factor (LDWF) utility metric. These proposed changes are discussed in more detail below.

(1) Automobiles With Three or More Rows of Seating

As referenced above, automobiles with at least three rows of designated seating positions as standard equipment qualify as non-passenger automobiles under section 523.5(a)(5) if the removal or stowing of foldable seats creates a flat, leveled cargo surface extending from the forwardmost point of installation of those seats to the rear of the automobile's interior. The original version of this provision in the 1977 final rule was for automobiles that had removable seats, such that the automobile permits expanded use of the automobile for cargo-carrying purposes. In explaining the rationale for creating the criteria, the 1977 preamble stated:

> [I]t is not the convertibility factor alone which results in passenger vans being classified as non-passenger automobiles. It is that factor together with the derivative nature of those vans . . . . [S]ince a passenger van is designed with the same chassis, springs, and suspension system as a cargo van, it is treated in the same way as a cargo van.[544]

When 49 CFR 523.5(a)(5) was applied to the original CAFE reference fleet, it achieved its intended objective of identifying those derivative vehicles, where purchasers could have instead opted for a ''cargo'' version of that vehicle. However, unlike the other regulations in section 523.5(a), the regulation at 523.5(a)(5) does not directly describe a chief non-passenger characteristic, but rather a passenger-based design feature that does not reveal, describe, or quantify a chief non-passenger characteristic when applied to the current automobile fleet. The automobile fleet of the late 1970s was fundamentally different from the automobile fleet being manufactured and sold today as there are no ''cargo van'' derivatives ''designed with the same chassis, springs, and suspension system'' in the present-day light-duty fleet. The regulatory text at 523.5(a)(5) applied to the late-1970s fleets accommodated the derivative vehicles as they existed at the time, but that same regulatory text applied to today's fleet misaligns with the statutory intent and text. Meeting the criterion in section 523.5(a)(5) is simply not enough to indicate that the automobile is not ''manufactured primarily'' for carrying passengers. In fact, the presence of at least three rows of designated seating positions indicates the opposite, as having three rows of designated seating positions is a significant feature indicating that a primary purpose of that automobile is for carrying numerous passengers. Accordingly, NHTSA is proposing to remove 49 CFR 523.5(a)(5) as a non-passenger classification criterion beginning with MY 2028.

(2) Light-Duty Work Factor

With the proposal to remove the expanded use criterion for vehicles with three or more rows of seating, NHTSA recognizes that some automobiles that have significant functional characteristics for the transportation of property would be classified as passenger automobiles unless NHTSA were to make further amendments to the criteria in section 523.5. To address this, NHTSA is proposing a new criterion for classification as a non-passenger automobile, beginning in MY 2028. While the criterion NHTSA is proposing to remove for vehicles with three or more rows of seating is based primarily on a passenger-carrying design element (three rows of seats), NHTSA is proposing a new non-passenger automobile pathway that can be described independent of vehicle construction, platform, equipment, materials, or passenger-based metrics (such as rated cargo load[545] or seating arrangements). This new performance-based utility attribute, which NHTSA is referring to as the light-duty work factor (LDWF), would be determined based on a light-duty vehicle's ability to transport property via its payload and towing capacities. Performance-based standards preclude design or technology obsolescence by only prescribing a target without guidance or restriction on how it should be achieved. A complete discussion of NHTSA's analysis and the process by which the LDWF formula and threshold were derived can be found in Draft TSD Chapter 2.7.

NHTSA developed an analysis fleet specifically for the LDWF analysis, referred to as the LDWF analysis fleet. Beginning with the full MY 2024 non-passenger fleet, NHTSA created the LDWF analysis fleet by removing vehicles that qualified as non-passenger automobiles via any of the following pathways:

- Transport more than 10 persons.
- Provide temporary living quarters.
- Transport property on an open bed.
- Provide, as sold to the first retail purchaser, greater cargo-carrying than passenger-carrying volume.
- Has either 4WD or a GVWR of more than 6000 lbs., and meets all four of the following criteria:[546]
  - Approach angle of not less than 28 degrees
  - Breakover angle of not less than 14 degrees
  - Departure angle of not less than 20 degrees
  - Running clearance of not less than 20 centimeters

The agency opted to omit vehicles that qualified via these alternative non-passenger pathways due to their designs' containing other non-passenger characteristics or off-highway features that could skew the results of an analysis intended to evaluate whether a vehicle was designed chiefly for enhanced property-transporting utility. The remaining vehicles were subject to the LDWF analysis to evaluate an appropriate formula and threshold for the work factor.

In performing the fleet analysis to determine at what threshold of LDWF a vehicle would qualify as a non-

[544] 42 FR 38367 (July 28, 1977).

[545] Per 49 CFR 571.110 S.3, rated cargo load can be calculated as the vehicle capacity weight (payload capacity) minus 68 kg (150 lbs.) times the vehicle's designated seating capacity.

[546] These sub-bullets reflect the proposed changes to criteria for off-highway capability, which are discussed in detail in NPRM preamble Section VI.B.1.b and Draft TSD Chapter 2.7.

passenger vehicle, NHTSA recognized that many vehicles could be specified with or without a trailering package (also commonly referred to as a ''tow package'' or ''towing package''). These packages can range from minor changes, such as the inclusion of trailer wiring and a tow hitch, to more significant changes, such as higher capacity cooling packages, enhanced suspensions, or reinforced driveline components. These changes do not significantly impact the powertrain or fuel economy of the base vehicle. In other words, trailering packages unlock utility that the powertrain and vehicle platform are already designed to provide. Therefore, in establishing the LDWF analysis fleet, NHTSA assumes that for a vehicle that would qualify as a non-passenger automobile via the LDWF criterion when specified with its trailering equipment, manufacturers will in the future not remove trailering capability as standard equipment on a vehicle that is otherwise designed to include it. These maximum available towing capacities for each vehicle in the LDWF analysis fleet were applied to the dataset used in the analysis.[547]

NHTSA is proposing to calculate LDWF as the weighted sum of a vehicle's payload and towing capacities and is proposing a minimum threshold for this non-passenger criterion based on extensive analysis. In determining appropriate weighting for payload and towing capacity in the LDWF calculation, NHTSA is considering the vehicle design considerations and property-transporting capabilities of payload capacity versus towing capacity. Designing for a higher payload capacity includes considerations for axle, frame, suspension, wheel, and tire capacities. These higher capacity components add weight to the vehicle and, when combined with the additional payload capacity, may require only modest enhancements to the powertrain and driveline to maintain performance and utility characteristics. In contrast, designing for a higher towing capacity includes considerations for pulling, including frame reinforcements to resist trailer forces acting opposite the direction of motion, increases to powertrain torque and power, and reinforcing driveline components to handle the additional torque. There is also a modest consideration for payload increases when considering increases to towing capacity due to a trailer's tongue weight.[548] In addition to the more expansive design considerations, towing capacity is a more effective means of providing cargo-transporting utility. For example, the highest payload capacity in the LDWF analysis fleet is nearly 2,100 pounds, compared to the highest towing capacity of 10,000 pounds; the range of payload capacity across the entire LDWF analysis fleet spans approximately 1,500 pounds compared to a 10,000-pound spread in towing capacity. Accordingly, NHTSA is proposing a higher weighting for towing capacity when determining the LDWF.[549] Draft TSD Chapter 2.7 provides the complete analysis and also describes the differences between the LDWF and the HDPUV work-factor attribute. Both the Draft TSD Chapter 2.7 and NPRM preamble Section IX Regulatory Text provide the LDWF formula and threshold.

In connection with the proposed addition of the LDWF, NHTSA is proposing to update its definition of curb weight and add two additional definitions for ''nominal tank capacity'' and ''optional equipment'' which would be used in determining curb weight. NHTSA is changing the definition of curb weight and defining the additional terms to provide clarity regarding how NHTSA would test a vehicle to determine whether it meets the LDWF or off-road criteria for non-passenger automobiles. The update to the curb weight definition is intended to ensure that every vehicle a manufacturer reports as a non-passenger automobile meets the criteria as configured at the time of first retail purchase (*i.e.,* it must meet the criteria in any configuration offered by the manufacturer).

2. Removal of Credit Trading in the CAFE Program

Under EPCA, as amended by EISA, manufacturers are afforded several compliance flexibilities that can be used to achieve compliance with CAFE standards. While some of these flexibilities are provided to manufacturers by statute, such as the ability to carry forward and backward credits earned from over-complying with a CAFE standard in a given model year, others are provided by regulations issued at NHTSA's discretion. Credit trading among manufacturers is one flexibility that the statute authorizes but does not mandate. Credit trading refers to the ability of manufacturers or persons to sell credits to, or purchase credits from, another manufacturer. EISA gave NHTSA discretion to establish by regulation a CAFE credit trading program to allow credits to be traded between vehicle manufacturers.[550] While establishing the credit trading program is discretionary, it is also limited by statute. Total oil savings must be preserved when credits are traded, and traded credits are not permitted to be used to meet the MDPCS.[551] Under this discretionary authority, NHTSA established a credit trading program in its 2009 final rule, permitting manufacturers to trade credits earned in MY 2011 and later.[552] Under NHTSA's regulations, traded credits are subject to an ''adjustment factor'' to ensure total oil savings.[553]

NHTSA has observed, in recent years, that credit trading increasingly has been used by manufacturers of ICE vehicles to purchase credits from manufacturers of alternative fueled vehicles. As fuel economy standards increase, manufacturers generally look for the most cost-effective means of compliance. As standards increased to levels unattainable for ICE vehicles, credit trading has become an increasingly more attractive means of satisfying CAFE requirements. This situation is due, in part, to EV manufacturers' earning credits that are not representative of real-world fuel savings. The fuel economy values for EVs have been artificially high, resulting from the multiplier in the PEF [554] and EV manufacturers' generating FCIVs for AC efficiency and OC technologies that are not representative of real-world fuel savings.[555] As a result, EV manufacturers have been earning an abundance of credits. Under NHTSA's credit trading program, EV manufacturers can sell their credits to

[547] See Non-Passenger_Analysis.xlsx, Docket No. NHTSA–2025–0491, tab ''Existing Reg Classification,'' column ''Max Spec Tow Capacity (lb.).''

[548] SAE, Performance Requirements for Determining Tow-Vehicle Gross Combination Weight Rating and Trailer Weight Rating, SAE Standard J2807_202411, SAE International: Warrendale, PA, available at: *https://doi.org/10.4271/J2807_202411* (accessed: Sept. 10, 2025).

[549] The proposed weighting is ⅔ of towing capacity and ⅓ of payload capacity, with a threshold of greater than or equal to 5,500, calculated in pounds. See Draft TSD Chapter 2.7.

[550] 49 U.S.C. 32903(f).

[551] 49 U.S.C. 32903(f)(1) and (2).

[552] 74 FR 14206 (Mar. 30, 2009).

[553] 49 CFR 536.4(c).

[554] In DOE's final rule (89 FR 22041, Mar. 29, 2024), DOE explained that ''by significantly overvaluing the fuel savings effects of EVs in a mature EV market with CAFE standards in place, the fuel content factor [in the PEF] will disincentivize both increased production of EVs and increased deployment of more efficient ICE vehicles,'' which DOE concludes ''results in higher petroleum use than would otherwise occur.''

[555] In EPA's Apr. 18, 2024, final rule (89 FR 27842), EPA noted that EVs are ''receiving a windfall of credits [for AC efficiency technologies] that fails to correspond to any real-world reduction in vehicle emissions'' and that there is ''no technical basis for providing BEVs with off-cycle credits.''

ICE vehicle manufacturers, effectively subsidizing the production of EVs. This was never NHTSA's intention in establishing a credit trading program nor Congress's intention in authorizing such a program, as it creates market distortion that undermines EPCA's overarching purposes.

NHTSA is proposing to end credit trading by MY 2028, with MY 2027 being the last year in which manufacturers can use traded credits for CAFE compliance. Because NHTSA, as required by statute, is proposing standards in this rulemaking without considering alternative fueled vehicles or the use of compliance credits, NHTSA believes that manufacturers of ICE vehicles will be able to meet CAFE standards without credit trading, thus minimizing any impacts that this would have on manufacturers' decisions about what vehicles and technologies to offer in the marketplace. As shown in Section IV.B.1 Effects on Vehicle Manufacturers, NHTSA's standard-setting analysis indicates that manufacturers at both the individual fleet level and total fleet level exceed the standards year over year from MY 2028 to MY 2031. This demonstrates that NHTSA's proposed CAFE standards are achievable with ICE technologies without consideration of the factors NHTSA is prohibited from considering pursuant to 49 U.S.C. 32902(h), namely, alternative fueled vehicles and the availability of credits. The inputs for the compliance simulations that inform NHTSA's standard-setting analysis are discussed further in Section II.C.2. In addition, while NHTSA's analysis indicates that manufacturers will be able to meet the proposed standards by applying a diverse set of technologies available in the market now, manufacturers will continue to be able to transfer credits between their own fleets, subject to the 2-mpg statutory limit on how much a manufacturer can improve a fleet's average fuel economy using transferred credits.[556] NHTSA is not proposing changes to how manufacturers may transfer earned credits between different compliance fleets, such as between their domestic passenger car and non-passenger car fleets, as this form of credit transfer is permitted explicitly by statute.

The agency recognizes that manufacturers have made investments in fuel-saving technologies, which they have factored into their future design and compliance plans. Or, instead of investing in potential technology application, NHTSA recognizes that manufacturers may have reliance interests in the credit trading program to fulfill their current CAFE compliance obligations. However, NHTSA believes that its proposal to end credit trading within the CAFE program by MY 2028 provides manufacturers adequate transition time before trading ends. NHTSA has also proposed standards in this notice that explicitly do not account for manufacturers' use of credits to comply with standards. These adjustments to the fuel economy standards also should limit any potential impacts manufacturers will experience because of NHTSA's proposed programmatic changes. NHTSA seeks comment on this proposal, including on its assumptions about manufacturers' compliance pathways exclusive of credit trading as an compliance option. NHTSA also seeks comment on the extent to which the presence of credits changed manufacturer compliance behavior, and on the value of credits now that the civil penalty rate has been updated by law.

3. Technical Amendments To Remove References to EPA's Regulations for AC Efficiency and Off-Cycle Fuel Consumption Improvement Values

In its 2012 final rule, NHTSA issued regulations to align with EPA's provisions that allowed manufacturers to generate FCIVs for the adoption of AC efficiency and OC technologies beginning in MY 2017. EPA established the AC efficiency and OC programs to account for technologies that are not fully captured in the 2-cycle test procedures (FTP and HFET) that EPA uses to measure fuel economy for the CAFE program. Under EPA's provisions, FCIVs generated by manufacturers are factored into each manufacturer's calculation of its average fuel economy for purposes of CAFE compliance. As explained in Section II, NHTSA is now proposing to remove FCIVs from its standard-setting analysis starting in MY 2028. NHTSA is making this change to ensure that it sets maximum feasible standards that are achievable without consideration of technology-specific standards. Upon examination of NHTSA's existing regulations, NHTSA has identified technical changes to remove references to EPA regulations pertaining to AC efficiency and OC FCIVs.

AC efficiency technologies are technologies that reduce the operation of or the loads on the vehicle engine by reducing AC usage. For example, the less frequently the AC compressor operates or the more efficiently it operates, the less load the AC compressor places on the engine, resulting in better fuel efficiency. AC efficiency technologies can include, but are not limited to, blower motor controls, internal heat exchangers, and improved condensers/evaporators. OC technologies are technologies that also reduce the operation of ICE engines, but they cover other areas of vehicle operation. Examples of OC technologies include thermal control technologies, high-efficiency alternators, and high-efficiency exterior lighting.[557]

Under EPA's current regulations, manufacturers are eligible to earn AC efficiency and OC FCIVs for all types of automobiles equipped with those technologies in their fleet through MY 2026. Starting in MY 2027, only automobiles powered by ICEs are eligible to generate FCIVs, and the OC FCIV program is currently being phased out between MYs 2031–2033, with manufacturers no longer being able to generate OC FCIVs for MY 2033 and beyond.

NHTSA is proposing to remove the references to EPA's regulations regarding FCIVs from 49 CFR 531.6 and 49 CFR 533.6 because such references are unnecessary and create a potential for confusion. As noted above, fuel economy is calculated pursuant to testing and calculation procedures prescribed by EPA. Accordingly, NHTSA is proposing to remove the references to EPA regulations.

4. Modification of Manufacturer Reporting Requirements

In support of the proposed modifications to vehicle classification, including the new light-duty work factor (LDWF), NHTSA is proposing to make gross combined weight rating (GCWR) a required reporting element for all non-passenger automobiles in the pre-model year and mid-model year reports beginning in MY 2028. GCWR is the value specified by the manufacturer as the loaded weight of a combination vehicle. Currently, GCWR is one option that manufacturers may use to support a vehicle's classification as a full-sized pickup. NHTSA is proposing to require GCWR due in part to the proposed introduction of the LDWF, as GCWR information would be needed to determine whether an automobile qualifies as a non-passenger automobile under the LDWF criteria. NHTSA is also proposing to require GCWR for all non-passenger automobiles because it will allow NHTSA to understand fleet characteristics better, as non-passenger automobiles may qualify under multiple criteria. NHTSA is proposing that this

[556] 49 U.S.C. 32903(g)(3)(c).

[557] 40 CFR 86.1869–12(b), Credit available for certain off-cycle technologies.

change would first apply for MY 2028 reporting.

NHTSA is also proposing to remove 49 CFR 523.5(a)(5) and 49 CFR 523.5(b)(2)(v) beginning with MY 2028. Additional details regarding their removal can be found in Section VI.B.1.b and in Draft TSD Chapter 2.7. Due to these changes, starting in MY 2028 manufacturers will no longer be required to provide information related to these two regulations, which are described in 49 CFR 537.7(c)(5), paragraphs (c)(5)(i)(E) and (c)(5)(ii)(D), respectively.

C. Technical Amendments

NHTSA is proposing to make certain technical amendments through this rulemaking, which include amendments removing residual mentions of fuel efficiency standards for trailers; technical amendments removing reference to civil penalties for non-compliance with fuel economy standards; removing provisions applicable only to model years before MY 2022; and technical amendments correcting regulatory citations and incorporating minor spelling, grammatical, and formatting edits to 49 CFR parts 523, 531, 533, 536, and 537. NHTSA has included in the docket redline text highlighting all of the proposed changes to the regulations. Instructions for accessing the docket can be found in Section VII Public Participation.

1. Technical Amendments To Remove Residual Mention of Fuel Efficiency Standards for Trailers in NHTSA's Vehicle Classification Regulations

In November 2021, the United States Court of Appeals for the District of Columbia ''vacate[d] all portions of the [2016 joint NHTSA and EPA] rule that apply to trailers.'' [558] The underlying statute authorizes NHTSA to examine the fuel efficiency of and prescribe fuel economy standards for ''work trucks and commercial medium-duty or heavy-duty on-highway vehicles.'' 49 U.S.C. 32902(b)(1)(C); 49 U.S.C. 32902(k)(2). The court reasoned that trailers do not qualify as ''vehicles'' when that term is used in the fuel economy context because trailers are motorless and use no fuel. *Truck Trailer Mfrs. Ass'n, Inc.,* 17 F.4th at 1200, 1204–08. Accordingly, the court held that NHTSA does not have the authority to regulate the fuel economy of trailers. *Id.* at 1208.[559]

On March 15, 2024, NHTSA published the final rule titled ''Improvements for Heavy-Duty Engine and Vehicle Fuel Efficiency Test Procedures, and Other Technical Amendments.'' (89 FR 18808). In that final rule, NHTSA removed portions of its regulations that were vacated by that decision. While that final rule removed all the fuel efficiency standards for trailers and most of the mentions of those standards from its regulations, a residual mention of those standards remains in NHTSA's vehicle classification regulations at 49 CFR 523.10(a)(3). NHTSA is proposing to amend 49 CFR 523.10(a)(3) by deleting the sentence that mentions fuel efficiency standards for trailers.

2. Technical Amendment To Remove Heavy-Duty Trailers From the List of Heavy-Duty Vehicle Regulatory Categories

On June 24, 2024, NHTSA published the final rule titled ''Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027 and Beyond and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030 and Beyond.'' (89 FR 52540, June 24, 2024). In Section VII.C.8.e of that final rule,[560] NHTSA finalized the removal of ''Heavy-duty trailers'' from the list of four heavy-duty vehicle regulatory categories in 49 CFR 523.6(a). However, NHTSA inadvertently excluded the necessary changes from the final rule's amendatory text. To align with its original intent as expressed in its 2024 final rule, NHTSA is proposing to amend 49 CFR 523.6(a) introductory text by stipulating that heavy-duty vehicles are divided into three regulatory categories and removing paragraph (a)(4)—which lists heavy-duty trailers as a heavy-duty vehicle regulatory category—from 49 CFR 523.6(a).

3. Technical Amendments To Remove Civil Penalties for Non-Compliance With Fuel Economy Standards From the CAFE Program

NHTSA is proposing to remove the mention of civil penalty payments for manufacturers that do not meet their fuel economy standards in the CAFE program from 49 CFR part 536. These amendments are to remove the mention of civil penalties from 49 CFR 536.5(d)(2) and (6), § 536.9(e), § 536.10(b); and to remove § 536.7(b) through (d).

