DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Parts 1 and 48

[REG–121244–23]

RIN 1545–BR30

Section 45Z Clean Fuel Production Credit

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice of proposed rulemaking and public hearing.

SUMMARY: This document contains proposed regulations regarding the clean fuel production credit enacted by the Inflation Reduction Act of 2022 and amended by the One, Big, Beautiful Bill Act (OBBBA). These proposed regulations would provide rules for determining clean fuel production credits, including credit eligibility rules, emissions rates, and certification and registration requirements. In addition, the proposed regulations would amend three sets of final regulations: the elective payment election regulations and the credit transfer election regulations, to clarify language relating to ownership of clean fuel production facilities, and the Federal excise tax registration regulations, to make them clearer and more consistent with the clean fuel production credit registration requirements in these proposed regulations. The proposed regulations would affect domestic producers of clean transportation fuel, taxpayers that may claim a credit for a related producer's fuel, and excise tax registrants.

DATES: Written or electronic comments must be received by April 6, 2026. The public hearing is being held on May 28, 2026, at 10 a.m. Eastern Time (ET). Requests to speak and outlines of topics to be discussed at the public hearing must be received by April 6, 2026. If no outlines are received by April 6, 2026, the public hearing will be cancelled. Requests to attend the public hearing must be received by 5 p.m. ET on May 26, 2026.

ADDRESSES: Commenters are strongly encouraged to submit public comments electronically via the Federal eRulemaking Portal at *https://www.regulations.gov* (indicate IRS and REG–121244–23) by following the online instructions for submitting comments. Requests for a public hearing must be submitted as prescribed in the ''Comments and Requests for a Public Hearing'' section. Once submitted to the Federal eRulemaking Portal, comments cannot be edited or withdrawn. The Department of the Treasury (Treasury Department) and the IRS will publish for public availability any comments submitted to the IRS's public docket. Send paper submissions to: CC:PA:01:PR (REG–121244–23), Room 5503, Internal Revenue Service, P.O. Box 7604, Ben Franklin Station, Washington, DC 20044. A plain language summary of the proposed regulations will be made available at *https://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Concerning the proposed regulations, Jennifer Golden or Danielle Mayfield of the Office of Associate Chief Counsel (Energy, Credits, and Excise Tax) at (202) 317–6855 (not a toll-free number); concerning submissions of comments or the public hearing, Publications and Regulations Section at (202) 317–6901 (not a toll-free number) or by email at *publichearings@irs.gov* (preferred).

SUPPLEMENTARY INFORMATION:

Authority

This document contains proposed amendments to the Income Tax Regulations (26 CFR part 1) regarding sections 45Z, 1361, 4101, 6417, and 6418 of the Internal Revenue Code (Code) as they relate to the clean fuel production credit determined under section 45Z (proposed regulations). This document also contains proposed amendments to the Manufacturers and Retailers Excise Tax Regulations (26 CFR part 48) regarding section 4101 as they relate to excise tax registration. The proposed regulations would be issued under the authority granted by sections 45Z, 1361(b)(3)(A), 4101(a)(1) and (c), 4222(c), 6001, 6417(h), 6418(h), and 7805(a) of the Code.

Section 45Z contains several delegations of authority to the Secretary of the Treasury or the Secretary's delegate (Secretary). Section 45Z(e) directs the Secretary to issue guidance no later than January 1, 2025, regarding implementation of section 45Z, including calculation of emissions factors of transportation fuel, the emissions rate table described in section 45Z(b)(1)(B)(i), and the determination of clean fuel production credits under section 45Z. Section 45Z(f)(2) further authorizes the Secretary to issue regulations regarding the fuel production attributable to the taxpayer in the case of a facility with multiple owners, and section 45Z(f)(1)(A)(i)(II) authorizes the Secretary to issue guidance on certification and other information with respect to certain transportation fuels.

Section 45Z(f)(3) authorizes the Secretary to prescribe additional related person rules for other entities similar to the rule described for corporations that are members of an affiliated group of corporations filing a consolidated return. This includes the authority to prescribe rules for related persons with respect to which the taxpayer has reason to believe will sell fuel to