4. Additional Technical Amendments

NHTSA is proposing to incorporate minor technical amendments to 49 CFR parts 523, 531, 533, 536, and 537. These amendments are to correct regulatory citations and incorporate minor spelling, grammatical, and formatting edits. Specifically, NHTSA is proposing to incorporate the following technical amendments.

a. Technical Amendments to Part 523

NHTSA is proposing to add and remove text, correct spelling errors, and incorporate other grammatical edits to clarify several definitions, including *Cargo-carrying volume, Electric vehicle, Transmission configuration,* and *Vocational vehicle (or heavy-duty vocational vehicle)* in § 523.2 and § 523.3 and to correct a regulatory citation in § 523.4.

b. Technical Amendments to Part 531

NHTSA is proposing to correct regulatory citations in § 531.5(b), (c), and (e) and Table 14 to § 531.5(e)(10); to correct capitalization errors in § 531.5(a) through (c) and Table 16 to § 531.5(e)(12); to correct spelling errors in Table 8 to § 531.5(e)(4), Table 11 to § 531.5(e)(7), Table 12 to § 531.5(e)(8), Table 13 to § 531.5(e)(9), Table 14 to § 531.5(e)(10), Table 15 to § 531.5(e)(11), Table 16 to § 531.5(e)(12), Table 21 to § 531.5(e)(17), Table 22 to § 531.5(e)(18), Table 23 to § 531.5(e)(19), and Table 24 to § 531.5(e)(20); to add clarifying text to § 531.5(c); to incorporate other grammatical edits in Table 8 to § 531.5(e)(4), Table 16 to § 531.5(e)(12), Table 19 to § 531.5(e)(15), Table 20 to § 531.5(e)(16), Table 21 to § 531.5(e)(17), Table 22 to § 531.5(e)(18), Table 23 to § 531.5(e)(19), and Table 24 to § 531.5(e)(20); and to incorporate grammatical edits in § 531.6(b)(4)(ii)(C).

c. Technical Amendments to Part 533

NHTSA is proposing to correct formatting errors in the text supporting Figure 1 to § 533.5; to correct capitalization errors in § 533.5(j); and to incorporate a grammatical edit in § 533.6(c)(5)(ii)(C).

d. Technical Amendments to Part 536

NHTSA is proposing to change the title of a section in Part 536 Introductory Text; to remove text and to correct terminology to clarify a provision in § 536.1; to remove text to clarify a provision in § 536.2; to add text to

[558] *Truck Trailer Mfrs. Ass'n, Inc.* v. *EPA*, 17 F.4th 1198, 1200 (D.C. Cir. 2021).

[559] For similar reasons, the court also held that the statute authorizing EPA to regulate the emissions of ''motor vehicles'' does not encompass trailers. *Id.* at 1200–03. The court affirmed, however, that both agencies still ''can regulate *tractors* based on the trailers they pull.'' *Id.* at 1208 (emphasis original). Moreover, NHTSA is still authorized to regulate trailers in other contexts, such as under 49 U.S.C. chapter 301. *See* 49 U.S.C. 30102(a)(7) (defining ''motor vehicle'' to include ''a vehicle . . . drawn by mechanical power''); *Truck Trailer Mfrs. Ass'n, Inc.,* 17 F.4th at 1207 (''A trailer is 'drawn by mechanical power.' '').

[560] 89 FR 52540, 52933 (June 24, 2024).

clarify the definition of *Credit holder (or holder)* in § 536.3(b)(6); to remove text to clarify the definition of *Light truck* in § 536.3(b)(10); to add and remove text to clarify the definition of *Trade* in § 536.3(b)(11); add and remove text to clarify the definition of *Transfer* in § 536.3(b)(12); to correct a capitalization error in § 536.4(c); to add and remove text to clarify provisions in § 536.4(a) through (c) and Figure 1 to § 536.4(c); to correct a table heading in Table 1 to § 536.4(c); to rename the title of § 536.6; to add a new paragraph (a) to § 536.6; to change the existing paragraph (a) to paragraph (a)(1) in § 536.6; to change the existing paragraph (b) to paragraph (a)(2) in § 536.6; to add a new paragraph (b) to § 536.6; to change the existing paragraph (c) to paragraph (b)(1); to add a new paragraph (2) to § 536.6(b); to add a new paragraph (3) to § 536.6(b); and to add text to the title of § 536.8; correct a spelling error in § 536.8(a) and (f).

e. Technical Amendments to Part 537

NHTSA is proposing to correct a spelling error in § 537.4(b)(3) and a regulatory citation in § 537.7(c)(7)(i).

VII. Public Participation

NHTSA requests comments on all aspects of this NPRM. This section describes how you can participate in this process.

How do I prepare and submit comments?

Your comments must be written and in English.[561] To ensure that your comments are correctly filed in the docket, please include the docket number NHTSA–2025–0491 at the top of your comments. Your comments must not be more than 15 pages long.[562] NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments, and there is no limit on the length of the attachments. If you are submitting comments electronically as a PDF (Adobe) file, NHTSA asks that the documents be scanned using the Optical Character Recognition (OCR) process, thus allowing NHTSA to search and copy certain portions of your submissions.[563] Please note that pursuant to the Data Quality Act, for substantive data to be relied upon and used by NHTSA, it must meet the information quality standards set forth in the OMB and DOT Data Quality Act guidelines. Accordingly, NHTSA encourages you to consult the guidelines in preparing your comments. OMB's guidelines may be accessed at *https://www.gpo.gov/fdsys/pkg/FR-2002-02-22/pdf/R2-59.pdf.* DOT's guidelines may be accessed at *https://www.transportation.gov/dot-information-dissemination-quality-guidelines.*

Tips for Preparing Your Comments

When submitting comments, please remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, Regulation Identifier Number (RIN), **Federal Register** date, and page number).
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information either or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified in the **DATES** section above.

How can I be sure that my comments were received?

If you submit your comments to NHTSA's docket by mail and wish DOT Docket Management to notify you upon receipt of your comments, please enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

How do I submit Confidential Business Information (CBI)?

If you wish to submit any information under a claim of confidentiality, you should submit your complete submission, including the information you claim to be CBI, to NHTSA's Office of the Chief Counsel. When you send a comment containing CBI, you should include a cover letter setting forth the information specified in our CBI regulation.[564] In addition, you should submit a copy from which you have deleted the claimed CBI to the docket by one of the methods set forth above.

NHTSA is currently treating electronic submission as an acceptable method for submitting CBI to NHTSA under 49 CFR part 512. Any CBI submissions sent via email should be sent to an attorney in the Office of the Chief Counsel at the address given above under **FOR FURTHER INFORMATION CONTACT**. Likewise, for CBI submissions via a secure file transfer application, an attorney in the Office of the Chief Counsel must be set to receive a notification when files are submitted and have access to retrieve the submitted files. At this time, regulated entities should not send a duplicate hardcopy of their electronic CBI submissions to DOT headquarters. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

Will NHTSA consider late comments?

NHTSA will consider all comments received before the close of business on the comment closing date indicated above under **DATES**. To the extent practicable, NHTSA will also consider comments received after that date. If interested persons believe that any information that NHTSA places in the docket after the issuance of the NPRM affects their comments, they may submit comments after the closing date concerning how NHTSA should consider that information for the proposed rule. However, NHTSA's ability to consider any such late comments in this rulemaking will be limited.

If a comment is received too late for NHTSA to practicably consider in developing a proposed rule, NHTSA will consider that comment as an informal suggestion for future rulemaking action.

How can I read the comments submitted by other people?

You may read the materials placed in the dockets for this document (*e.g.,* the comments submitted in response to this document by other interested persons) at any time by going to *https://www.regulations.gov.* Follow the online instructions for accessing the dockets. You may also read the materials at the DOT Docket Management Facility by going to the street address given above under **ADDRESSES**.

How do I participate in the public hearings?

NHTSA will hold one virtual public hearing during the public comment period. NHTSA will announce the

[561] 49 CFR 553.21.

[562] *Id.*

[563] OCR is the process of converting an image of text, such as a scanned paper document or electronic fax file, into computer-editable text.

[564] *See* 49 CFR part 512.

specific date and web address for the hearing in a supplemental **Federal Register** notification. NHTSA will accept oral and written comments to the rulemaking documents and will also accept comments to the Draft EIS at this hearing. The hearing will start at 9 a.m. Eastern time and will continue until everyone has had a chance to speak.

NHTSA will conduct the hearing informally, and technical rules of evidence will not apply. NHTSA will arrange for a written transcript of the hearing to be posted in the dockets as soon as it is available and keep the official record of the hearing open for 30 days following the hearing to allow you to submit supplementary information.

How do I comment on the Draft Environmental Impact Statement?

The Draft EIS associated with this proposal has a unique public docket number and is available at Docket No. NHTSA–2025–0491. Comments on the Draft EIS can be submitted electronically at *https://www.regulations.gov,* at this docket number. You may also mail or hand-deliver comments to Docket Management, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Room W12–140, Washington, DC 20590 (referencing Docket No. NHTSA–2025–0491), between 9 a.m. and 5 p.m., Monday through Friday, except on Federal holidays. To be sure that someone is there to help you, please call (202) 366–9322 before coming. All comments and materials received, including the names and addresses of the commenters who submit them, will become part of the administrative record and will be posted on the internet without change at *https://www.regulations.gov.*

VIII. Regulatory Notices and Analyses

A. Executive Order 12866, ''Regulatory Planning and Review''; Executive Order 13563, ''Improving Regulation and Regulatory Review''; Executive Order 14192, ''Unleashing Prosperity Through Deregulation''; and Executive Order 14219, ''Ensuring Lawful Governance and Implementing the President's 'Department of Government Efficiency' Deregulatory Initiative''

E.O. 12866, ''Regulatory Planning and Review'' (58 FR 51735, Oct. 4, 1993), reaffirmed by E.O. 13563, ''Improving Regulation and Regulatory Review'' (76 FR 3821, Jan. 21, 2011), provides for determining whether a regulatory action is ''significant'' and therefore subject to the Office of Management and Budget (OMB) review process and to the requirements of the Executive order. This action is a ''significant regulatory action'' under Section 3(f)(1) of E.O. 12866 because it is likely to have an annual effect on the economy of $100 million or more. Accordingly, NHTSA submitted this action to OMB for review and any changes made in response to interagency feedback submitted via the OMB review process have been documented in the docket for this action. The estimated benefits and costs of this proposed rule are described above and in the PRIA, located in the docket and on NHTSA's website.

E.O. 14192, ''Unleashing Prosperity Through Deregulation'' (90 FR 9065, Feb. 6, 2025) requires an agency, unless prohibited by law, to identify at least ten existing regulatory requirements to be repealed when the agency publicly proposes for notice and comment or otherwise promulgates a new significant regulatory rule. Section 3(c) of E.O. 14192 also requires that the total incremental costs associated with an agency's proposed new regulations must, to the extent permitted by law, be offset by the elimination of costs associated with other previous regulations of the agency. This proposed rule, if finalized as proposed, is expected to be an E.O. 14192 deregulatory action and thus is not expected to generate net new incremental costs. The estimated cost savings of this proposal are detailed in the PRIA.

E.O. 14219, ''Ensuring Lawful Governance and Implementing the President's 'Department of Government Efficiency' Deregulatory Initiative'' (90 FR 10583, Feb. 19, 2025) requires agency heads to review their regulations and identify regulations that, among other things, are based on anything other than the best reading of the underlying statutory authority or prohibition or that implicate matters of social, political, or economic significance that are not authorized by clear statutory authority. NHTSA has identified its CAFE standards issued in 2022 and 2024 as falling within an enumerated category of E.O. 14219. Specifically, as described in an interpretive rule published on June 11, 2025, NHTSA determined that the CAFE standards issued in 2022 and 2024 are not authorized by clear statutory authority. NHTSA is issuing this proposed rule to reset the CAFE standards and bring the CAFE program into compliance with relevant statutory requirements. NHTSA discusses compliance with relevant statutory requirements in Section V above.

B. Environmental Considerations

1. National Environmental Policy Act

To inform its development of the CAFE standards for MYs 2022–2031, and pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq.,* and DOT Order 5610.1D, 90 FR 29621 (July 3, 2025), NHTSA prepared a Draft SEIS to evaluate the potential environmental impacts of the proposed action and a reasonable range of alternatives. In revising the CAFE standards established in NHTSA's June 2024 final rule, NHTSA is making substantial changes to the proposed action examined in the 2024 Final EIS and, as such, prepared this Draft SEIS to inform its amendment of MYs 2027–2031 CAFE standards. Because the MY 2026 passenger car and light truck fleets will already be produced and for sale by the time NHTSA issues a final rule to amend MYs 2022–2031 CAFE standards, this Draft SEIS analyzes environmental impacts associated only with the proposed MYs 2027–2031 CAFE standards. The Draft SEIS analyzes reasonably foreseeable impacts of the proposed rule on the potentially affected environment, which are discussed in proportion to their significance. It also discusses NHTSA's reasonable range of alternatives, including a No-Action Alternative and a Preferred Alternative, and other factors used in developing this proposed rule. The Draft SEIS addresses mitigation measures considered as part of the environmental analysis.[565]

NHTSA has considered the information contained in the Draft SEIS as part of developing this proposed rule. As explained in NHTSA's June 2025 interpretive rule, NHTSA ''must not consider the fuel economy of dedicated automobiles; must consider dual-fueled automobiles to be operated only on gasoline or diesel fuel; and must not consider, when prescribing a fuel economy standard, the trading, transferring, or availability of credits under [49 U.S.C. 32903]''; [566] NEPA, however, does not impose such constraints on analysis; instead, NEPA requires that Federal agencies consider reasonably foreseeable environmental impacts of their proposed actions.[567]

[565] DOT Order 5610.1D, sec. 26.l (''Mitigation means measures that avoid, minimize, or compensate for environmental impacts caused by a proposed action or alternatives. . . . While NEPA requires consideration of mitigation, it does not mandate the form or adoption of any mitigation.'').

[566] Resetting the Corporate Average Fuel Economy Program; Interpretive Rule, 90 FR 24518, 24519 (June 11, 2025).

[567] 42 U.S.C. 4332(2); DOT Order 5610.1D, sec. 13.f.

NHTSA's Draft SEIS therefore presents results of an ''unconstrained'' analysis that considers manufacturers' potential use of CAFE credits and application of alternative fuel technologies (including PHEVs using their charge depleting fuel economy values, BEVs, and FCEVs) in order to disclose and allow consideration of real-world environmental consequences of the Proposed Action and alternatives.[568]

The Draft SEIS is available for public comment; instructions for the submission of comments are included within the document. Afterward, NHTSA will simultaneously issue the Final SEIS and Record of Decision (ROD), pursuant to Section 14 of DOT Order 5610.D, unless NHTSA determines the statutory criteria or practicability considerations preclude simultaneous issuance. For additional information on NHTSA's NEPA analysis, please see the Draft SEIS.

2. Clean Air Act as Applied to NHTSA's Proposed Rule

CAA (42 U.S.C. 7401 *et seq.*) is the primary Federal legislation that addresses air quality. Under the authority of the CAA and subsequent amendments, EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, which are reviewed every 5 years.

The air quality of a geographic region is usually assessed by comparing the levels of criteria air pollutants found in the ambient air to the levels established by the NAAQS (also considering the other elements of a NAAQS: averaging time, form, and indicator). Concentrations of criteria pollutants within the air mass of a region are measured in parts of a pollutant per million parts (ppm) of air or in micrograms of a pollutant per cubic meter ($\mu g/m^3$) of air present in repeated air samples taken at designated monitoring locations using specified types of monitors. These ambient concentrations of each criteria pollutant are compared to the levels, averaging time, and form specified by the NAAQS to assess whether the region's air quality is in attainment with the NAAQS.

When the measured concentrations of a criteria pollutant within a geographic region are below those permitted by the NAAQS, EPA designates the region as an attainment area for that pollutant, while regions where concentrations of criteria pollutants exceed Federal standards are called nonattainment areas. Former nonattainment areas that are now in compliance with the NAAQS are designated as maintenance areas. Each state with a nonattainment area is required to develop and implement a State Implementation Plan (SIP) documenting how the region will reach attainment levels within the time periods specified in the CAA. For maintenance areas, the SIP must document how the state intends to maintain compliance with the NAAQS. EPA develops a Federal Implementation Plan (FIP) if a state fails to submit an approvable plan for attaining and maintaining the NAAQS. When EPA revises a NAAQS, each state must revise its SIP to address how it plans to attain the new standard.

No Federal agency may ''engage in, support in any way or provide financial assistance for, license or permit, or approve'' any activity that does not ''conform'' to a SIP or FIP after EPA has approved or promulgated it.[569] Further, no Federal agency may ''approve, accept or fund'' any transportation plan, program, or project developed pursuant to title 23 or chapter 53 of title 49, U.S.C., unless the plan, program, or project has been found to ''conform'' to any applicable implementation plan in effect.[570] The purpose of these conformity requirements is to ensure that federally sponsored or conducted activities do not interfere with meeting the emissions targets in SIPs or FIPs, do not cause or contribute to new violations of the NAAQS, and do not impede the ability of a state to attain or maintain the NAAQS or delay any interim milestones. EPA has issued two sets of regulations to implement the conformity requirements:

(1) The Transportation Conformity Rule[571] applies to transportation plans, programs, and projects that are developed, funded, or approved under 23 U.S.C. (Highways) or 49 U.S.C. chapter 53 (Public Transportation).

(2) The General Conformity Rule[572] applies to all other Federal actions not covered under the Transportation Conformity Rule. The General Conformity Rule establishes emissions thresholds, or de minimis levels, for use in evaluating the conformity of an action that results in emissions increases.[573] If the net increases of direct and indirect emissions exceed any of these thresholds, and the action is not otherwise exempt, then a conformity determination is required. The conformity determination can entail air quality modeling studies, consultation with EPA and state air quality agencies, and commitments to revise the SIP or to implement measures to mitigate air quality impacts.

The proposed CAFE standards and associated program activities are not developed, funded, or approved under 23 U.S.C. or 49 U.S.C. chapter 53. Accordingly, this proposed action and associated program activities would not be subject to transportation conformity. Under the General Conformity Rule, a conformity determination is required where a Federal action would result in total direct and indirect emissions of a criteria pollutant or precursor in a nonattainment or maintenance areas equaling or exceeding the rates specified in 40 CFR 93.153(b)(1) and (2). As explained below, NHTSA's proposed action would not result in direct or indirect emissions as defined in 40 CFR 93.152.

The General Conformity Rule defines direct emissions as ''those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment or maintenance area and occur at the same time and place as the action and are reasonably foreseeable.'' [574] NHTSA's proposed action would set fuel economy standards for passenger cars and light trucks. It therefore would not cause or initiate direct emissions consistent with the meaning of the General Conformity Rule.[575]

Indirect emissions under the General Conformity Rule are ''those emissions of a criteria pollutant or its precursors: (1) [t]hat are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action; (2) [t]hat are reasonably foreseeable; (3) [t]hat the agency can practically control; and (4) [f]or which the agency has continuing program responsibility.'' [576] Each element of the definition must be met to qualify as indirect emissions. NHTSA has determined, for purposes of general conformity, that emissions (if any) that may result from its fuel economy standards would not be caused by the agency's action, but rather would occur

[568] See Appendix C of the Draft SEIS for a discussion of the full range of modeled electrified technologies.

[569] 42 U.S.C. 7506(c)(1).

[570] 42 U.S.C. 7506(c)(2).

[571] 40 CFR part 51, subpart T, and part 93, subpart A.

[572] 40 CFR part 51, subpart W, and part 93, subpart B.

[573] 40 CFR 93.153(b).

[574] 40 CFR 93.152.

[575] *Dep't of Transp.* v. *Pub. Citizen,* 541 U.S. 752, 772 (2004) (''[T]he emissions from the Mexican trucks are not 'direct' because they will not occur at the same time or at the same place as the promulgation of the regulations.''). NHTSA's proposed action would establish fuel economy standards for MYs 2022–2031 passenger cars and light trucks; any emissions increases would occur in a different place and well after promulgation of the proposed rule.

[576] 40 CFR 93.152.

because of subsequent activities the agency cannot practically control. ''[E]ven if a Federal licensing, rulemaking or other approving action is a required initial step for a subsequent activity that causes emissions, such initial steps do not mean that a Federal agency can practically control any resulting emissions.'' [577]

EPCA requires NHTSA to set fleetwide average fuel economy standards for the CAFE program using performance-based standards. NHTSA is not authorized to dictate how manufacturers are to comply with the standards, nor may NHTSA require manufacturers to use specific technologies to achieve improved fuel economy in their fleets. Furthermore, NHTSA cannot control consumer purchasing or driving behavior, both of which can have a considerable effect on vehicle emissions of criteria pollutants. It is the combination of factors outside NHTSA's control, such as manufacturers' decisions to apply fuel economy technologies and consumers' purchasing and driving behaviors, which determine the aggregate levels of criteria pollutant and precursor emissions. For purposes of analyzing the environmental impacts of the alternatives considered under NEPA, NHTSA has necessarily made assumptions regarding all of these factors.

In addition, NHTSA does not have the statutory authority or practical ability to control the actual vehicle miles traveled (VMT) by drivers. As the extent of emissions is directly dependent on the operation of motor vehicles, changes in any emissions that would result from NHTSA's proposed CAFE standards are not changes NHTSA can practically control or for which NHTSA has continuing program responsibility. Therefore, the proposed CAFE standards and alternative standards considered by NHTSA would not cause indirect emissions under the General Conformity Rule, and a general conformity determination is not required.

3. Endangered Species Act (ESA)

Under Section 7(a)(2) of the ESA, Federal agencies must ensure that actions they authorize, fund, or carry out are ''not likely to jeopardize the continued existence'' of any federally listed threatened or endangered species (collectively, ''listed species'') or result in the destruction or adverse modification of the designated critical habitat of these species.[578] If a Federal agency determines that an agency action may affect a listed species or designated critical habitat, it must initiate consultation with the appropriate service—the U.S. Fish and Wildlife Service (FWS) of the Department of the Interior (DOI) or the National Oceanic and Atmospheric Administration's National Marine Fisheries Service of the Department of Commerce (together, ''the Services''), or both, depending on the species involved—in order to ensure that the action is not likely to jeopardize the species or destroy or adversely modify designated critical habitat.[579] Under this standard, the Federal agency taking action evaluates the possible effects of its action and determines whether to initiate consultation.[580]

The Services have previously provided legal and technical guidance about whether CO_2 emissions associated with a specific proposed Federal action trigger ESA Section 7(a)(2) consultation. NHTSA analyzed the Services' history of actions, analysis, and guidance in Appendix G of the MYs 2012–2016 CAFE standards EIS and now incorporates by reference that appendix here.[581] In that appendix, NHTSA looked at the history of the Polar Bear Special Rule and several guidance memoranda provided by FWS and the U.S. Geological Survey. Ultimately, DOI concluded that a causal link could not be made between CO_2 emissions associated with a proposed Federal action and specific effects on listed species; therefore, no Section 7(a)(2) consultation would be required.

Subsequent to the publication of that appendix, a court vacated the Polar Bear Special Rule on NEPA grounds, though it upheld the ESA analysis as having a rational basis.[582] FWS then issued a revised Final Special Rule for the Polar Bear.[583] In that final rule, FWS provided for ESA Section 7, that the determination of whether consultation is triggered is narrow and focused on the discrete effect of the proposed agency action. FWS wrote, ''[T]he consultation requirement is triggered only if there is a causal connection between the proposed action and a discernible effect to the species or critical habitat that is reasonably certain to occur. One must be able to 'connect the dots' between an effect of proposed action and an impact to the species and there must be a reasonable certainty that the effect will occur.'' [584] The statement in the revised Final Special Rule is consistent with the prior guidance published by FWS and remains valid today.[585] If the consequence is not reasonably certain to occur, it is not an ''effect of a proposed action'' and does not trigger the consultation requirement.

Pursuant to Section 7(a)(2) of the ESA, NHTSA considered the effects of the proposed CAFE standards and reviewed applicable ESA regulations, case law, and guidance to determine what, if any, impact there might be to listed species or designated critical habitat. Based on this assessment, the agency has determined that the action of setting CAFE standards does not require consultation under Section 7(a)(2) of the ESA and has concluded the agency's review of this action under Section 7 of the ESA.

4. Other Regulatory Analyses Discussed in the Draft SEIS

NHTSA conducted brief qualitative reviews of the impacts of action alternatives on potentially affected resources, including those related to the statutory requirements and orders listed below, in the Draft SEIS, and determined that setting CAFE standards for passenger cars and light trucks is not the type of activity to have impacts on such resource categories:

- National Historic Preservation Act (NHPA);
- Fish and Wildlife Conservation Act (FWCA);
- Coastal Zone Management Act (CZMA);
- Floodplain Management (E.O. 11988 and DOT Order 5650.2);
- Preservation of the Nation's Wetlands (E.O. 11990 and DOT Order 5660.1a);
- Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), E.O. 13186; and
- Department of Transportation Act (Section 4(f)).

[577] 40 CFR 93.152.

[578] 16 U.S.C. 1536(a)(2).

[579] *See* 50 CFR 402.14.

[580] *See* 50 CFR 402.14(a) (''Each Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat.'').

[581] Available on NHTSA's Corporate Average Fuel Economy website at: NHTSA, Appendix G: Endangered Species Act Consideration, available at: *https://static.nhtsa.gov/nhtsa/downloads/CAFE/2012-2016%20Docs-PCLT/2012-2016%20Final%20Environmental%20Impact%20Statement/Appendix_G_Endangered_Species_Act_Consideration.pdf* (accessed: Sept. 10, 2025).

[582] In re: Polar Bear Endangered Species Act Listing and § 4(D) Rule Litigation, 818 F.Supp.2d 214 (D.D.C. Oct. 17, 2011).

[583] 78 FR 11766 (Feb. 20, 2013).

[584] 78 FR 11784–11785 (Feb. 20, 2013).

[585] See DOI, Guidance on the Applicability of the Endangered Species Act Consultation Requirements to Proposed Actions Involving the Emissions of Greenhouse Gases, Solicitor's Opinion No. M–37017, DOI: Washington, DC (2008), available at: *https://www.doi.gov/sites/doi.opengov.ibmcloud.com/files/uploads/M-37017.pdf* (accessed: Sept. 10, 2025).

5. Executive Order 13045: ''Protection of Children From Environmental Health Risks and Safety Risks''

This action is subject to E.O. 13045 (62 FR 19885, Apr. 23, 1997). Pursuant to E.O. 13045, NHTSA must prepare an evaluation of the environmental health or safety effects of the planned action on children and an explanation of why the planned action is preferable to other potentially effective and reasonably feasible alternatives considered by NHTSA. Further, this analysis may be included as part of any other required analysis.

While environmental and health effects associated with criteria pollutant and toxic air pollutant emissions vary over time and across alternatives, negative effects, when estimated, are extremely small. This preamble and the Draft SEIS discuss air quality, climate, and their related environmental and health effects. In addition, Section V of this preamble explains why NHTSA believes the proposed CAFE standards are preferable to other alternatives considered. Together, this preamble and Draft SEIS satisfy NHTSA's responsibilities under E.O. 13045.

6. Executive Order 14154: ''Unleashing American Energy''

E.O. 14154, ''Unleashing American Energy'' (90 FR 8353, Jan. 29, 2025), announced the administration's policy regarding energy resources, specifically to promote the production, distribution, and use of reliable domestic energy supplies, including oil, natural gas, and biofuels; to ensure that all regulatory requirements related to energy are ''grounded in clearly applicable law''; and ''to eliminate the 'electric vehicle (EV) mandate' and promote true consumer choice'' [586] by ''removing regulatory barriers to motor vehicle access; by ensuring a level regulatory playing field for consumer choice in vehicles; by terminating, where appropriate, state emissions waivers that function to limit sales of gasoline-powered automobiles; and by considering the elimination of unfair subsidies and other ill-conceived government-imposed market distortions that favor EVs over other technologies and effectively mandate their purchase by individuals, private businesses, and government entities alike by rendering other types of vehicles unaffordable.'' [587] E.O. 14154 also directs agencies to adhere only to relevant legislated requirements for environmental considerations and to eliminate any considerations beyond these requirements. Further, the Executive order specifically directed the Council on Environmental Quality to propose rescinding its NEPA regulations found at 40 CFR 1500. CEQ rescinded its NEPA regulations in an interim final rule published on February 25, 2025. That rule went into effect on April 11, 2025.[588]

This proposed rule follows the direction of E.O. 14154 to ensure that all analysis related to energy is grounded in clearly applicable law and that only the relevant legislated requirements for environmental considerations and any considerations beyond these requirements are eliminated from the assessment of maximum feasible standards and the Draft SEIS.

7. Executive Order 14173: ''Ending Illegal Discrimination and Restoring Merit-Based Opportunity''

E.O. 14173, ''Ending Illegal Discrimination and Restoring Merit-Based Opportunity'' (90 FR 8633, Jan. 31, 2025), removed ''diversity, equity, and inclusion'' (DEI) and ''diversity, equity, inclusion, and accessibility'' (DEIA) principles from mandates, policies, programs, activities, guidance, regulations, and requirements. This Executive order revoked E.O. 12898, ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, Feb. 11, 1994), which directed Federal agencies to identify and address, as appropriate, ''disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.'' [589] The proposed rule is in compliance with E.O. 14173, and the Draft SEIS analyzes the impacts on the quality of life of all Americans potentially affected by the proposed action.

[586] E.O. 14154, sec. 2, Unleashing American Energy, 90 FR 8353 (Jan. 29, 2025).

[587] E.O. 14154, sec. 2(e).

[588] See Removal of National Environmental Policy Act Implementing Regulations, Docket No. CEQ–2025–0002.

[589] E.O. 12898, sec. 1–101.

C. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.,* as amended), whenever an agency is required to publish an NPRM, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*e.g.,* small businesses, small organizations, and small governmental jurisdictions). No regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities and publishes with the proposed rule a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

NHTSA has considered the impacts of this proposed rule under the Regulatory Flexibility Act, and the NHTSA Administrator certifies this proposed rule will not have a significant economic impact on a substantial number of small entities. NHTSA's statement providing the factual basis for this certification pursuant to 5 U.S.C. 605(b) follows.

Small businesses are defined based on the North American Industry Classification System (NAICS) code.[590] One of the criteria for determining size is the number of employees in the firm. For establishments primarily engaged in manufacturing or assembling automobiles, the firm must have less than 1,500 employees to be classified as a small business. This rulemaking would affect motor vehicle manufacturers. As shown in Table VIII–1, NHTSA has identified twelve small manufacturers that produce passenger cars, light trucks, and SUVs. NHTSA acknowledges that some very new manufacturers may potentially not be listed. However, those new manufacturers tend to have transportation products that are not part of the light-duty vehicle fleet and have yet to start production of relevant vehicles.[591]

[590] Classified in NAICS under Subsector 336—Transportation Equipment Manufacturing for Automobile and Light Duty Motor Vehicle Manufacturing (336110), available at: *https://www.sba.gov/document/support-table-size-standards* (accessed: Sept. 10, 2025).

[591] 5 U.S.C. 605(b).

Table VIII-1: Small Domestic Manufacturers

Manufacturers	Founded	Employees[592]	Estimated Annual Production[593]
BXR Motors	2007	< 25	< 100
Equus Automotive	2008	< 25	< 100
Falcon Motorsports	2009	< 25	< 100
Faraday Future	2014	249	<100
Lucra Cars	2005	< 25	< 100
Lyons Motor Car	2012	< 25	< 100
Panoz	1988	< 50	< 100
RAESR	2013	< 25	< 100
Rezvani Motors	2014	< 25	< 100
Rossion Automotive	2007	< 50	< 100
Saleen Automotive, Inc.	1984	113	< 100
SSC Automotive	1999	< 25	< 100

NHTSA believes that the proposed rule would not have a significant economic impact on small vehicle manufacturers. The proposal is intended to reset the CAFE standards consistent with NHTSA's statutory authority. In addition, under 49 CFR part 525, passenger car manufacturers building less than 10,000 vehicles per year can petition NHTSA to have alternative standards apply to them. The listed manufacturers producing gasoline- and diesel-powered vehicles do not currently meet the standard and must already petition NHTSA for relief. This proposal to amend standards is not expected to have a meaningful impact on these manufacturers—they are still expected to be required to go through the same process and petition for relief, as the amended standards are expected to exceed the maximum feasibility of these small manufacturers. Accordingly, a regulatory flexibility analysis was not prepared.

D. Executive Order 13132 (''Federalism'')

E.O. 13132, ''Federalism'' (64 FR 43255, Aug. 10, 1999), requires Federal agencies to develop an accountable process to ensure ''meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications.'' The Executive order defines the term ''[p]olicies that have federalism implications'' to include regulations that have ''substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.'' Under the Executive order, agencies may not issue a regulation that has federalism implications, which imposes substantial direct compliance costs, unless the Federal Government provides the funds necessary to pay the direct compliance costs incurred by the state and local governments, or the agencies consult with state and local officials early in the process of developing the proposed rule.

NHTSA has determined that this proposed rule does not implicate E.O. 13132, because it neither imposes substantial direct compliance costs on state, local, or tribal governments, nor does it preempt state law. Thus, this proposed rule does not implicate the consultation procedures that E.O. 13132 imposes on agency regulations that would either preempt state law or impose substantial direct compliance costs on state, local, or tribal governments, because the only entities subject to this proposed rule are vehicle manufacturers.

NHTSA is not taking any action regarding preemption in this proposed rule, as this rule's purpose is to propose amended CAFE standards. Nothing in EPCA or EISA provides that NHTSA must make a determination or pronouncement on preemption.

E. Executive Order 12988 (''Civil Justice Reform'')

With respect to the review of the promulgation of a new regulation, Section 3(b) of E.O. 12988, ''Civil Justice Reform'' (61 FR 4729, Feb. 7, 1996), requires that executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) specifies whether administrative proceedings are to be required before parties file suit in court; (6) adequately defines key terms; and (7) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. This document is consistent with these requirements.

NHTSA has examined this proposed rule to reset the CAFE standards applicable to MYs 2022–2026 and MYs 2027–2031 and determined that it meets the requirements of the Executive order. In particular, the issue of preemption is discussed above and the agency's assessment of the rule's effect on prior model years is discussed in Section V. NHTSA notes further that there is no requirement that individuals submit a petition for reconsideration or pursue

[592] Estimated number of employees as of Jan. 2025, source: *linkedin.com, zoominfo.com, rocketreach.co,* and *datanyze.com.*

[593] Rough estimate of LDV production for MY 2024.

other administrative proceedings before they file suit in court. In addition, the rule provides a clear legal standard for compliance, establishing CAFE standards for passenger cars and light trucks for MYs 2022–2026 and MYs 2027–2031.

F. Executive Order 13175 (''Consultation and Coordination With Indian Tribal Governments'')

This proposed rule does not have tribal implications, as specified in E.O. 13175, ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, Nov. 9, 2000). This proposed rule would be implemented at the Federal level and would directly impact only vehicle manufacturers. Thus, E.O. 13175, which requires consultation with tribal officials when agencies are developing policies that have ''substantial direct effects'' on tribes and tribal interests, does not apply to this proposed rule.

G. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a written assessment of the costs, benefits, and other effects of a proposed or final rule that includes a Federal mandate likely to result in the expenditure by state, local, or tribal governments, in the aggregate, or by the private sector, of more than $100 million in any 1 year (adjusted for inflation with base year of 1995). Adjusting this amount by the implicit GDP price deflator for 2024 results with $187 million (125.23/66.939 = 1.87).[594] Before promulgating a rule for which a written statement is needed, Section 205 of UMRA generally requires NHTSA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost effective, or least burdensome alternative that achieves the objective of the rule. The provisions of Section 205 do not apply when they are inconsistent with applicable law. Moreover, Section 205 allows NHTSA to adopt an alternative other than the least costly, most cost effective, or least burdensome alternative if NHTSA publishes with the rule an explanation of why that alternative was not adopted.

This proposed rule will not result in the expenditure by state, local, or tribal governments, in the aggregate, of more than $187 million annually, but it will result in cost savings exceeding that amount for vehicle manufacturers and their suppliers. In developing this proposed rule, NHTSA considered a range of alternative fuel economy standards. As explained in detail in Section V of the preamble above, NHTSA concludes its selected alternatives are the maximum feasible alternatives that achieve the objectives of this proposed rule, as required by EPCA/EISA.

H. Regulation Identifier Number

DOT assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in the spring and fall of each year. The RIN contained in the heading at the beginning of this document may be used to find this action in the Unified Agenda.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) requires NHTSA to evaluate and use existing voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law (*i.e.,* the statutory provisions regarding NHTSA's vehicle safety authority) or otherwise impractical.[595]

Voluntary consensus standards are technical standards developed or adopted by voluntary consensus standards bodies. Technical standards are defined by the NTTAA as ''performance-based or design-specific technical specification and related management systems practices.'' They pertain to ''products and processes, such as the size, strength, or technical performance of a product, process, or material.'' [596]

Examples of organizations generally regarded as voluntary consensus standards bodies include the American Society for Testing and Materials, International, the SAE, and the American National Standards Institute (ANSI). If NHTSA does not use available and potentially applicable voluntary consensus standards, it is required by the act to provide Congress, through OMB, an explanation of reasons for not using such standards. There are currently no consensus standards that NHTSA administers relevant to these proposed CAFE standards.

J. Department of Energy Review

In accordance with 49 U.S.C. 32902(j)(2), NHTSA submitted this proposed rule to DOE for review. That agency did not make any comments that NHTSA did not address.[597]

K. Paperwork Reduction Act

Under the procedures established by the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from the OMB for each collection of information they conduct, sponsor, or require through regulations. A person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. The Information Collection Request (ICR) for a modification to NHTSA's existing information collection for CAFE Reporting described below is being forwarded to OMB for review and comment. In compliance with these requirements, NHTSA asks for public comments on the following proposed collection of information for which the agency is seeking approval from OMB.

Title: Corporate Average Fuel Economy Reporting.

OMB Control Number: 2127–0019.

Form Number: NHTSA Form 1474 (CAFE Projections Reporting Template).

Type of Request: Modification of a currently approved collection.

Type of Review Requested: Regular.

Requested Expiration Date of Approval: Three years from date of approval.

Summary of the Collection of Information: NHTSA is submitting to OMB, in connection with this NPRM, an information collection request (ICR) for NHTSA's information collections for the CAFE program. The ICR covers 11 information collections: two required projection reports (pre-model year and mid-model year reports), eight additional compliance submissions that are required to be submitted under certain circumstances, and one information collection for a petition process that is required to receive a benefit. NHTSA is requesting approval for the modification of the ICR to cover proposed changes in this NPRM, including both additions and removals to required reporting. Specifically, the modifications include: (1) amending reporting elements related to vehicle classification on the pre-model year and mid-model year reports; (2) removing data elements related to AC and OC fuel consumption incentive values (FCIVs), in line with the AC and OC FCIV

[594] Bureau of Economic Analysis (BEA), National Income and Product Accounts, NIPA Table 1.1.9: Implicit Price Deflators for Gross Domestic Product (2025), available at: *https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey* (accessed: Sept. 10, 2025).

[595] 15 U.S.C. 272.

[596] 142 Cong. Rec. S1081 (Feb. 7, 1996) (statement of Sen. Rockefeller).

[597] DOE's letter of review for the notice of the proposed rule.

program ending in MY 2027; (3) removing reporting requirements for credit trading in line with NHTSA's proposal to end credit trading in MY 2027, which includes credit trade contracts, credit allocation plans, credit transaction requests, and credit value reports; and (4) updating the pre-model year and mid-model year reporting templates to align with revised requirements. In addition, NHTSA is removing information collection requirements that were already ending in the regulation for reporting requirements related to AC and OC FCIV petitions, which are set to end in MY 2026 and reporting requirements related to hybrid/electric full-size pickup truck FCIVs, which end in MY 2024.

The following table provides a summary of each of the information collections in the ICR.

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Table VIII-2: CAFE Information Collections

Report or Submission Title	Regulatory Requirement	Description of Reported Information
Pre-model Year Reports	§ 537.5, § 537.7(b), § 537.7(c)(1) and (2), § 537.7(c)(3) and (4), § 537.7(c)(5), § 537.7(c)(7)	1. General reporting information for identifying the manufacturer.
		2. Projected required fuel economy.
		3. Combined fuel economy and projected sales information.
		4. Vehicle configuration design and attribute data (e.g., transmission and engine information).
		5. Non-passenger automobile (light truck) attribute data (e.g., 4WD and ground clearance measurements).
		6. Any improved AC, OC and full-size pickup truck technologies used each model year to calculate the average fuel economy specified in 40 CFR 600.510-12(c).
		7. Additional reporting fields for AC/OC and other clarifying data fields have been added to the template since last review.
Mid-model Year Reports	§ 537.5, § 537.7(b), § 537.7(c)(1) and (2)	1. General reporting information for identifying the manufacturer.
		2. Projected required fuel economy.
		3. Combined fuel economy and projected sales information.
		4. Vehicle configuration design and attribute data (e.g., transmission and engine information).
		5. Non-passenger automobile (light truck) attribute data (e.g., 4WD and ground clearance measurements).
		6. Any improved AC, OC and full-size pickup truck technologies used each model year to calculate the average fuel economy specified in 40 CFR 600.510-12(c).
		7. Additional reporting fields for AC/OC and other clarifying data fields have been added to the template since last review.
Supplementary Reports	§ 537.5, § 537.8	1. General reporting information for identifying the manufacturer.
		2. Projected required fuel economy.
		3. Combined fuel economy and projected sales information.
		4. Vehicle configuration design and attribute data (e.g., transmission and engine information).
		5. Non-passenger automobile (light truck) attribute data (e.g., 4WD and ground clearance measurements).
		6. Any improved AC, OC and full-size pickup truck technologies used each model year to calculate the average fuel economy specified in 40 CFR 600.510-12(c).
		7. Additional reporting fields for AC/OC and other clarifying data fields have been added to the template since last review.
Information for setting future CAFE standards	49 U.S.C. 32902	Information on platform series fuel economy for CAFE Modeling.
Petitions for alternative CAFE standards	§ 525.6 and § 525.7	Petitions for small volume manufacturers seeking relief to allow them to comply with less stringent alternative CAFE standards. Manufacturers submit information on production and fuel efficiency of the vehicles they plan to produce.

Reports on corporate relationship transactions	§ 534.5(e) and § 534.6 and § 536.8(c)	Manufacturers file certified reports when one manufacturer has assumed a controlling stock ownership or control over the design, production or sale of vehicles of another manufacturer, affecting the allocation of credits or liabilities.
Credit Trade Contract	§ 536.5(c) and § 536.8	Manufacturers submit instructions to NHTSA to execute credit transactions using earned, transferred, traded, carry-forward, and carryback credit transactions/allocations using the Credit Transaction Template.
Credit Allocation Plan	§ 536.5(d)	If a manufacturer's vehicles in a particular compliance category have below standard fuel economy, upon notification from NHTSA, the manufacturer will be required to submit a plan indicating how it will allocate existing credits, earn, transfer and/or acquire credits, or pay the appropriate civil penalty.
Credit transaction requests	§ 536.5(e)	Manufacturers submit instructions to NHTSA to execute credit transactions using earned, transferred, traded, carry-forward, and carryback credit transactions/allocations.
Credit Carry-back Plan	§ 536.7	Manufacturers submit plans to carryback credits earned in a compliance category in any model year, pursuant to 49 U.S.C. 32903(b), for up to three model years prior to the year in which the credit was earned.
Credit Value Reporting	§ 536.5(c)	NHTSA will collect credit cost information in accordance with 49 CFR 536.5(c)(5).

Description of the Need for the Information and Proposed Use of the Information: The following table provides a brief description of the need and use of each information collection.

Table VIII-3: Description of Data Collection Uses

Report or Submission Title	Description of how, by whom and what purpose the information is used
Pre-model Year Reports	NHTSA uses these reports for reference to help the agency anticipate potential compliance issues as early as possible and help manufacturers plan compliance strategies. NHTSA also uses the reports for auditing and testing purposes, which helps manufacturers correct errors prior to the end of the model year and facilitates acceptance of their final CAFE report by EPA.
Mid-model Year Reports	NHTSA uses these reports for reference to help the agency anticipate potential compliance issues as early as possible and help manufacturers plan compliance strategies. NHTSA also uses the reports for auditing and testing purposes, which helps manufacturers correct errors prior to the end of the model year and facilitates acceptance of their final CAFE report by EPA.
Supplementary Reports	NHTSA uses these reports to help the agency understand any changes to the production predicted in the pre-model year or mid-model year reports as soon as possible in the reporting cycle. NHTSA also uses the reports for auditing and testing purposes, which helps manufacturers correct errors prior to the end of the model year and facilitates acceptance of their final CAFE report by EPA.
Information for setting future CAFE standards	NHTSA uses certain data from projection reports to prepare a market data file, which supports the development of the CAFE Model.
Petitions for alternative CAFE standards	NHTSA uses these petitions to determine if a manufacturer is eligible for small volume exemptions. If it is determined that they qualify, NHTSA publishes a *Federal Register* Notice.
Reports on corporate relationship transactions	NHTSA uses these reports to determine corporate relationships between manufacturers, and subsequent handling of combined or separated credit banks.
Credit Trade Contract	NHTSA uses these to evaluate if a credit trade can be executed, for example, if there are enough credits available to complete the trade. Once NHTSA has determined the requested trade can be executed, NHTSA uses these reports as instructions to execute the trade.
Credit Allocation Plan	NHTSA uses the credit allocation plans to determine how manufacturers will solve their credit shortfalls each year.
Credit Transaction Requests	NHTSA uses these to evaluate if a credit transaction can be executed, for example, if there are enough credits available to complete the transaction. Once NHTSA has determined the requested transaction can be executed, NHTSA uses these reports as instructions to execute the transaction.
Credit Carry-back Plan	NHTSA uses these to evaluate if a credit transaction can be executed, for example, if there are enough credits available to complete the transaction. Once NHTSA has determined the requested transaction can be executed, NHTSA uses these reports as instructions to execute the transaction.
Credit Value Reporting	NHTSA uses the credit value reporting to determine the value of a credit in the market. This will help NHTSA when setting standards and fines in the future.

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Affected Public: Respondents are manufacturers of engines and vehicles within the North American Industry Classification System (NAICS) and use the coding structure as defined by NAICS, including codes 33611, 336111, 336112, 33631, 33632, 336320, 33635, and 336350 for motor vehicle and parts manufacturing.

Estimated Number of Respondents: 28.

The two largest information collections for the pre-model year and mid-model year reports each have an estimated 25 respondents per year. These respondents are the vehicle manufacturers that manufacture automobiles subject to the CAFE standards in 49 CFR parts 531 and 533 and they must report pursuant to 49 CFR part 537. For the remaining collections, the number of respondents varies each year, as the information is collected on an as-needed basis from the 25 respondents each year, except for the small volume petitions. NHTSA estimates that, on average, three small volume manufacturers will petition NHTSA for alternative standards in each

year, and these three respondents will be unique from those 25 respondents who must submit pre-model year and mid-model year reports annually. Accordingly, NHTSA estimates there will be 28 unique respondents to the CAFE reporting requirements annually.

Frequency: Varies by collection.

The pre-model year and mid-model year reports are both annual reports. However, the other collections are submitted when needed and are generally based on compliance obligations arising in particular circumstances.

Number of Responses: Varies.

NHTSA estimates that there will be an average of 25 responses for the pre-model year and mid-model year reporting requirements. For the other collections, the number of responses varies and NHTSA has provided annualized averages for each collection in Table VIII–4 below.

Estimated Total Annual Burden Hours: 4,576 hours.

The total number of burden hours associated with this collection is estimated to be 4,576 hours. The average number of respondents and responses estimated for each submission type is based on a 3-year average from MY 2026 through MY 2028. Certain reporting elements will be discontinued starting in MY 2028, which is reflected in the 3-year average.

An average of 25 automobile manufacturers submitted CAFE pre-model year and mid-model year reports over MYs 2017–2025 under 49 CFR part 537. Manufacturers use engineers, managers, legal, and clerical staff to prepare and submit CAFE reports to NHTSA. All manufacturers use electronic database systems to produce CAFE reports, and manufacturers can use those databases to export the compliance data required by Part 537. The template has been updated since the last rulemaking based on feedback from manufacturers on functionality. The burden hours associated with producing CAFE reports primarily involve engineers and managers reviewing the output of these database systems. NHTSA estimates that each pre-model year and mid-model year report takes each manufacturer approximately 51 hours. Therefore, NHTSA estimates that manufacturers spend a total of 1,275 hours (25 respondents × 51 hours) each year producing pre-model year reports and 1,275 hours (25 respondents × 51 hours) each year producing the required mid-model year CAFE reports.

Manufacturers may also be required to submit supplementary reports if the information in their mid-model year report needs to be corrected. NHTSA receives on average three supplementary reports from manufacturers each year requesting to make corrections to previously submitted reports. These revisions account for 93 (3 respondents × 31 hours) additional burden hours.

Starting with the 2017 compliance model year, manufacturers began incurring additional burden hours for incorporating information regarding AC technologies, OC technologies, and advanced technology that is applied to full-sized pickup trucks into pre-model year and mid-model year reports. However, this reporting burden will cease when these incentives are no longer applicable, which end in MY 2024 for advanced technology that is applied to full-sized pickup trucks and in MY 2026 for AC and OC technologies. This results in a reduction in burden for submitting pre-model year and mid-model year reports.

Manufacturers may also be required occasionally to submit existing production information (*e.g.,* what engines are shared across vehicle models) to NHTSA for its analysis in modeling potential future economy improvements and standards. The production information is similar to the information submitted as part of EPA's final model year report (*e.g.,* final model year vehicle volumes). NHTSA anticipates that each manufacturer may periodically spend 13 hours for each submission of information for NHTSA's analysis, which will result in a total burden of 325 hours annually (25 respondents × 13 hours) for the automotive industry.

On average, three small volume manufacturers submit petitions for alternative standards to NHTSA each year. These petitions are seeking relief from complying with conventional CAFE standards. These small volume manufacturers primarily include exotic sports car manufacturers (*e.g.,* Aston Martin and McLaren). The associated burden hours involve attorneys, engineers, and managers collecting fuel economy performance and production information on their production vehicles and preparing petitions for submission to NHTSA. These professionals will spend approximately 89 hours to prepare each petition. As a result, the estimated total industry burden will be 267 annual hours (3 respondents × 89 hours) for preparing and submitting CAFE petitions for alternative standards to NHTSA.

Very few manufacturers incur burden each year in submitting documents to NHTSA for corporate relationship changes. On average, only one manufacturer each model year submits documents to NHTSA for corporate relationship changes. The burden hours associated with this activity primarily involve attorneys preparing documents. Minimal amounts of burden hours are necessary for engineers and managers to review documents and for clerical staff to submit them to NHTSA. The estimated total industry burden will be 19 annual hours (1 respondent × 19 hours) for preparing and submitting information on corporate relationship changes to NHTSA.

Nearly all vehicle manufacturers will incur burden hours in managing their CAFE credit accounts each year. Credit management is a significant activity for vehicle manufacturers that are addressing a current credit shortfall or are preparing to avoid one in the future. Manufacturers manage their credit accounts using engineers, managers, and attorneys to prepare documents and then clerical staff to submit credit allocation plans, credit transaction instructions and trade documents to NHTSA. Manufacturers submit credit transaction instructions to NHTSA at various times throughout the model year when transferring credit trades from one manufacturer to another or when submitting a credit allocation plan to NHTSA because of a credit shortfall. On average, based upon compliance data for MYs 2017–2025, NHTSA receives 25 credit transaction instructions from vehicle manufacturers each model year. There are an additional 11 credit shortfalls/credit allocation plans submitted each year. There are an additional 17 credit trades with accompanying credit trades documents, which have been reduced due to credit trades no longer being applicable starting in MY 2028. Both credit allocation plans and credit transaction requests have their labor hour burdens slightly reduced due to credit trades no longer being applicable starting in MY 2028. Therefore, NHTSA estimates that manufacturers will spend a total of approximately 374 hours for credit trade documents each year (17 respondents × 22 hours), 297 hours for credit allocation plans (11 respondents × 27 hours), and 250 hours for credit transaction requests (25 respondents × 10 hours).

NHTSA rarely receives carryback plans. A temporary increase in respondents for carryback plans occurred only for MYs 2019–2021, maintaining the average at approximately one respondent per year. NHTSA estimates that on average 27 hours (1 respondent × 27 hours) will be incurred by any manufacturer preparing a credit carryback plans each year.

NHTSA requires all manufacturers engaging in trades to report credit cost information, so that NHTSA can determine the monetary and non-monetary values of credit trades. Manufacturers are required to submit this information every time they fill out a credit trade contract per 49 CFR 536.5(c)(5). In the 2021 NPRM, NHTSA had proposed a Credit Value Reporting Template to ease the process of reporting credit cost information. In response to comments, NHTSA decided to hold off on requiring the Credit Value Reporting Template. Credit cost information is still required in the format that manufacturers choose to submit to meet the requirements of this section, and the hourly burden remains the same even without a Credit Value Reporting Template. NHTSA currently receives an average of 25 credit trade contracts annually, but the average will drop off due to the removal of credit trading starting in MY 2028, resulting in an estimated average of 17 respondents. Therefore, the total burden hours for submitting credit value information in conjunction with credit trade contracts is estimated to be 374 hours (17 reports × 22 hours). The total combined hours for the industry to manage their credit accounts is estimated to be 1,322 hours annually (374 hours + 297 hours + 250 hours + 27 hours + 374 hours).

Table VIII–4 provides a summary of the annual burden hours for each of the 11 information collections.

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Table VIII-4: Annual Burden Hours

Report or Submission Title	Total Annual Reponses	Manufacturer Labor Hours					Total Fleet Hours
		Engineer	Manager	Legal	Clerical	Burden Per Respondent	
Pre-model Year Reports	25	41	7	1	2	51	1275
Mid-model Year Reports	25	41	7	1	2	51	1275
Supplementary Reports	3	22	6	1	2	31	93
Information for setting future CAFE standards	25	8	4	0	1	13	325
Petitions for alternative CAFE standards	3	40	8	40	1	89	267
Reports on corporate relationship transactions	1	1	1	16	1	19	19
Credit Trade Contract	17	2	2	16	2	22	374
Credit Allocation Plan	11	14	4	8	1	27	297
Credit Transaction Requests	25	7	1	1	1	10	250
Credit Carry-back Plan	1	16	2	8	1	27	27
Credit Value Reporting	17	2	2	16	2	22	374
Totals	153	194	44	108	16	362	4,576

The estimated total annual labor hour cost associated with 4,576 burden hours for CAFE reporting is $437,468.62. The cost is based upon the estimated burden hours and current average labor rates for engineers, managers, attorneys, and clerical staff to prepare and send CAFE information to NHTSA. Table VIII–4 provides the breakdown of the associated costs based upon individual hourly mean wage estimates from the Bureau of Labor Statistics (BLS) for 2024 National Industry-Specific Occupational Employment and Wage Statistics,[598] which are adjusted for employee compensation costs.

BLS estimates that the hourly mean wage for Engineers (Engineer) (BLS Occupation code 17–2199) in the Motor Vehicle Manufacturing Industry is $54.54. BLS estimates that the hourly mean wage for Administrative Services Managers (Manager) (BLS Occupation code 11–3012) in the Motor Vehicle Manufacturing Industry is $69.75. BLS estimates that the hourly mean wage for Lawyers (Legal) (BLS Occupation code 23–1011) in the Motor Vehicle Manufacturing Industry is $117.96. BLS estimates that the hourly mean wage for Other Office and Administrative Support Workers (Clerical) (BLS Occupation code 43–9000) in the Motor Vehicle Manufacturing Industry is $30.34.

In addition to base hourly wages, respondents also incur costs associated with employee compensation. The Bureau of Labor Statistics estimates that private industry workers' wages represent 70.3 percent of total labor compensation costs.[599] Therefore, NHTSA estimates the modified hourly wages used in Table VIII–5 as follows:

- Engineer (17–2199): $77.58
- Manager (11–3012): $99.22
- Legal (23–1011): $167.80
- Clerical (43–9000): $43.16

Table VIII-5: Annual Labor Costs*,**

Report or Submission Title	Hourly Labor Costs				Total Costs per Activity*					Annual Costs (All MFRs)**
	Engineer	Manager	Legal	Clerical	Engineer	Manager	Legal	Clerical	Total Cost	Total Annual Cost
Pre-model Year Reports	$77.58	$99.22	$167.80	$43.16	$3,180.85	$694.52	$167.80	$86.32	$4,129.49	$103,237.20
Mid-model Year Reports	$77.58	$99.22	$167.80	$43.16	$3,180.85	$694.52	$167.80	$86.32	$4,129.49	$103,237.20
Supplementary Reports	$77.58	$99.22	$167.80	$43.16	$1,706.80	$595.31	$167.80	$86.32	$2,556.22	$7,668.65
Information for setting future CAFE standards	$77.58	$99.22	$167.80	$43.16	$620.65	$396.87	$0.00	$43.16	$1,060.68	$26,517.07
Petitions for alternative CAFE standards	$77.58	$99.22	$167.80	$43.16	$3,103.27	$793.74	$6,711.81	$43.16	$10,651.98	$31,955.93
Reports on corporate relationship transactions	$77.58	$99.22	$167.80	$43.16	$77.58	$99.22	$2,684.72	$43.16	$2,904.68	$2,904.68
Credit Trade Contract	$77.58	$99.22	$167.80	$43.16	$155.16	$198.44	$2,684.72	$86.32	$3,124.64	$53,118.83
Credit Allocation Plan	$77.58	$99.22	$167.80	$43.16	$1,086.15	$396.87	$1,342.36	$43.16	$2,868.53	$31,553.88
Credit Transaction Requests	$77.58	$99.22	$167.80	$43.16	$543.07	$99.22	$167.80	$43.16	$853.24	$21,331.08
Credit Carry-back Plan	$77.58	$99.22	$167.80	$43.16	$1,241.31	$198.44	$1,342.36	$43.16	$2,825.26	$2,825.26
Credit Value Reporting	$77.58	$99.22	$167.80	$43.16	$155.16	$198.44	$2,684.72	$86.32	$3,124.64	$53,118.83
Totals					$15,050.87	$4,365.58	$18,121.88	$690.53	$38,228.85	**$437,468.62**

* Based upon the labor hours in Table VIII-3

** Based upon the number of manufacturers involved in each activity as described in Table VIII-3

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Estimated Total Annual Burden Cost: $0.

NHTSA estimates there are no costs to respondents or record keepers other

[598] Bureau of Labor Statistics, 2024 National Industry-Specific Occupational Employment and Wage Statistics NAICS 336100—Motor Vehicle Manufacturing, (2025), available at: *https://data.bls.gov/oes/#/industry/336100* (accessed: Sept. 10, 2025).

[599] Bureau of Labor Statistics, Employer Costs for Employee Compensation by ownership—March 2025, Last revised: Mar. 2025, available at: *https://www.bls.gov/news.release/archives/ecec_06132025.pdf* (accessed: Sept. 10, 2025).

than the labor costs associated with the burden hours.

Public Comments Invited: You are asked to comment on any aspects of this information collection, including (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; (b) the accuracy of the Department's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology.

Please submit any comments, identified by the docket number in the heading of this document, by the methods described in the **ADDRESSES** section of this document to NHTSA and OMB. Although comments may be submitted during the entire comment period, comments received within 30 days of publication are most useful.

L. Rulemaking Summary, 5 U.S.C. 553(b)(4)

As required by 5 U.S.C. 553(b)(4), a summary of this rule can be found in the Abstract section of the Department's Unified Agenda entry for this rulemaking at *www.reginfo.gov.*

IX. Regulatory Text

List of Subjects

49 CFR Part 523

Fuel economy.

49 CFR Part 531

Energy conservation, Fuel economy, Gasoline, Imports, Motor vehicles, Reporting and recordkeeping requirements.

49 CFR Parts 533, 536, and 537

Fuel economy, Reporting and recordkeeping requirements.

For the reasons discussed in the preamble, NHTSA proposes to amend 49 CFR parts 523, 531, 533, 536, and 537 as follows:

■ 1. Revise part 523 to read as follows:

PART 523—VEHICLE CLASSIFICATION

Sec.

523.1 Scope.
523.2 Definitions.
523.3 Automobile.
523.4 Passenger automobile.
523.5 Non-passenger automobile.
523.6 Heavy-duty vehicle.
523.7 Heavy-duty pickup trucks and vans.
523.8 Heavy-duty vocational vehicle.
523.9 Truck tractors.
523.10 Heavy-duty trailers.

Authority: 49 U.S.C. 32901; delegation of authority at 49 CFR 1.95.

§ 523.1 Scope.

This part establishes categories of vehicles subject to title V of the Motor Vehicle Information and Cost Savings Act, 15 U.S.C. 2001 *et seq.*

§ 523.2 Definitions.

As used in this part:

Ambulance has the meaning given in 40 CFR 86.1803.

Approach angle means the smallest angle, in a plane side view of an automobile, formed by the level surface on which the automobile is standing and a line tangent to the front tire static loaded radius arc and touching the underside of the automobile forward of the front tire.

Axle clearance means the vertical distance from the level surface on which an automobile is standing to the lowest point on the axle differential of the automobile.

Base tire (for passenger automobiles, non-passenger automobiles, and medium-duty passenger vehicles) means the tire size specified as standard equipment by the manufacturer on each unique combination of a vehicle's footprint and model type. Standard equipment is defined in 40 CFR 86.1803.

Basic vehicle frontal area is used as defined in 40 CFR 86.1803–01 for passenger automobiles, non-passenger automobiles, medium-duty passenger vehicles and Class 2b through 3 pickup trucks and vans. For heavy-duty tracts and vocational vehicles, it has the meaning given in 40 CFR 1037.801.

Breakover angle means the supplement of the largest angle, in the plane side view of an automobile that can be formed by two lines tangent to the front and rear static loaded radii arcs and intersecting at a point on the underside of the automobile.

Bus has the meaning given in 49 CFR 571.3.

Cab-complete vehicle means a vehicle that is first sold as an incomplete vehicle that substantially includes the vehicle cab section as defined in 40 CFR 1037.801. For example, vehicles known commercially as chassis-cabs, cab-chassis, box-deletes, bed-deletes, and cut-away vans are considered cab-complete vehicles. A cab includes a steering column and a passenger compartment. Note that a vehicle lacking some components of the cab is a cab-complete vehicle if it substantially includes the cab.

Cargo-carrying volume means the luggage capacity or cargo volume index, as appropriate, and as those terms are defined in 40 CFR 600.315–08, in the case of automobiles to which either of these terms apply. With respect to automobiles to which neither of these terms apply, ''cargo-carrying volume'' means the total volume in cubic feet, rounded to the nearest 0.1 cubic feet, of either an automobile's enclosed non-seating space that is intended primarily for carrying cargo and is not accessible from the passenger compartment, or the space intended primarily for carrying cargo bounded in the front by a vertical plane that is perpendicular to the longitudinal centerline of the automobile and passes through the rearmost point on the rearmost seat and elsewhere by the automobile's interior surfaces.

Class 2b vehicles are vehicles with a gross vehicle weight rating (GVWR) ranging from 8,501 to 10,000 pounds.

Class 3 through Class 8 vehicles are vehicles with a gross vehicle weight rating (GVWR) of 10,001 pounds or more as defined in 49 CFR 565.15.

Coach bus has the meaning given in 40 CFR 1037.801.

Commercial medium- and heavy-duty on-highway vehicle means an on-highway vehicle with a gross vehicle weight rating of 10,000 pounds or more as defined in 49 U.S.C. 32901(a)(7).

Complete vehicle has the meaning given to *completed vehicle* as defined in 49 CFR 567.3.

Concrete mixer has the meaning given in 40 CFR 1037.801.

Curb weight means the actual weight of the vehicle in operational status, including the weight of all standard and all optional equipment installed on the vehicle as sold to the first retail purchaser, and the weight of fuel at nominal tank capacity.

Dedicated vehicle has the same meaning as dedicated automobile as defined in 49 U.S.C. 32901(a)(8).

Departure angle means the smallest angle, in a plane side view of an automobile, formed by the level surface on which the automobile is standing and a line tangent to the rear tire static loaded radius arc and touching the underside of the automobile rearward of the rear tire.

Dual-fueled vehicle (multi-fuel, or flexible-fuel vehicle) has the same meaning as dual fueled automobile as defined in 49 U.S.C. 32901(a)(9).

Electric vehicle means a vehicle that does not include a combustion engine and is powered solely by an external source of electricity and/or solar power. Note that this does not include hybrid-electric or hydrogen combustion vehicles that use a chemical fuel such as gasoline, diesel fuel, or hydrogen.

Electric vehicles may also be referred to as BEVs and fuel cell electric vehicles to distinguish them from hybrid-electric vehicles.

Emergency vehicle means one of the following:

(1) For passenger automobiles, non-passenger automobiles, and medium-duty passenger vehicles, emergency vehicle has the meaning given in 49 U.S.C. 32902(e).

(2) For heavy-duty vehicles, emergency vehicle has the meaning given in 40 CFR 1037.801.

Engine code has the meaning given in 40 CFR 86.1803.

Final-stage manufacturer has the meaning given in 49 CFR 567.3.

Fire truck has the meaning given in 40 CFR 86.1803.

Footprint is defined as the product of track width (measured in inches, calculated as the average of front and rear track widths, and rounded to the nearest tenth of an inch) times wheelbase (measured in inches and rounded to the nearest tenth of an inch), divided by 144 and then rounded to the nearest tenth of a square foot. For purposes of this definition, track width is the lateral distance between the centerlines of the base tires at ground, including the camber angle. For purposes of this definition, wheelbase is the longitudinal distance between front and rear wheel centerlines.

Full-size pickup truck means a non-passenger automobile, including a medium-duty passenger vehicle, that meets the specifications in 40 CFR 86.1803–01 for a full-size pickup truck.

Gross axle weight rating (GAWR) has the meaning given in 49 CFR 571.3.

Gross combination weight rating (GCWR) has the meaning given in 49 CFR 571.3.

Gross vehicle weight rating (GVWR) has the meaning given in 49 CFR 571.3.

Heavy-duty engine means any engine used for (or for which the engine manufacturer could reasonably expect to be used for) motive power in a heavy-duty vehicle. For purposes of this definition in this part, the term ''engine'' includes internal combustion engines and other devices that convert chemical fuel into motive power. For example, a fuel cell and motor used in a heavy-duty vehicle is a heavy-duty engine. Heavy duty-engines include those engines subject to the standards in 49 CFR part 535.

Heavy-duty vehicle means a vehicle as defined in § 523.6.

Hitch means a device attached to the chassis of a vehicle for towing.

Incomplete vehicle has the meaning given in 49 CFR 567.3.

Manufacturer has the meaning given in 49 U.S.C. 32901(a)(14).

Medium-duty passenger vehicle means any complete or incomplete motor vehicle rated at more than 8,500 pounds GVWR and less than 10,000 pounds GVWR that is designed primarily to transport passengers, but does not include a vehicle that—

(1) Is an ''incomplete truck,'' meaning any truck that does not have the primary load carrying device or container attached; or

(2) Has a seating capacity of more than 12 persons; or

(3) Is designed for more than 9 persons in seating rearward of the driver's seat; or

(4) Is equipped with an open cargo area (for example, a pick-up truck box or bed) of 72.0 inches in interior length or more. A covered box not readily accessible from the passenger compartment will be considered an open cargo area for purposes of this definition. (See paragraph (1) of the definition of *medium-duty passenger vehicle* at 40 CFR 86.1803–01.)

Mild hybrid gasoline-electric vehicle means a vehicle as defined by EPA in 40 CFR 86.1866–12(e).

Motor home has the meaning given in 49 CFR 571.3.

Motor vehicle has the meaning given in 49 U.S.C. 30102.

Nominal tank capacity means a fuel tank's volume as specified by the manufacturer.

Optional equipment means any equipment or feature not standard on a vehicle model that is installed by the manufacturer or provided by the manufacturer for installation prior to a vehicle's first retail purchase.

Passenger-carrying volume means the sum of the front seat volume and, if any, rear seat volume, as defined in 40 CFR 600.315–08, in the case of automobiles to which that term applies. With respect to automobiles to which that term does not apply, ''passenger-carrying volume'' means the sum in cubic feet, rounded to the nearest 0.1 cubic feet, of the volume of a vehicle's front seat and seats to the rear of the front seat, as applicable, calculated as follows with the head room, shoulder room, and leg room dimensions determined in accordance with the procedures outlined in Society of Automotive Engineers Recommended Practice J1100, Motor Vehicle Dimensions (Report of Human Factors Engineering Committee, Society of Automotive Engineers, approved November 2009).

(1) For front seat volume, divide 1,728 into the product of the following SAE dimensions, measured in inches to the nearest 0.1 inches, and round the quotient to the nearest 0.001 cubic feet.

(i) H61-Effective head room—front.

(ii) W3-Shoulder room—front.

(iii) L34-Maximum effective leg room-accelerator.

(2) For the volume of seats to the rear of the front seat, divide 1,728 into the product of the following SAE dimensions, measured in inches to the nearest 0.1 inches, and rounded the quotient to the nearest 0.001 cubic feet.

(i) H63-Effective head room—second.

(ii) W4-Shoulder room—second.

(iii) L51-Minimum effective leg room—second.

Pickup truck means a non-passenger automobile that has a passenger compartment and an open cargo area (bed).

Pintle hooks means a type of towing hitch that uses a tow ring configuration to secure to a hook or a ball combination for the purpose of towing.

Recreational vehicle or RV means a motor vehicle equipped with living space and amenities found in a motor home.

Refuse hauler has the meaning given in 40 CFR 1037.801.

Running clearance means the distance from the surface on which an automobile is standing to the lowest point on the automobile, excluding unsprung weight.

School bus has the meaning given in 49 CFR 571.3.

Static loaded radius arc means a portion of a circle whose center is the center of a standard tire-rim combination of an automobile and whose radius is the distance from that center to the level surface on which the automobile is standing, measured with the automobile at curb weight, the wheel parallel to the vehicle's longitudinal centerline, and the tire inflated to the manufacturer's recommended pressure.

Strong hybrid gasoline-electric vehicle means a vehicle as defined by EPA in 40 CFR 86.1866–12(e).

Temporary living quarters means a space in the interior of an automobile in which people may temporarily live that includes sleeping surfaces, such as beds, and household conveniences, such as a sink, stove, refrigerator, or toilet.

Transmission class has the meaning given in 40 CFR 600.002.

Transmission configuration has the meaning given in 40 CFR 600.002.

Transmission type has the meaning given in 40 CFR 86.1803.

Truck tractor has the meaning given in 49 CFR 571.3 and 49 CFR 535.5(c). This includes most heavy-duty vehicles specifically designed for the primary purpose of pulling trailers, but does not include vehicles designed to carry other loads. For purposes of this definition ''other loads'' would not include loads

carried in the cab, sleeper compartment, or toolboxes. Examples of vehicles similar to tractors but not tractors under this part include dromedary tractors, automobile haulers, straight trucks with trailers hitches, and tow trucks.

Van means a vehicle with a body that fully encloses the driver and a cargo carrying or work performing compartment. The distance from the leading edge of the windshield to the foremost body section of vans is typically shorter than that of pickup trucks and sport utility vehicles.

Vocational tractor means a tractor that is classified as a vocational vehicle according to 40 CFR 1037.630

Vocational vehicle (or heavy-duty vocational vehicle) has the meaning given in § 523.8 and 49 CFR 535.5(b). This includes any vehicle that is equipped for a particular industry, trade, or occupation such as construction, heavy hauling, mining, logging, oil fields, or refuse and includes vehicles such as school buses, motorcoaches, and RVs.

Work truck means a vehicle that is rated at more than 8,500 pounds and less than or equal to 10,000 pounds gross vehicle weight, and is not a medium-duty passenger vehicle as defined in 49 U.S.C. 32901(a)(19).

§ 523.3 Automobile.

An automobile is any 4-wheeled vehicle propelled by fuel, or by alternative fuel, manufactured primarily for use on public streets, roads, and highways and rated at less than 10,000 pounds gross vehicle weight, except:

(a) A vehicle operated only on a rail line;

(b) A vehicle manufactured in different stages by 2 or more manufacturers, if no intermediate or final-stage manufacturer of that vehicle manufactures more than 10,000 multi-stage vehicles per year; or

(c) A work truck.

§ 523.4 Passenger automobile.

A passenger automobile is any automobile (other than an automobile capable of off-highway operation) manufactured primarily for use in the transportation of not more than 10 individuals. A medium-duty passenger vehicle that does not meet the criteria for non-passenger motor vehicles in § 523.5 is a passenger automobile.

§ 523.5 Non-passenger automobile.

A non-passenger automobile means an automobile that is not a work truck and possesses one or more of the characteristics described in paragraph (a) of this section or meets the off-highway features described in paragraph (b) of this section. A medium-duty passenger vehicle that meets the criteria in either paragraph (a) or (b) of this section is a non-passenger automobile.

(a) An automobile not manufactured primarily for transporting 10 or fewer individuals, determined by the presence of at least one of the following chief characteristics:

(1) Transports more than 10 individuals;

(2) Provides temporary living quarters, as defined in § 523.2 of this chapter;

(3) Transports property on an open bed;

(4) Provides, as sold to the first retail purchaser, greater cargo-carrying than passenger-carrying volume, such as in a cargo van; if a vehicle is sold with two or more rows of seating, its cargo-carrying volume is determined with those seats installed, regardless of whether the manufacturer has described that seat as optional; or

(5) Permits expanded use of the automobile for cargo-carrying purposes or other non-passenger-carrying purposes through:

(i) For automobiles manufactured in model year 2022 through model year 2027, for vehicles equipped with at least 3 rows of designated seating positions as standard equipment, permit expanded use of the automobile for cargo-carrying purposes or other non-passenger-carrying purposes through the removal or stowing of foldable or pivoting seats so as to create a flat, leveled cargo surface extending from the forwardmost point of installation of those seats to the rear of the automobile's interior.

(ii) [Reserved]

(6) For automobiles manufactured in model year 2028 and beyond, as sold to the first retail purchaser, has a light-duty work factor (LDWF) value greater than or equal to 5500, calculated according to Figure 1 to this paragraph (a).

Figure 1 to § 523.5(a)

$$LDWF = \frac{1}{3} * [GVWR - C_w] + \frac{2}{3} * [GCWR - GVWR]$$

Where:

GVWR is the gross vehicle weight rating;
C_w is the curb weight;
GCWR is the gross combined weight rating;
GVWR minus C_w is the payload capacity;
GCWR minus GVWR is the towing capacity.

(b) An automobile capable of off-highway operation, as indicated by the presence of the significant features contained in this paragraph (b):

(1) (i) Has 4-wheel drive; or

(ii) Is rated at more than 6,000 pounds gross vehicle weight; and

(2) For automobiles manufactured through model year 2027, has at least four of the following high ground clearance feature characteristics measured when the automobile is at curb weight, on a level surface, with the front wheels parallel to the automobile's longitudinal centerline, and the tires inflated to the manufacturer's recommended pressure—

(i) Approach angle of not less than 28 degrees.

(ii) Breakover angle of not less than 14 degrees.

(iii) Departure angle of not less than 20 degrees.

(iv) Running clearance of not less than 20 centimeters.

(v) Front and rear axle clearances of not less than 18 centimeters each.

(3) For automobiles manufactured in model year 2028 and beyond, has all four of the following high ground clearance feature characteristics measured when the automobile is at curb weight, on a level surface, with the front wheels parallel to the automobile's longitudinal centerline, and the tires inflated to the manufacturer's recommended pressure—

(i) Approach angle of not less than 28 degrees.

(ii) Breakover angle of not less than 14 degrees.

(iii) Departure angle of not less than 20 degrees.

(iv) Running clearance of not less than 20 centimeters.

§ 523.6 Heavy-duty vehicle.

(a) A heavy-duty vehicle is any commercial medium- or heavy-duty on-highway vehicle or a work truck, as defined in 49 U.S.C. 32901(a)(7) and (19). For the purpose of this section, heavy-duty vehicles are divided into three regulatory categories as follows:

(1) Heavy-duty pickup trucks and vans;

(2) Heavy-duty vocational vehicles; and

(3) Truck tractors with a GVWR above 26,000 pounds.

(b) The heavy-duty vehicle classification does not include vehicles excluded as specified in 49 CFR 535.3.

§ 523.7 Heavy-duty pickup trucks and vans.

(a) Heavy-duty pickup trucks and vans are pickup trucks and vans with a gross vehicle weight rating between 8,501 pounds and 14,000 pounds (Class 2b through 3 vehicles) manufactured as complete vehicles by a single or final-stage manufacturer or manufactured as incomplete vehicles as designated by a manufacturer. See references in 40 CFR 86.1801–12, 40 CFR 86.1819–17, 40 CFR 1037.150, and 49 CFR 535.5(a).

(b) Heavy duty vehicles above 14,000 pounds GVWR may be optionally certified as heavy-duty pickup trucks and vans and comply with fuel consumption standards in 49 CFR 535.5(a), if properly included in a test group with similar vehicles at or below 14,000 pounds GVWR. Fuel consumption standards apply to these vehicles as if they were Class 3 heavy-duty vehicles. The work factor for these vehicles may not be greater than the largest work factor that applies for vehicles in the test group that are at or below 14,000 pounds GVWR (see 40 CFR 86.1819–14).

(c) Incomplete heavy-duty vehicles at or below 14,000 pounds GVWR may be optionally certified as heavy-duty pickup trucks and vans and comply with the fuel consumption standards in 49 CFR 535.5(a).

§ 523.8 Heavy-duty vocational vehicle.

Heavy-duty vocational vehicles are vehicles with a gross vehicle weight rating (GVWR) above 8,500 pounds excluding:

(a) Heavy-duty pickup trucks and vans defined in § 523.7;

(b) Medium-duty passenger vehicles; and

(c) Truck tractors, except vocational tractors, with a GVWR above 26,000 pounds.

§ 523.9 Truck tractors.

Truck tractors for the purpose of this part are considered as any truck tractor as defined in 49 CFR part 571 having a GVWR above 26,000 pounds.

§ 523.10 Heavy-duty trailers.

(a) A trailer means a motor vehicle with or without motive power, designed for carrying cargo and for being drawn by another motor vehicle as defined in 49 CFR 571.3. For the purpose of this part, heavy-duty trailers include only those trailers designed to be drawn by a truck tractor excluding non-box trailers other than flatbed trailers, tanker trailers, and container chassis, and those that are coupled to vehicles exclusively by pintle hooks or hitches instead of a fifth wheel. Heavy-duty trailers may be divided into different types and categories as follows:

(1) Box vans are trailers with enclosed cargo space that is permanently attached to the chassis, with fixed sides, nose, and roof. Tank trailers are not box vans.

(2) Box vans with front-mounted HVAC systems are refrigerated vans. Note that this includes systems that provide cooling, heating, or both. All other box vans are dry vans.

(3) Trailers that are not box vans are non-box trailers.

(4) Box vans with a length greater than 50 feet are long box vans. Other box vans are short box vans.

(5) The following types of equipment are not trailers:

(i) Containers that are not permanently mounted on chassis.

(ii) Dollies used to connect tandem trailers.

(iii) Equipment that serves similar purposes but are not intended to be pulled by a tractor.

(b) Heavy-duty trailers do not include trailers excluded in 49 CFR 535.3.

■ 2. Revise part 531 to read as follows:

PART 531—PASSENGER AUTOMOBILE AVERAGE FUEL ECONOMY STANDARDS

Sec.

531.1 Scope.
531.2 Purpose.
531.3 Applicability.
531.4 Definitions.
531.5 Fuel economy standards.
531.6 Measurement and calculation procedures.
Appendix A to Part 531—Example of Calculating a Fleet Average Fuel Economy Standard for a Passenger Automobile Fleet Under § 531.5(a)

Authority: 49 U.S.C. 32902, delegation of authority at 49 CFR 1.95.

§ 531.1 Scope.

This part establishes average fuel economy standards pursuant to 49 U.S.C. 32902 for passenger automobiles.

§ 531.2 Purpose.

The purpose of this part is to increase the fuel economy of passenger automobiles by establishing minimum levels of average fuel economy for those vehicles.

§ 531.3 Applicability.

This part applies to manufacturers of passenger automobiles.

§ 531.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy, manufacture, manufacturer,* and *model year* are used as defined in 49 U.S.C. 32901.

(2) The terms *automobile* and *passenger automobile* are used as defined in 49 U.S.C. 32901 and in accordance with the determination in part 523 of this chapter.

(b) *Other terms.* As used in this part, unless otherwise required by the context—

(1) The term *domestically manufactured passenger automobile* means the vehicle is deemed to be manufactured domestically under 49 U.S.C. 32904(b)(3) and 40 CFR 600.511–08.

(2) [Reserved]

§ 531.5 Fuel economy standards.

(a) Except as provided in paragraph (c) of this section, for model years 2022 through 2031, a manufacturer's passenger automobile fleet shall comply with the fleet average fuel economy level calculated for that model year according to Figure 1 to this paragraph (a) and the appropriate values in Table 1 to this paragraph (a).

Figure 1 to Paragraph (a)

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_i}}$$

Where:

$CAFE_{required}$ is the fleet average fuel economy standard for a given fleet (domestic passenger automobiles or imported passenger automobiles);

Subscript i is a designation of multiple groups of automobiles, where each group's designation, *i.e.,* i = 1, 2, 3, etc., represents automobiles that share a unique model type and footprint within the applicable fleet, either domestic passenger automobiles or imported passenger automobiles;

$Production_i$ is the number of passenger automobiles produced for sale in the United States within each *ith* designation, *i.e.,* which share the same model type and footprint; and

$TARGET_i$ is the fuel economy target in miles per gallon (mpg) applicable to the footprint of passenger automobiles within each *ith* designation, *i.e.,* which share the same model type and footprint, calculated according to Figure 2 to this paragraph (a) and rounded to the nearest hundredth of a mpg, *i.e.,* 35.455 = 35.46 mpg, and the summations in the numerator and denominator are both performed over all models in the fleet in question.

Figure 2 to Paragraph (a)

$$TARGET = \frac{1}{MIN\left[MAX\left(c \times FOOTPRINT + d, \frac{1}{a}\right), \frac{1}{b}\right]}$$

Where:

TARGET is the fuel economy target (in mpg) applicable to vehicles of a given footprint (*FOOTPRINT,* in square feet);

Parameters *a, b, c,* and *d* are defined in Table 1 to this paragraph (a); and

The *MIN* and *MAX* functions take the minimum and maximum, respectively, of the included values.

Table 1 to Paragraph (a)—Parameters for the Passenger Automobile Fuel Economy Targets, MYs 2022-2031

Model year	Parameters			
	a (mpg)	b (mpg)	c (gal/mi/ft^2)	d (gal/mi)
2022	38.14	32.51	0.00041302	0.00845926
2023	38.33	32.67	0.00041097	0.00841718
2024	38.52	32.83	0.00040892	0.00837530
2025	38.71	33.00	0.00040689	0.00833363
2026	38.91	33.16	0.00040487	0.00829217
2027	39.04	33.28	0.00040346	0.00826345
2028	40.57	30.38	0.00068863	-0.00634053
2029	40.67	30.46	0.00068691	-0.00632468
2030	40.78	30.54	0.00068519	-0.00630887
2031	40.88	30.61	0.00068348	-0.00629310

(b) In addition to the requirements of paragraph (a) of this section, each manufacturer, other than manufacturers subject to standards in paragraph (c) of this section, shall also meet the minimum fleet standard for domestically manufactured passenger automobiles expressed in Table 2 to this paragraph (b):

Table 2 to Paragraph (b)—Minimum Fuel Economy Standards for Domestically Manufactured Passenger Automobiles, MYs 2022-2031

Model year	Minimum standard
2022	33.1
2023	33.1
2024	33.5
2025	33.7
2026	33.9
2027	33.8
2028	33.9
2029	34.0
2030	34.0
2031	34.1

(c) The following manufacturers shall comply with the standards indicated in paragraphs (c)(1) through (4) of this section for the specified model years:

(1) *Aston Martin Lagonda Limited.*

Table 3 to § 531.5(c)(1)—Average Fuel Economy Standards

Model year	Miles per gallon
2022	24.9
2023	24.9

(2) *Koenigsegg.*

Table 4 to § 531.5(c)(2)—Average Fuel Economy Standards

Model year	Miles per gallon
2022	16.9
2023	16.9

(3) *McLaren.*

Table 5 to § 531.5(c)(3)—Average Fuel Economy Standards

Model year	Miles per gallon
2022	24.6
2023	25.7

(4) *Pagani.*

Table 6 to § 531.5(c)(4)—Average Fuel Economy Standards

Model year	Miles per gallon
2022	15.5
2023	15.5

§ 531.6 Measurement and calculation procedures.

The fleet average fuel economy performance of all passenger automobiles manufactured for sale in the United States for a model year shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency (EPA) under 49 U.S.C. 32904 and set forth in 40 CFR part 600.

Appendix A to Part 531—Example of Calculating a Fleet Average Fuel Economy Standard for a Passenger Automobile Fleet Under § 531.5(a)

Assume a hypothetical manufacturer (Manufacturer X) produces a fleet of passenger automobiles as follows:

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Appendix A—Table I

Model type				Description	Base tire size	Wheelbase (inches)	Track width F&R average (inches)	Footprint (ft^2)	Volume	Fuel economy target standard (mpg)
Group	Carline name	Basic engine (L)	Transmission class							
1	PC A FWD	1.8	A5	2-door sedan	205/75R14	99.8	61.2	42.4	1,500	35.01
2	PC A FWD	1.8	M6	2-door sedan	215/70R15	99.8	60.9	42.2	2,000	35.14
3	PC A FWD	2.5	A6	4-door wagon	215/70R15	100.0	60.9	42.3	2,000	35.08
4	PC A AWD	1.8	A6	4-door wagon	235/60R15	100.0	61.2	42.5	1,000	35.95
5	PC A AWD	2.5	M6	2-door hatchback	225/65R16	99.6	59.5	41.2	3,000	35.81
6	PC B RWD	2.5	A6	4-door wagon	265/55R18	109.2	66.8	50.7	8,000	30.33
7	PC B RWD	2.5	A7	4-door sedan	235/65R17	109.2	67.8	51.4	2,000	29.99
8	PC C AWD	3.2	A7	4-door sedan	265/55R18	111.3	67.8	52.4	5,000	29.52
9	PC C FWD	3.2	M6	2-door coupe	225/65R16	111.3	67.2	51.9	3,000	29.76
	TOTAL								27,500	

NOTE TO TABLE I TO THIS APPENDIX: With the appropriate fuel economy targets determined for each unique model type and footprint combination, Manufacturer X's required fleet average fuel economy standard would be calculated as illustrated in Figure 1 to this appendix.

BILLING CODE 4910–59–C

Appendix A Figure 1—Calculation of Manufacturer X's Fleet Average Fuel Economy Standard Using Table I

$$FE_{Standard} = \frac{(Manufacturer's\ Passenger\ Automobile\ Production\ for\ Applicable\ Model\ Year)}{\sum_i \left(\frac{Group_1\ Production}{Group_1\ Target\ Standard} + \frac{Group_2\ Production}{Group_2\ Target\ Standard} + \cdots + \frac{Group_9\ Production}{Group_9\ Target\ Standard}\right)}$$

$$FE_{Standard} = \frac{27{,}500}{\left(\frac{1{,}500}{35.01} + \frac{2{,}000}{35.14} + \frac{2{,}000}{35.08} + \frac{1{,}000}{35.95} + \frac{3{,}000}{35.81} + \frac{8{,}000}{30.33} + \frac{2{,}000}{29.99} + \frac{5{,}000}{29.52} + \frac{3{,}000}{29.79}\right)}$$

$$FE_{Standard} = 31.6\ mpg$$

■ 3. Revise part 533 to read as follows:

PART 533—NON–PASSENGER AUTOMOBILE FUEL ECONOMY STANDARDS

Sec.
533.1 Scope.
533.2 Purpose.
533.3 Applicability.
533.4 Definitions.
533.5 Requirements.
533.6 Measurement and calculation procedures.
Appendix A to Part 533—Example of Calculating a Fleet Average Fuel Economy Standard for a Non-Passenger Automobile Fleet Under § 533.5(a)

Authority: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.95.

§ 533.1 Scope.

This part establishes average fuel economy standards pursuant to 49 U.S.C. 32902 for non-passenger automobiles.

§ 533.2 Purpose.

The purpose of this part is to increase the fuel economy of non-passenger automobiles by establishing minimum levels of average fuel economy for those vehicles.

§ 533.3 Applicability.

This part applies to manufacturers of non-passenger automobiles.

§ 533.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy, average fuel economy standard, fuel economy, import, manufacture, manufacturer,* and *model year* are used as defined in 49 U.S.C. 32901.

(2) The term *automobile* is used as defined in 49 U.S.C. 32901 and in accordance with the determinations in part 523 of this chapter.

(b) *Other terms.* As used in this part, unless otherwise required by the context—

(1) *Non-passenger automobile* is used in accordance with the determinations in part 523 of this chapter.

(2) *Captive import* means, with respect to a non-passenger automobile, one that is not domestically manufactured, as defined in section 502(b)(2)(E) of the Motor Vehicle Information and Cost Savings Act, but that is imported in the 1980 model year or thereafter by a manufacturer whose principal place of business is in the United States.

(3) *4-wheel drive, general utility vehicle* means a 4-wheel drive, general purpose automobile capable of off-highway operation that has a wheelbase of not more than 280 centimeters, and that has a body shape similar to 1977 Jeep CJ–5 or CJ–7, or the 1977 Toyota Land Cruiser.

(4) *Basic engine* means a unique combination of manufacturer, engine displacement, number of cylinders, fuel system (as distinguished by number of carburetor barrels or use of fuel injection), and catalyst usage.

(5) *Limited product line non-passenger automobile* means a non-passenger automobile manufactured by a manufacturer whose light truck fleet is powered exclusively by basic engines that are not also used in passenger automobiles.

§ 533.5 Requirements.

(a) Each manufacturer of non-passenger automobiles shall comply with the following fleet average fuel economy standards, expressed in miles per gallon, in the model year (MY) specified as applicable:

(1) For model years 2022–2031, a manufacturer's non-passenger automobile fleet shall comply with the fleet average fuel economy standard calculated for that model year according to Figures 1 and 2 to this paragraph (a) and the appropriate values in Table 1 to this paragraph (a).

Figure 1 to § 533.5(a)

$$CAFE_{required} = \frac{\sum_i PRODUCTION_i}{\sum_i \frac{PRODUCTION_i}{TARGET_i}}$$

Where:

$CAFE_{required}$ is the fleet average fuel economy standard for a given non-passenger automobile fleet;

Subscript *i* is a designation of multiple groups of non-passenger automobiles, where each group's designation, *i.e., i* = 1, 2, 3, etc., represents non-passenger automobiles that share a unique model type and footprint within the applicable fleet;

$Production_i$ is the number of non-passenger automobiles produced for sale in the United States within each *ith* designation, *i.e.,* which share the same model type and footprint; and

$TARGET_i$ is the fuel economy target in miles per gallon (mpg) applicable to the footprint of non-passenger automobiles within each *ith* designation, *i.e.,* which share the same model type and footprint, calculated according to Figure 2 to this paragraph (a) and rounded to the nearest hundredth of a mpg, *i.e.,* 35.455 = 35.46 mpg, and the summations in the numerator and denominator are both performed over all models in the fleet in question.

Figure 2 to § 533.5(a)

$$TARGET = \frac{1}{MIN\left[MAX\left(c \times FOOTPRINT + d, \frac{1}{a}\right), \frac{1}{b}\right]}$$

Where:

TARGET is the fuel economy target (in mpg) applicable to vehicles of a given footprint (*FOOTPRINT,* in square feet);

Parameters *a, b, c,* and d are defined in Table 1 to this paragraph (a); and

The *MIN* and *MAX* functions take the minimum and maximum, respectively, of the included values.

Table 1 to § 533.5(a)—Parameters for the Non-Passenger Automobile Fuel Economy Targets for MYs 2022-2031

Model year	Parameters			
	a (mpg)	b (mpg)	c (gal/mi/ft^2)	d (gal/mi)
2022	34.89	20.33	0.00064166	0.00171340
2023	35.06	20.43	0.00063847	0.00170487
2024	35.24	20.53	0.00063529	0.00169639
2025	35.41	20.63	0.00063213	0.00168795
2026	35.59	20.74	0.00062899	0.00167955
2027	35.84	20.88	0.00062460	0.00166784
2028	31.45	25.92	0.00037701	0.01218745
2029	31.53	25.99	0.00037607	0.01215698
2030	31.61	26.05	0.00037513	0.01212659
2031	31.69	26.12	0.00037419	0.01209627

(2) [Reserved]

(b) [Reserved]

§ 533.6 Measurement and calculation procedures.

(a) Any reference to a class of non-passenger automobiles manufactured for sale in the United States in a model year shall be deemed—

(1) To include all non-passenger automobiles in that class manufactured by persons who control, are controlled by, or are under common control with, such manufacturer;

(2) To include only automobiles that qualify as non-passenger vehicles in accordance with § 523.5 of this chapter; and

(3) To exclude all non-passenger automobiles in that class manufactured (within the meaning of paragraph (a)(1) of this section) during a model year by such manufacturer that are exported prior to the expiration of 30 days following the end of such model year.

(b) The fleet average fuel economy performance of all non-passenger automobiles manufactured for sale in the United States in a model year shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency (EPA) under 49 U.S.C. 32904 and set forth in 40 CFR part 600.

Appendix A to Part 533—Example of Calculating a Fleet Average Fuel Economy Standard for a Non-Passenger Automobile Fleet Under § 533.5(a)

Assume a hypothetical manufacturer (Manufacturer X) produces a fleet of non-passenger automobiles as follows:

BILLING CODE 4910–59–P

Appendix A—Table I

Model type				Description	Base tire size	Wheelbase (inch)	Track width F&R avg (inch)	Footprint (ft^2)	Volume	Fuel economy target standard (mpg)
Group	Carline name	Basic engine (L)	Transmission class							
1	Pickup A 2WD	4	A5	Reg cab, MB	235/75R15	100.0	68.8	47.8	800	27.30
2	Pickup B 2WD	4	M5	Reg cab, MB	235/75R15	100.0	68.2	47.4	200	27.44
3	Pickup C 2WD	4.5	A5	Reg cab, LB	255/70R17	125.0	68.8	59.7	300	23.79
4	Pickup C 2WD	4	M5	Ext cab, MB	255/70R17	125.0	68.8	59.7	400	23.79
5	Pickup C 4WD	4.5	A5	Crew cab, SB	275/70R17	150.0	69.0	71.9	400	22.27
6	Pickup D 2WD	4.5	A6	Crew cab, SB	255/70R17	125.0	68.8	59.7	400	23.79
7	Pickup E 2WD	5	A6	Ext cab, LB	255/70R17	125.0	68.8	59.7	500	23.79
8	Pickup E 2WD	5	A6	Crew cab, MB	285/70R17	125.0	69.2	60.1	500	23.68
9	Pickup F 2WD	4.5	A5	Reg cab, LB	255/70R17	125.0	68.9	59.8	1,600	23.76
10	Pickup F 4WD	4.5	A5	Ext cab, MB	275/70R17	150.0	69.0	71.9	800	22.27
11	Pickup F 4WD	4.5	A5	Crew cab, SB	285/70R17	150.0	69.2	72.1	800	22.27
Total									6,700	

NOTE TO TABLE I TO THIS APPENDIX: With the appropriate fuel economy targets determined for each unique model type and footprint combination, Manufacturer X's required fleet average fuel economy standard would be calculated as illustrated in Figure 1 to this appendix:

Appendix A Figure 1—Calculation of Manufacturer X's Fleet Average Fuel Economy Standard Using Table I

$$FE_{Standard} = \frac{(Manufacturer's\ Light\ Truck\ Production\ for\ Applicable\ Model\ Year)}{\sum_i \left(\frac{Group_1\ Production}{Group_1\ Target\ Standard} + \frac{Group_2\ Production}{Group_2\ Target\ Standard} + \cdots + \frac{Group_{11}\ Production}{Group_{11}\ Target\ Standard}\right)}$$

$$FE_{Standard} = \frac{6{,}700}{\left(\frac{800}{27.30} + \frac{200}{27.44} + \frac{300}{23.79} + \frac{400}{23.79} + \frac{400}{22.27} + \frac{400}{23.79} + \frac{500}{23.79} + \frac{500}{23.68} + \frac{1{,}600}{23.76} + \frac{800}{22.27} + \frac{800}{22.27}\right)}$$

$$FE_{Standard} = 23.7\ mpg$$

BILLING CODE 4910–59–C

■ 4. Revise part 536 to read as follows:

PART 536—TRANSFER AND TRADING OF FUEL ECONOMY CREDITS

Sec.

536.1 Scope.
536.2 Application.
536.3 Definitions.
536.4 Credits.
536.5 Trading infrastructure.
536.6 Credit flexibilities in the CAFE program.
536.7 Treatment of carryback credits.
536.8 Conditions for the trading of credits.
536.9 Use of credits with regard to the domestically manufactured passenger automobile minimum standard.
536.10 Treatment of dual-fuel and alternative fuel vehicles—consistency with 49 CFR part 538.

Authority: 49 U.S.C. 32903; delegation of authority at 49 CFR 1.95.

§ 536.1 Scope.

This part establishes regulations governing the use and application of corporate average fuel economy (CAFE) credits up to three model years before and five model years after the model year in which the credit was earned. It also specifies requirements for manufacturers wishing to transfer fuel economy credits between their compliance categories. It also establishes regulations that allow manufacturers and other persons to trade fuel economy credits through model year 2027.

§ 536.2 Application.

This part applies to all credits earned for exceeding applicable average fuel economy standards in a given model year for domestically manufactured passenger automobiles, imported passenger automobiles, and non-passenger automobiles.

§ 536.3 Definitions.

(a) *Statutory terms.* All terms defined in 49 U.S.C. 32901(a) are used pursuant to their statutory meaning.

(b) *Other terms.* (1) *Above standard fuel economy* means, with respect to a compliance category, that the automobiles manufactured by a manufacturer in that compliance category in a particular model year have greater average fuel economy (calculated in a manner that reflects the incentives for alternative fuel automobiles per 49 U.S.C. 32905) than that manufacturer's fuel economy standard for that compliance category and model year.

(2) *Adjustment factor* means a factor used to adjust the value of a traded or transferred credit for compliance purposes to ensure that the compliance value of the credit when used reflects the total volume of oil saved when the credit was earned.

(3) *Below standard fuel economy* means, with respect to a compliance category, that the automobiles manufactured by a manufacturer in that compliance category in a particular model year have lower average fuel economy (calculated in a manner that reflects the incentives for alternative fuel automobiles per 49 U.S.C. 32905) than that manufacturer's fuel economy standard for that compliance category and model year.

(4) *Compliance* means a manufacturer achieves compliance in a particular compliance category when:

(i) The average fuel economy of the vehicles in that category exceed or meet the fuel economy standard for that category; or

(ii) The average fuel economy of the vehicles in that category do not meet the fuel economy standard for that category, but the manufacturer proffers a sufficient number of valid credits, adjusted for total oil savings, to cover the gap between the average fuel economy of the vehicles in that category and the required average fuel economy. A manufacturer achieves compliance for its fleet if the conditions in paragraph (b)(4)(i) of this section or this paragraph (b)(4)(ii) are simultaneously met for all compliance categories.

(5) *Compliance category* means any of three categories of automobiles subject to Federal fuel economy regulations in this chapter. The three compliance categories recognized by 49 U.S.C. 32903(g)(6) are domestically manufactured passenger automobiles, imported passenger automobiles, and non-passenger automobiles.

(6) *Credit holder (or holder)* means a legal person or entity that has valid possession of credits, either because they are a manufacturer who has earned credits by exceeding an applicable fuel economy standard in this chapter, or because they are a designated recipient who has received credits from another holder. Credit holders need not be manufacturers, although all manufacturers may be credit holders.

(7) *Credits (or fuel economy credits)* means an earned or purchased allowance recognizing that the average fuel economy of a particular manufacturer's vehicles within a particular compliance category and model year exceeds that manufacturer's fuel economy standard for that compliance category and model year. One credit is equal to 1/10 of a mile per gallon above the fuel economy standard per one vehicle within a compliance category. Credits are denominated according to model year in which they are earned (vintage), originating manufacturer, and compliance category.

(8) *Expiry date* means the model year after which fuel economy credits may no longer be used to achieve compliance with fuel economy regulations in this chapter. Expiry dates are calculated in terms of model years: For example, if a manufacturer earns credits for model year 2011, these credits may be used for compliance in model years 2008–2016.

(9) *Fleet* means all automobiles manufactured by a manufacturer in a particular model year and are subject to fuel economy standards under parts 531 and 533 of this chapter. For the purposes of this part, a manufacturer's fleet means all domestically

manufactured and imported passenger automobiles and non-passenger automobiles. ''Work trucks'' and medium and heavy trucks are not included in this definition for purposes of this part.

(10) *Originating manufacturer* means the manufacturer that originally earned a particular credit. Each credit earned will be identified with the name of the originating manufacturer.

(11) *Trade* means the movement of credits from the account of a credit holder to the account of another credit holder within the same compliance category in which the credits were originally earned, in accordance with all applicable provisions under this part.

(12) *Transfer* means the movement of credits from one compliance category to another in accordance with all applicable provisions under this part. Subject to the credit transfer limitations of 49 U.S.C. 32903(g)(3), credits can also be transferred across compliance categories and banked or saved in that category to be carried forward or backwards later to address a credit shortfall.

(13) *Vintage* means, with respect to a credit, the model year in which the credit was earned.

§ 536.4 Credits.

(a) *Type and vintage.* In each credit account, credits are identified and distinguished by the manufacturer that earned the credits, the compliance category in which they were earned, and the model year in which they were earned (vintage).

(b) *Application of credits.* All credits earned and applied (*i.e.,* used to resolve an existing credit shortfall) are calculated, per 49 U.S.C. 32903(c), in tenths of a mile per gallon by which the average fuel economy of vehicles in a particular compliance category manufactured by a manufacturer in the model year in which the credits are earned exceeds the applicable average fuel economy standard, multiplied by the number of vehicles sold in that compliance category. However, credits that have been traded between credit holders or transferred between compliance categories are valued for compliance purposes using the adjustment factor specified in paragraph (c) of this section, pursuant to the ''total oil savings'' requirement of 49 U.S.C. 32903(f)(1).

(c) *Adjustment factor.* When traded or transferred fuel economy credits are applied, they are adjusted to ensure fuel oil savings is preserved. For traded credits, the user (or buyer) must multiply the calculated adjustment factor by the number of shortfall credits it plans to offset in order to determine the number of equivalent credits to acquire from the earner (or seller). For transferred credits, the user of credits must multiply the calculated adjustment factor by the number of shortfall credits it plans to offset to determine the number of equivalent credits to transfer from the compliance category holding the available credits. The adjustment factor is calculated according to the following equation in Figure 1 to this paragraph (c):

Figure 1 to § 536.4(c)—Equation for Calculating Adjustment Factor

$$A = \frac{VMT_u \times MPG_{ae} \times MPG_{se}}{VMT_e \times MPG_{au} \times MPG_{su}}$$

Where:

A = Adjustment factor applied to traded and transferred credits. The quotient shall be rounded to 4 decimal places;

VMTe = Lifetime vehicle miles traveled as provided in the following Table 1 to this paragraph (c) for the model year and compliance category in which the credit was earned;

VMTu = Lifetime vehicle miles traveled as provided in the following Table 1 to this paragraph (c) for the model year and compliance category in which the credit is used for compliance;

MPGse = Required fuel economy standard for the originating (earning) manufacturer, compliance category, and model year in which the credit was earned;

MPGae = Actual fuel economy for the originating manufacturer, compliance category, and model year in which the credit was earned;

MPGsu = Required fuel economy standard for the user (buying) manufacturer, compliance category, and model year in which the credit is used for compliance; and

MPGau = Actual fuel economy for the user manufacturer, compliance category, and model year in which the credit is used for compliance.

Table 1 to § 536.4(c)—Lifetime Vehicle Miles Traveled

Category (model years 2017-2031)	Lifetime vehicle miles traveled (VMT)
Passenger Automobiles	195,264
Non-passenger Automobiles	225,865

§ 536.5 Trading infrastructure.

(a) *Accounts.* NHTSA maintains ''accounts'' for each credit holder. The account consists of a balance of credits in each compliance category and vintage held by the holder.

(b) *Who may hold credits.* Every manufacturer subject to fuel economy standards under part 531 or 533 of this chapter is automatically an account holder. If the manufacturer earns credits pursuant to this part, or receives credits from another party, so that the manufacturer's account has a non-zero balance, then the manufacturer is also a credit holder. Any party designated as a recipient of credits by a current credit holder will receive an account from NHTSA and become a credit holder, subject to the following conditions:

(1) A designated recipient must provide name, address, contact information, and a valid taxpayer identification number or Social Security number;

(2) NHTSA does not grant a request to open a new account by any party other than a party designated as a recipient of credits by a credit holder; and

(3) NHTSA maintains accounts with zero balances for a period of time, but reserves the right to close accounts that have had zero balances for more than 1 year.

(c) *Automatic debits and credits of accounts.* (1) To carry credits forward, backward, transfer credits, or trade credits into other credit accounts, a manufacturer or credit holder must submit a credit instruction to NHTSA. A credit instruction must detail and include:

(i) The credit holder(s) involved in the transaction.

(ii) The originating credits described by the amount of the credits, compliance category, and the vintage of the credits.

(iii) The recipient credit account(s) for banking or applying the originating credits described by the compliance category(ies), model year(s), and if applicable the adjusted credit amount(s) and adjustment factor(s).

(iv) For trades, a contract authorizing the trade signed by the manufacturers or credit holders or by managers legally authorized to obligate the sale and purchase of the traded credits.

(2) Upon receipt of a credit instruction from an existing credit holder, NHTSA verifies the presence of sufficient credits in the account(s) of the credit holder(s) involved as applicable and notifies the credit holder(s) that the credits will be debited from and/or credited to the accounts involved, as specified in the credit instruction. NHTSA determines if the credits can be debited or credited based upon the amount of available credits, accurate application of any adjustment factors and the credit requirements prescribed by this part that are applicable at the time the transaction is requested.

(3) After notifying the credit holder(s), all accounts involved are either credited or debited, as appropriate, in line with the credit instruction. Traded credits identified by a specific compliance category are deposited into the recipient's account in that same compliance category and model year. If a recipient of credits as identified in a credit instruction is not a current account holder, NHTSA establishes the credit recipient's account, subject to the conditions described in paragraph (b) of this section, and adds the credits to the newly opened account.

(4) NHTSA will automatically delete unused credits from holders' accounts when those credits reach their expiry date.

(5) Starting January 1, 2022, all parties trading credits must also provide NHTSA the price paid for the credits including a description of any other monetary or non-monetary terms affecting the price of the traded credits, such as any technology exchanged or shared in exchange for the credits, any other non-monetary payment for the credits, or any other agreements related to the trade.

(6) Starting September 1, 2022, manufacturers or credit holders issuing credit instructions or providing credit allocation plans as specified in paragraph (d) of this section, must use and submit the NHTSA Credit Template fillable form (Office of Management and Budget (OMB) Control No. 2127–0019, NHTSA Form 1475). In the case of a trade, manufacturers or credit holders buying traded credits must use the credit transactions template to submit trade instructions to NHTSA. Manufacturers or credit holders selling credits are not required to submit trade instructions. The NHTSA Credit Template must be signed by managers legally authorized to obligate the sale and/or purchase of the traded credits from both parties to the trade. The NHTSA Credit Template signed by both parties to the trade serves as an acknowledgement that the parties have agreed to trade a certain amount of credits, and does not dictate terms, conditions, or other business obligations of the parties.

(7) NHTSA will consider claims that information submitted to the agency under this section is entitled to confidential treatment under 5 U.S.C. 552(b) and under the provisions of part 512 of this chapter if the information is submitted in accordance with the procedures of part 512. The NHTSA Credit Template is available for download on the CAFE Public Information Center website. Manufacturers must submit the cost information to NHTSA in a PDF document along with the Credit Template through the CAFE email, *cafe@dot.gov.* NHTSA reserves the right to request additional information from the parties regarding the terms of the trade.

(d) *Compliance.* (1) NHTSA assesses compliance with fuel economy standards each year, utilizing the certified and reported CAFE data provided by the Environmental Protection Agency (EPA) for enforcement of the CAFE program pursuant to 49 U.S.C. 32904(e). Credit values are calculated based on the CAFE data from EPA. If a particular compliance category within a manufacturer's fleet has above standard fuel economy, NHTSA adds credits to the manufacturer's account for that compliance category and vintage in the appropriate amount by which the manufacturer has exceeded the applicable standard.

(2) If a manufacturer's vehicles in a particular compliance category have below standard fuel economy, NHTSA will provide written notification to the manufacturer that it has failed to meet a particular fleet target standard. The manufacturer will be required to confirm the shortfall and may also submit a plan indicating how it will allocate existing credits or earn, transfer and/or acquire credits to achieve compliance. If the manufacturer submits a plan, the plan must be submitted within 60 days of receiving agency notification.

(3) Credits used to offset shortfalls are subject to the three- and five-year limitations as described in § 536.6.

(4) Transferred credits are subject to the limitations specified by 49 U.S.C. 32903(g)(3) and this part.

(5) The value, when used for compliance, of any credits received via trade or transfer is adjusted, using the adjustment factor described in § 536.4(c), pursuant to 49 U.S.C. 32903(f)(1).

(6) Credit allocation plans received from a manufacturer will be reviewed and approved by NHTSA. Starting in model year 2022, credit holders must use the NHTSA Credit Template (OMB Control No. 2127–0019, NHTSA Forms 1475) to record the credit transactions. The template is a fillable form that has an option for recording and calculating credit transactions for credit allocation plans. The template calculates the required adjustments to the credits. The credit allocation plan and the completed transaction templates must be submitted to NHTSA. NHTSA will approve the credit allocation plan unless it finds that the proposed credits are unavailable or that it is unlikely that the plan will result in the manufacturer earning sufficient credits to offset the subject credit shortfall. If the plan is approved, NHTSA will revise the respective manufacturer's credit account accordingly. If the plan is rejected, NHTSA will notify the respective manufacturer and may request a revised plan.

(e) *Reporting.* (1) NHTSA periodically publishes the names and credit holdings of all credit holders. NHTSA does not publish individual transactions, nor respond to individual requests for updated balances from any party other than the account holder.

(2) NHTSA issues an annual credit status letter to each party that is a credit holder at that time. The letter to a credit holder includes a credit accounting record that identifies the credit status of the credit holder including any activity

(earned, expired, transferred, traded, carry-forward and carry-back credit transactions/allocations) that took place during the identified activity period.

§ 536.6 Credit flexibilities in the CAFE program.

(a) *Carrying back and carrying forward of credits.*

(1) Credits earned in a compliance category may be applied by the manufacturer that earned them to carryback plans for that compliance category approved up to three years prior to the year in which the credits were earned, or may be held or applied for up to five model years after the year in which the credits were earned.

(2) [Reserved]

(b) *Transferring and trading of credits.*

(1) Credits earned in a compliance category in model years 2022 through 2027 may be transferred or traded in accordance with all applicable provisions under this part.

(2) Credits earned in a compliance category in model year 2028 and beyond may be transferred in accordance with all applicable provisions under this part. Credits earned in a compliance category in model year 2028 and beyond may not be traded.

§ 536.7 Treatment of carryback credits.

(a) Carryback credits earned in a compliance category in any model year may be used in carryback plans approved by NHTSA, pursuant to 49 U.S.C. 32903(b), for up to three model years prior to the year in which the credit was earned.

(b) No credits from any source (earned, transferred, and/or traded) will be accepted in lieu of compliance if those credits are not identified as originating within one of the three model years after the model year of the confirmed shortfall.

§ 536.8 Conditions for the trading of credits.

(a) *Trading of credits.* If a credit holder wishes to trade credits to another party, the current credit holder and the receiving party must jointly issue an instruction to NHTSA, identifying the quantity, vintage, compliance category, and originator of the credits to be traded. If the recipient is not a current account holder, the recipient must provide sufficient information for NHTSA to establish an account for the recipient. Once an account has been established or identified for the recipient, NHTSA completes the trade by debiting the transferor's account and crediting the recipient's account. NHTSA will track the quantity, vintage, compliance category, and originator of all credits held or traded by all account holders.

(b) *Using traded credits to comply with fuel economy standards.* For credits earned in model years 2022 through 2027, and used to satisfy compliance obligations for model years 2019 through 2027 in accordance with all applicable provisions under this part:

(1) Manufacturers may use credits originally earned by another manufacturer in a particular compliance category to satisfy compliance obligations within the same compliance category.

(2) Once a manufacturer acquires by trade credits originally earned by another manufacturer in a particular compliance category, the manufacturer may transfer the credits to satisfy its compliance obligations in a different compliance category, but only to the extent that the CAFE increase attributable to the transferred credits does not exceed the limits in 49 U.S.C. 32903(g)(3). For any compliance category, the sum of a manufacturer's transferred credits earned by that manufacturer and transferred credits obtained by that manufacturer through trade must not exceed that limit.

(c) *Changes in corporate ownership and control.* Manufacturers must inform NHTSA of corporate relationship changes to ensure that credit accounts are identified correctly and credits are assigned and allocated properly.

(1) In general, if two manufacturers merge in any way, they must inform NHTSA how they plan to merge their credit accounts. NHTSA will subsequently assess corporate fuel economy and compliance status of the merged fleet instead of the original separate fleets.

(2) If a manufacturer divides or divests itself of a portion of its automobile manufacturing business, it must inform NHTSA how it plans to divide the manufacturer's credit holdings into two or more accounts. NHTSA will subsequently distribute holdings as directed by the manufacturer, subject to provision for reasonably anticipated compliance obligations.

(3) If a manufacturer is a successor to another manufacturer's business, it must inform NHTSA how it plans to allocate credits and resolve liabilities per part 534 of this chapter.

(d) *No short or forward sales.* NHTSA will not honor any instructions to trade or transfer more credits than are currently held in any account. NHTSA will not honor instructions to trade or transfer credits from any future vintage (*i.e.,* credits not yet earned). NHTSA will not participate in or facilitate contingent trades.

(e) *Cancellation of credits.* A credit holder may instruct NHTSA to cancel its currently held credits, specifying the originating manufacturer, vintage, and compliance category of the credits to be cancelled. These credits will be permanently null and void; NHTSA will remove the specific credits from the credit holder's account and will not reissue them to any other party.

(f) *Error or fraud in earning credits.* If NHTSA determines that a manufacturer has been credited, through error or fraud, with earning credits, NHTSA will cancel those credits if possible. If the manufacturer credited with having earned those credits has already traded them when the error or fraud is discovered, NHTSA will hold the receiving manufacturer responsible for returning the same or equivalent credits to NHTSA for cancellation.

(g) *Error or fraud in trading.* In general, all trades are final and irrevocable once executed, and may only be reversed by a new, mutually agreed transaction. If NHTSA executes an erroneous instruction to trade credits from one holder to another through error or fraud, NHTSA will reverse the transaction if possible. If those credits have been traded away, the recipient holder is responsible for obtaining the same or equivalent credits for return to the previous holder.

§ 536.9 Use of credits with regard to the domestically manufactured passenger automobile minimum standard.

(a) Each manufacturer is responsible for compliance with both the minimum standard and the attribute-based standard set out in the chapter.

(b) In any particular model year, the domestically manufactured passenger automobile compliance category credit excess or shortfall is determined by comparing the actual CAFE value against either the required standard value or the minimum standard value, whichever is larger.

(c) Transferred or traded credits may not be used, pursuant to 49 U.S.C. 32903(g)(4) and (f)(2), to meet the domestically manufactured passenger automobile minimum standard specified in 49 U.S.C. 32902(b)(4) and in 49 CFR 531.5(b).

(d) If a manufacturer's average fuel economy level for domestically manufactured passenger automobiles is lower than the attribute-based standard, but higher than the minimum standard, then the manufacturer may achieve compliance with the attribute-based standard by applying credits.

(e) If a manufacturer's average fuel economy level for domestically manufactured passenger automobiles is lower than the minimum standard, then the difference between the minimum standard and the manufacturer's actual fuel economy level may only be relieved by the use of credits earned by that manufacturer within the domestic passenger automobile compliance category that have not been transferred or traded. If the manufacturer does not have available earned credits to offset a credit shortage below the minimum standard, then the manufacturer can submit a carry-back plan that indicates sufficient future credits will be earned in its domestic passenger automobile compliance category.

§ 536.10 Treatment of dual-fuel and alternative fuel vehicles—consistency with 49 CFR part 538.

(a) The fuel economy of alternative fueled and dual fueled automobiles is calculated pursuant to EPA's regulations at 40 CFR 600.510–12 and included as part of EPA's calculation of a manufacturer's fleet average fuel economy for the model year and compliance category to which the alternative fueled or dual fueled automobile belongs, in accordance with 49 U.S.C. 32905 and limited by 49 U.S.C. 32906.

(b) If a manufacturer's calculated fuel economy for a particular compliance category, including any alternative fueled and dual fueled automobiles, is higher or lower than the applicable fuel economy standard, manufacturers will earn credits or must apply credits equal to the difference between the calculated fuel economy level in that compliance category and the applicable standard. Credits earned are the same as any other credits, and may be held, transferred, or traded by the manufacturer subject to the limitations of the statute and this part.

■ 5. Revise part 537 to read as follows:

PART 537—AUTOMOTIVE FUEL ECONOMY REPORTS

Sec.

537.1 Scope.
537.2 Purpose.
537.3 Applicability.
537.4 Definitions.
537.5 General requirements for reports.
537.6 General content of reports.
537.7 Pre-model year and mid-model year reports.
537.8 Supplementary reports.
537.9 Determination of fuel economy values and average fuel economy.
537.10 Incorporation by reference by manufacturers.
537.11 Public inspection of information.
537.12 Confidential information.

Authority: 49 U.S.C. 32907; delegation of authority at 49 CFR 1.95.

§ 537.1 Scope.

This part establishes requirements for automobile manufacturers to submit reports to the National Highway Traffic Safety Administration regarding their efforts to improve automotive fuel economy.

§ 537.2 Purpose.

The purpose of this part is to obtain information to aid the National Highway Traffic Safety Administration in evaluating automobile manufacturers' plans for complying with average fuel economy standards and in preparing an annual review of the average fuel economy standards.

§ 537.3 Applicability.

This part applies to automobile manufacturers, except for manufacturers subject to an alternate fuel economy standard under 49 U.S.C. 32902(d).

§ 537.4 Definitions.

(a) *Statutory terms.* (1) The terms *average fuel economy standard, fuel, manufacture,* and *model year* are used as defined in 49 U.S.C. 32901.

(2) The term *manufacturer* is used as defined in 49 U.S.C. 32901 and in accordance with part 529 of this chapter.

(3) The terms *average fuel economy, fuel economy,* and *model type* are used as defined in subpart A of 40 CFR part 600.

(4) The terms *automobile, automobile capable of off-highway operation,* and *passenger automobile* are used as defined in 49 U.S.C. 32901 and in accordance with the determinations in part 523 of this chapter.

(b) *Other terms.* (1) The term *loaded vehicle weight* is used as defined in subpart A of 40 CFR part 86.

(2) The terms *axle ratio, base level, body style, car line, combined fuel economy, engine code, equivalent test weight, gross vehicle weight, inertia weight, transmission class,* and *vehicle configuration* are used as defined in subpart A of 40 CFR part 600.

(3) The terms *approach angle, axle clearance, breakover angle, cargo carrying volume, departure angle, passenger carrying volume, running clearance,* and *temporary living quarters* are used as defined in part 523 of this chapter.

(4) The term *incomplete automobile manufacturer* is used as defined in part 529 of this chapter.

(5) As used in this part, unless otherwise required by the context:

(i) *Administrator* means the Administrator of the National Highway Traffic Safety Administration or the Administrator's delegate.

(ii) *Current model year* means:

(A) In the case of a pre-model year report, the full model year immediately following the period during which that report is required by § 537.5(b) to be submitted.

(B) In the case of a mid-model year report, the model year during which that report is required by § 537.5(b) to be submitted.

(iii) *Average* means a production-weighted harmonic average.

(iv) *Total drive ratio* means the ratio of an automobile's engine rotational speed (in revolutions per minute) to the automobile's forward speed (in miles per hour).

§ 537.5 General requirements for reports.

(a) For each current model year, each manufacturer shall submit a pre-model year report, a mid-model year report, and, as required by § 537.8, supplementary reports.

(b)(1) The pre-model year report required by this part for each current model year must be submitted during the month of December (*e.g.,* the pre-model year report for the 1983 model year must be submitted during December 1982).

(2) The mid-model year report required by this part for each current model year must be submitted during the month of July (*e.g.,* the mid-model year report for the 1983 model year must be submitted during July 1983).

(3) Each supplementary report must be submitted in accordance with § 537.8(c).

(c) Each report required by this part must:

(1) Identify the report as a pre-model year report, mid-model year report, or supplementary report as appropriate;

(2) Identify the manufacturer submitting the report;

(3) State the full name, title, and address of the official responsible for preparing the report;

(4) Be submitted electronically to *cafe@dot.gov.* For each report, manufacturers should submit a confidential version and a non-confidential (*i.e.,* redacted) version. The confidential report should be accompanied by a request letter that contains supporting information, pursuant to § 512.8 of this chapter. Your request must also include a certificate, pursuant to § 512.4(b) of this chapter and part 512, appendix A, of this chapter. The word ''CONFIDENTIAL'' must appear on the top of each page containing information claimed to be confidential. If an entire page is claimed to be confidential, the submitter must

indicate clearly that the entire page is claimed to be confidential. If the information for which confidentiality is being requested is contained within a page, the submitter shall enclose each item of information that is claimed to be confidential within brackets: ''[ ].'' Confidential portions of electronic files submitted in other than their original format must be marked ''Confidential Business Information'' or ''Entire Page Confidential Business Information'' at the top of each page. If only a portion of a page is claimed to be confidential, that portion shall be designated by brackets. Files submitted in their original format that cannot be marked as described above must, to the extent practicable, identify confidential information by alternative markings using existing attributes within the file or means that are accessible through use of the file's associated program. A representative from NHTSA's Office of Chief Counsel, as designated by NHTSA, should be copied on any submissions with confidential business information;

(5) Identify the current model year;

(6) Be written in the English language; and

(7) (i) Specify any part of the information or data in the report that the manufacturer believes should be withheld from public disclosure as trade secret or other confidential business information.

(ii) With respect to each item of information or data requested by the manufacturer to be withheld under 5 U.S.C. 552(b)(4) and 15 U.S.C. 2005(d)(1), the manufacturer shall:

(A) Show that the item is within the scope of sections 552(b)(4) and 2005(d)(1);

(B) Show that disclosure of the item would result in significant competitive damage;

(C) Specify the period during which the item must be withheld to avoid that damage; and

(D) Show that earlier disclosure would result in that damage.

(d) Beginning with model year 2023, each manufacturer shall generate reports required by this part using the NHTSA CAFE Projections Reporting Template (Office of Management and Budget (OMB) Control No. 2127–0019, NHTSA Form 1474). The template is a fillable form.

(1) Manufacturers must select the option to identify the report as a pre-model year report, mid-model year report, or supplementary report as appropriate.

(2) Manufacturers must complete all required information for the manufacturer and for all vehicles produced for the current model year required to comply with corporate average fuel economy (CAFE) standards. The manufacturer must identify the manufacturer submitting the report, including the full name, title, and address of the official responsible for preparing the report and a point of contact to answer questions concerning the report.

(3) Manufacturers must use the template to generate confidential and non-confidential reports for each of the compliance fleets (*i.e.,* domestic passenger automobile, imported passenger automobile, non-passenger automobile) produced by the manufacturer for the current model year. Manufacturers must submit a request for confidentiality in accordance with part 512 of this chapter to withhold projected production sales volume estimates from public disclosure. If the request is granted, NHTSA will withhold the projected production sales volume estimates from public disclosure until all the vehicles produced by the manufacturer have been made available for sale (usually 1 year after the current model year).

(4) Manufacturers must submit confidential reports and requests for confidentiality to NHTSA on CD–ROM in accordance with § 537.12. Email copies of non-confidential (*i.e.,* redacted) reports to NHTSA's secure email address: *cafe@dot.gov.* Requests for confidentiality must be submitted in a PDF or MS Word format. Submit 2 copies of the CD–ROM to: Administrator, National Highway Traffic Administration, 1200 New Jersey Avenue SE, Washington, DC 20590, and submit emailed reports electronically to the following secure email address: *cafe@dot.gov.*

(5) Manufacturers can withhold information on projected production sales volumes under 5 U.S.C. 552(b)(4) and 15 U.S.C. 2005(d)(1). In accordance, the manufacturer must:

(i) Show that the item is within the scope of sections 552(b)(4) and 2005(d)(1);

(ii) Show that disclosure of the item would result in significant competitive damage;

(iii) Specify the period during which the item must be withheld to avoid that damage; and

(iv) Show that earlier disclosure would result in that damage.

(e) Each report required by this part must be based upon all information and data available to the manufacturer 30 days before the report is submitted to the Administrator.

§ 537.6 General content of reports.

(a) *Pre-model year and mid-model year reports.* Except as provided in paragraph (c) of this section, each pre-model year report and the mid-model year report for each model year must contain the information required by § 537.7(a).

(b) *Supplementary report.* Except as provided in paragraph (c) of this section, each supplementary report for each model year must contain the information required by § 537.7(a)(1) and (2), as appropriate for the vehicle fleets produced by the manufacturer, in accordance with § 537.8(b)(1) through (4) as appropriate.

(c) *Exceptions.* The pre-model year report, mid-model year report, and supplementary report(s) submitted by an incomplete automobile manufacturer for any model year are not required to contain the information specified in § 537.7(c)(4)(xv) through (xviii) and (c)(5). The information provided by the incomplete automobile manufacturer under § 537.7(c) shall be according to base level instead of model type or carline.

§ 537.7 Pre-model year and mid-model year reports.

(a) *Report submission requirements.* (1) Manufacturers must provide a report with the information required by paragraphs (b) and (c) of this section for each domestic and imported passenger automobile fleet, as specified in part 531 of this chapter, for the current model year.

(2) Manufacturers must provide a report with the information required by paragraphs (b) and (c) of this section for each non-passenger automobile fleet, as specified in part 533 of this chapter, for the current model year.

(3) For model year 2023 and later, for passenger automobiles specified in part 531 and non-passenger automobiles specified in part 533 of this chapter, manufacturers must provide the information for pre-model and mid-model year reports in accordance with the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127–0019, NHTSA Form 1474). The required reporting template can be downloaded from NHTSA's website.

(i) Manufacturers are only required to provide the actual information on vehicles and technologies in production at the time the pre- and mid-model year reports are required. Otherwise, manufacturers must provide reasonable estimates or updated estimates where possible for pre-and mid-model year reports.

(ii) Manufacturers should attempt not to omit data, which should only be the

done for products pending production and with unknown information at the time CAFE reports are prepared.

(b) *Projected average and required fuel economy.*

(1) Manufacturers must state the projected average fuel economy for the manufacturer's automobiles determined in accordance with § 537.9 and based upon the fuel economy values and projected sales figures provided under paragraph (c)(2) of this section.

(2) Manufacturers must state the projected final average fuel economy that the manufacturer anticipates having if changes implemented during the model year will cause that average to be different from the average fuel economy projected under paragraph (b)(1) of this section.

(3) Manufacturers must state the projected required fuel economy for the manufacturer's passenger automobiles and non-passenger automobiles determined in accordance with §§ 531.5(a) and 533.5 of this chapter and based upon the projected sales figures provided under paragraph (c)(2) of this section. For each unique model type and footprint combination of the manufacturer's automobiles, the manufacturer must provide the information specified in paragraphs (b)(3)(i) and (ii) of this section in tabular form. The manufacturer must list the model types in order of increasing average inertia weight from top to bottom down the left side of the table and list the information categories in the order specified in paragraphs (b)(3)(i) and (ii) of this section from left to right across the top of the table. Other formats, such as those accepted by the Environmental Protection Agency (EPA), which contain all the information in a readily identifiable format, are also acceptable. For model year 2023 and later, for each unique model type and footprint combination of the manufacturer's automobiles, the manufacturer must provide the information specified in paragraphs (b)(3)(i) and (ii) of this section in accordance with the CAFE Projections Reporting Template (OMB Control No. 2127–0019, NHTSA Form 1474).

(i) In the case of passenger automobiles, manufacturers must report the following:

(A) Beginning model year 2013, base tire as defined in § 523.2 of this chapter;

(B) Beginning model year 2013, front axle, rear axle, and average track width as defined in § 523.2 of this chapter;

(C) Beginning model year 2013, wheelbase as defined in § 523.2 of this chapter;

(D) Beginning model year 2013, footprint as defined in § 523.2 of this chapter; and

(E) The fuel economy target value for each unique model type and footprint entry listed in accordance with the equation provided in part 531 of this chapter.

(ii) In the case of non-passenger automobiles, manufacturers must report the following:

(A) Beginning model year 2013, base tire as defined in § 523.2 of this chapter;

(B) Beginning model year 2013, front axle, rear axle, and average track width as defined in § 523.2 of this chapter;

(C) Beginning model year 2013, wheelbase as defined in § 523.2 of this chapter;

(D) Beginning model year 2013, footprint as defined in § 523.2 of this chapter; and

(E) The fuel economy target value for each unique model type and footprint entry listed in accordance with the equation provided in part 533 of this chapter.

(4) Manufacturers must state the projected final required fuel economy that the manufacturer anticipates having if changes implemented during the model year will cause the targets to be different from the target fuel economy projected under paragraph (b)(3) of this section.

(5) Manufacturers must state whether the manufacturer believes that the projections it provides under paragraphs (b)(2) and (4) of this section, or if it does not provide an average or target under paragraphs (b)(2) and (4), the projections it provides under paragraphs (b)(1) and (3) of this section, sufficiently represent the manufacturer's average and target fuel economy for the current model year for purposes of the Act. In the case of a manufacturer that believes that the projections are not sufficiently representative for the purpose of determining the projected average fuel economy for the manufacturer's automobiles, the manufacturers must state the specific nature of any reason for the insufficiency and the specific additional testing or derivation of fuel economy values by analytical methods believed by the manufacturer necessary to eliminate the insufficiency and any plans of the manufacturer to undertake that testing or derivation voluntarily and submit the resulting data to EPA under 40 CFR 600.509–12.

(c) *Model type and configuration fuel economy and technical information.*

(1) For each model type of the manufacturer's automobiles, the manufacturers must provide the information specified in paragraph (c)(2) of this section in tabular form. List the model types in order of increasing average inertia weight from top to bottom down the left side of the table and list the information categories in the order specified in paragraph (c)(2) of this section from left to right across the top of the table. For model year 2023 and later, CAFE reports required by this part shall for each model type of the manufacturer's automobiles provide the information specified in paragraphs (c)(2) and (4) of this section using the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127–0019, NHTSA Form 1474) and list the model types in order of increasing average inertia weight from top to bottom.

(2) (i) Combined fuel economy; and

(ii) Projected sales for the current model year and total sales of all model types.

(3) For pre-model year reports not subject to § 537.5(d) of this chapter, for each vehicle configuration whose fuel economy was used to calculate the fuel economy values for a model type under paragraph (c)(2) of this section, manufacturers must provide the information specified in paragraph (c)(4) of this section.

(4) (i) Loaded vehicle weight;

(ii) Equivalent test weight;

(iii) Engine displacement, liters;

(iv) Society of Automotive Engineers (SAE) net rated power, kilowatts;

(v) SAE net horsepower;

(vi) Engine code;

(vii) Fuel system (number of carburetor barrels or, if fuel injection is used, so indicate);

(viii) Emission control system;

(ix) Transmission class;

(x) Number of forward speeds;

(xi) Existence of overdrive (indicate yes or no);

(xii) Total drive ratio (N/V);

(xiii) Axle ratio;

(xiv) Combined fuel economy;

(xv) Projected sales for the current model year;

(xvi) (A) In the case of passenger automobiles:

(*1*) Interior volume index, determined in accordance with subpart D of 40 CFR part 600; and

(*2*) Body style;

(B) In the case of non-passenger automobiles:

(*1*) All functional ability characteristic metrics described in (c)(5)(i) of this subpart; and

(*2*) All off-highway characteristic metrics described in (c)(5)(ii) of this subpart;

(xvii) Frontal area;

(xviii) Road load power at 50 miles per hour, if determined by the manufacturer for purposes other than compliance with this part to differ from

the road load setting prescribed in 40 CFR 86.177–11(d); and

(xix) Optional equipment that the manufacturer is required under 40 CFR parts 86 and 600 to have actually installed on the vehicle configuration, or the weight of which must be included in the curb weight computation for the vehicle configuration, for fuel economy testing purposes.

(5) For each model type of automobile classified as a non-passenger automobile under part 523 of this chapter, manufacturers must provide the following for each unique trim or configuration of the model type that alters any characteristic or feature described in the sections contained in paragraphs (c)(5)(i) and (ii) of this section:

(i) For an automobile not manufactured primarily for transporting 10 or fewer passengers, determined by the presence of at least one chief non-passenger characteristic in accordance with § 523.5(a) of this chapter, provide:

(A) A yes or no confirmation for whether the number of designated seating positions is greater than ten. If yes, provide the number of designated seating positions;

(B) A yes or no confirmation for the presence of temporary living accommodations, such as a bed, sink, stove, refrigerator, or toilet. If yes, list the provided accommodations;

(C) A yes or no confirmation for the ability to transport property on an open bed. If yes, provide bed width and length in inches, measured to the nearest tenth of inch;

(D) Maximum passenger carrying volume and minimum cargo carrying volume, as defined in § 523.2 of this chapter, with all seats, as sold to the first retail purchaser, installed and in their passenger-carrying position; and

(E) For automobiles manufactured in model year 2022 through model year 2027:

(*1*) A yes or no confirmation for the presence of three or more rows of designated seating positions;

(*2*) A yes or no confirmation that the 2nd and 3rd row seating can be removed, stowed, or folded as described in § 523.5(a)(5) of this chapter;

(3) A yes or no confirmation that the 2nd and 3rd rows create a flat, level surface when in their cargo-carrying configuration as described in § 523.5(a)(5) of this chapter.

(F) For automobiles manufactured in 2028 and beyond, curb weight, gross vehicle weight rating (GVWR), and gross combined weight rating (GCWR) for the calculation of the light duty work factor (LDWF).

(ii) For an automobile capable of off-highway operation, provide the features in paragraphs (c)(5)(ii)(A) through (D) of this section in accordance with § 523.5(b) of this chapter:

(A) A yes or no confirmation for the presence of 4-wheel drive;

(B) The gross vehicle weight rating (GVWR) in pounds;

(C) Measured in accordance with § 523.5(b)(2), provide the value of:

(*1*) Approach angle rounded to the nearest 0.1 degrees;

(*2*) Breakover angle rounded to the nearest 0.1 degrees;

(*3*) Departure angle rounded to the nearest 0.1 degrees; and

(*4*) Running clearance rounded to the nearest 0.1 centimeters.

(D) For automobiles manufactured through model year 2027, measured in accordance with § 523.5(b)(2), provide the value of:

(*1*) Front axle clearance rounded to the nearest 0.1 centimeters; and

(*2*) Rear axle clearance rounded to the nearest 0.1 centimeters.

(6) Manufacturers must determine the fuel economy values provided under paragraphs (c)(2) and (4) of this section in accordance with § 537.9.

(7) For the model years specified in paragraphs (c)(7)(i) through (iii) of this section, manufacturers must identify any air-conditioning (AC), off-cycle and full-size pick-up truck technologies used each model year to calculate the average fuel economy specified in 40 CFR 600.510–12.

(i) For automobiles manufactured in years in which a manufacturer may generate fuel consumption improvement values pursuant to 40 CFR part 600, each manufacturer must provide a list of each air conditioning (AC) efficiency improvement technology utilized in its fleet(s) of vehicles for each model year for which the manufacturer qualifies for fuel consumption improvement values . For each technology identify vehicles by make and model types that have the technology, which compliance category those vehicles belong to, and the number of vehicles for each model equipped with the technology. For each compliance category (domestic passenger automobile, imported passenger automobile, and non-passenger automobile), report the AC fuel consumption improvement value in gallons/mile in accordance with the applicable equation specified in 40 CFR part 600.

(ii) For automobiles manufactured in model years in which a manufacturer may generate fuel consumption improvement values pursuant to 40 CFR part 600, each manufacturer must provide a list of off-cycle efficiency improvement technologies utilized in its fleet(s) of vehicles for each model year that is pending or approved by EPA for which the manufacturer qualifies for fuel consumption improvement values. For each technology, manufacturers must identify vehicles by make and model types that have the technology, which compliance category those vehicles belong to, the number of vehicles for each model equipped with the technology, and the associated off-cycle credits (grams/mile) available for each technology. For each compliance category (domestic passenger automobile, imported passenger automobile, and non-passenger automobile), manufacturers must calculate the fleet off-cycle fuel consumption improvement value in gallons/mile in accordance with the applicable equation specified in 40 CFR part 600.

(iii) For model years up to 2024, each manufacturer must provide a list of full-size pickup trucks in its fleet that meet the mild and strong hybrid vehicle definitions. For each mild and strong hybrid type, manufacturers must identify vehicles by make and model types that have the technology, the number of vehicles produced for each model equipped with the technology, the total number of full-size pickup trucks produced with and without the technology, the calculated percentage of hybrid vehicles relative to the total number of vehicles produced, and the associated full-size pickup truck credits (grams/mile) available for each technology. For the non-passenger automobile compliance category, manufacturers must calculate the fleet pickup truck fuel consumption improvement value in gallons/mile in accordance with the applicable equation specified in 40 CFR part 600.

§ 537.8 Supplementary reports.

(a)(1) Except as provided in paragraph (d) of this section, each manufacturer whose most recently submitted mid-model year report contained an average fuel economy projection under § 537.7(b)(2) or, if no average fuel economy was projected under that section, under § 537.7(b)(1) that was not less than the applicable average fuel economy standard in this chapter and who now projects an average fuel economy that is less than the applicable standard in this chapter shall file a supplementary report containing the information specified in paragraph (b)(1) of this section.

(2) Except as provided in paragraph (d) of this section, each manufacturer that determines that its average fuel economy for the current model year as

projected under § 537.7(b)(2) or, if no average fuel economy was projected under § 537.7(b)(2), as projected under § 537.7(b)(1), is less representative than the manufacturer previously reported it to be under § 537.7(b)(3), this section, or both, shall file a supplementary report containing the information specified in paragraph (b)(2) of this section.

(3) For model years through 2022, each manufacturer whose mid-model year report omits any of the information specified in § 537.7(b) or (c) shall file a supplementary report containing the information specified in paragraph (b)(3) of this section.

(4) Starting model year 2023, each manufacturer whose mid-model year report omits any of the information shall resubmit the information with other information required in accordance with the NHTSA CAFE Projections Reporting Template (OMB Control No. 2127–0019, NHTSA Form 1474).

(b) (1) The supplementary report required by paragraph (a)(1) of this section must contain:

(i) Such revisions of and additions to the information previously submitted by the manufacturer under this part regarding the automobiles whose projected average fuel economy has decreased as specified in paragraph (a)(1) of this section as are necessary—

(A) To reflect the change and its cause; and

(B) To indicate a new projected average fuel economy based upon these additional measures.

(ii) An explanation of the cause of the decrease in average fuel economy that led to the manufacturer's having to submit the supplementary report required by paragraph (a)(1) of this section.

(2) The supplementary report required by paragraph (a)(2) of this section must contain:

(i) A statement of the specific nature of and reason for the insufficiency in the representativeness of the projected average fuel economy;

(ii) A statement of specific additional testing or derivation of fuel economy values by analytical methods believed by the manufacturer necessary to eliminate the insufficiency; and

(iii) A description of any plans of the manufacturer to undertake that testing or derivation voluntarily and submit the resulting data to the Environmental Protection Agency under 40 CFR 600.509–12.

(3) The supplementary report required by paragraph (a)(3) of this section must contain:

(i) All of the information omitted from the mid-model year report under § 537.6(c); and

(ii) Such revisions of and additions to the information submitted by the manufacturer in its mid-model year report regarding the automobiles produced during the current model year as are necessary to reflect the information provided under paragraph (b)(3)(i) of this section.

(4) The supplementary report required by paragraph (a)(4) of this section must contain:

(i) All information omitted from the mid-model year reports under § 537.6(c); and

(ii) Such revisions of and additions to the information submitted by the manufacturer in its pre-model or mid-model year reports regarding the automobiles produced during the current model year as are necessary to reflect the information provided under paragraph (b)(4)(i) of this section.

(c) (1) Each report required by paragraph (a)(1), (2), (3), or (4) of this section must be submitted in accordance with § 537.5(c) not more than 45 days after the date on which the manufacturer determined, or could have determined with reasonable diligence, that the report was required.

(2) [Reserved]

(d) A supplementary report is not required to be submitted by the manufacturer under paragraph (a)(1) or (2) of this section:

(1) With respect to information submitted under this part before the most recent mid-model year report submitted by the manufacturer under this part; or

(2) When the date specified in paragraph (c) of this section occurs after the day by which the pre-model year report for the model year immediately following the current model year must be submitted by the manufacturer under this part.

(e) For model years 2008, 2009, and 2010, each manufacturer of non-passenger automobiles, as that term is defined in § 523.5 of this chapter, shall submit a report, not later than 45 days following the end of the model year, indicating whether the manufacturer is opting to comply with § 533.5(f) or (g) of this chapter.

§ 537.9 Determination of fuel economy values and average fuel economy.

(a) *Vehicle subconfiguration fuel economy values.* (1) For each vehicle subconfiguration for which a fuel economy value is required under paragraph (c) of this section and has been determined and approved under 40 CFR part 600, the manufacturer shall submit that fuel economy value.

(2) For each vehicle subconfiguration specified in paragraph (a)(1) of this section for which a fuel economy value approved under 40 CFR part 600, does not exist, but for which a fuel economy value determined under 40 CFR part 600 exists, the manufacturer shall submit that fuel economy value.

(3) For each vehicle subconfiguration specified in paragraph (a)(1) of this section for which a fuel economy value has been neither determined nor approved under 40 CFR part 600, the manufacturer shall submit a fuel economy value based on tests or analyses comparable to those prescribed or permitted under 40 CFR part 600 and a description of the test procedures or analytical methods used.

(4) For each vehicle configuration for which a fuel economy value is required under paragraph (c) of this section and has been determined and approved under 40 CFR part 600, the manufacturer shall submit that fuel economy value.

(b) *Base level and model type fuel economy values.* For each base level and model type, the manufacturer shall submit a fuel economy value based on the values submitted under paragraph (a) of this section and calculated in the same manner as base level and model type fuel economy values are calculated for use under subpart F of 40 CFR part 600.

(c) *Average fuel economy.* Average fuel economy must be based upon fuel economy values calculated under paragraph (b) of this section for each model type and must be calculated in accordance with subpart F of 40 CFR part 600, except that fuel economy values for running changes and for new base levels are required only for those changes made or base levels added before the average fuel economy is required to be submitted under this part.

§ 537.10 Incorporation by reference by manufacturers.

(a) A manufacturer may incorporate by reference in a report required by this part any document other than a report, petition, or application, or portion thereof submitted to any Federal department or agency more than two model years before the current model year.

(b) A manufacturer that incorporates by reference a document not previously submitted to the National Highway Traffic Safety Administration shall append that document to the report.

(c) A manufacturer that incorporates by reference a document shall clearly identify the document and, in the case of a document previously submitted to the National Highway Traffic Safety Administration, indicate the date on

which and the person by whom the document was submitted to this agency.

§ 537.11 Public inspection of information.

Except as provided in § 537.12, any person may inspect the information and data submitted by a manufacturer under this part in the docket section of the National Highway Traffic Safety Administration. Any person may obtain copies of the information available for inspection under this section in accordance with the regulations of the Secretary of Transportation in part 7 of this title.

§ 537.12 Confidential information.

(a) *Treatment of confidential information.* Information made available under § 537.11 for public inspection does not include information for which confidentiality is requested under § 537.5(c)(7), is granted in accordance with section 505 of the Act and 5 U.S.C. 552(b) and is not subsequently released under paragraph (c) of this section in accordance with section 505 of the Act.

(b) *Denial of confidential treatment.* When the Administrator denies a manufacturer's request under § 537.5(c)(7) for confidential treatment of information, the Administrator gives the manufacturer written notice of the denial and reasons for it. Public disclosure of the information is not made until after the 10-day period immediately following the giving of the notice.

(c) *Release of confidential information.* After giving written notice to a manufacturer and allowing 10 days, when feasible, for the manufacturer to respond, the Administrator may make available for public inspection any information submitted under this part that is relevant to a proceeding under the Act, including information that was granted confidential treatment by the Administrator pursuant to a request by the manufacturer under § 537.5(c)(7).

Issued on December 2, 2025, under authority delegated in 49 CFR 1.95. The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; 49 CFR 1.49; and DOT Order 1351.29A.

Jonathan Morrison,

Administrator.

[FR Doc. 2025–22014 Filed 12–4–25; 8:45 am]

BILLING CODE 4910–59–P

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Federal Register

Vol. 90, No. 232

Friday, December 5, 2025

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FEDERAL REGISTER PAGES AND DATE, DECEMBER

55041–55292	1
55293–55620	2
55621–55788	3
55789–55996	4
55997–56656	5

CFR PARTS AFFECTED DURING DECEMBER

At the end of each month the Office of the Federal Register publishes separately a List of CFR Sections Affected (LSA), which lists parts and sections affected by documents published since the revision date of each title.

3 CFR

Proclamations:
10994 55787

10 CFR

2 55621
19 55621
20 55621
21 55621
25 55621
26 55621
30 55621
31 55621
32 55621
34 55621
35 55621
36 55621
37 55621
39 55621
40 55621
50 55621
51 55621
52 55621
54 55621
55 55621
60 55621
61 55621
62 55621
63 55621
70 55621
71 55621
72 55621
73 55621
74 55621
75 55621
76 55621
81 55621
95 55621
110 55621
140 55621
150 55621
160 55621
170 55621
171 55621

Proposed Rules:
2 55699
19 55699
20 55699
21 55699
25 55699
26 55699
30 55699
31 55699
32 55699
34 55699
35 55699
36 55699
37 55699
39 55699
40 55699
50 55699
51 55699
52 55699
54 55699
55 55699
60 55699
61 55699
62 55699
63 55699
70 55699
71 55699
72 55699
73 55699
74 55699
75 55699
76 55699
81 55699
95 55699
110 55699
140 55699
150 55699
160 55699
170 55699
171 55699

12 CFR

3 55248
6 55248
208 55248
217 55248
252 55248
303 55789
314 55789
324 55248
335 55789
340 55789
347 55789
363 55789
380 55789

Proposed Rules:
3 55048
217 55048
324 55048
621 56066

13 CFR

107 55997

14 CFR

71 ..... 55634, 55636, 55639, 55640, 55641
97 (2 documents) 55293, 55294
260 55999
399 55999

Proposed Rules:
39 ..... 55817, 56070, 56072
71 55819

15 CFR

774 56001

16 CFR

Proposed Rules:
425 55701

1241.....55701

17 CFR

10.....55642
11.....55642

21 CFR

801.....55978
803.....55978
812.....55978
860.....55978
862.....55978
864.....55978
866.....55978
868.....55978
872.....55978
874.....55978
876.....55978
878.....55978
880.....55978
882.....55978
886.....55978
888.....55978
890.....55978
892.....55978

23 CFR

630.....55646
633.....55648

26 CFR

300.....55041

30 CFR

948.....55649, 55658

32 CFR

161.....55042

33 CFR

100.....56001
165.....55812

Proposed Rules:

1.....56076
117.....55063

37 CFR

385.....55044
386.....55045

Proposed Rules:

380.....55821

40 CFR

52.....56001
60.....55671
63.....55681, 56010

Proposed Rules:

174.....55065
180.....55065

42 CFR

71.....55813
405.....55342
414.....55342
424.....55342
455.....55342
483.....55687
484.....55342
498.....55342

47 CFR

64.....56013
76.....56062

Proposed Rules:

1.....55066, 56076
2.....55826, 56076
4.....55835
25 .....55702, 56076, 56338
27.....56076
54.....55836
64 .....55713, 56101, 56115

48 CFR

1517.....55045

49 CFR

Proposed Rules:

171.....55836
172.....55836
173.....55836
174.....55836
175.....55836
176.....55836
177.....55836
178.....55836
523.....56438
531.....56438
533.....56438
536.....56438
537.....56438

50 CFR

622.....55046
648.....55814, 55815
679 .....56063, 56064, 56065

LIST OF PUBLIC LAWS

Note: No public bills which have become law were received by the Office of the Federal Register for inclusion in today's **List of Public Laws**.

Last List December 4, 2025

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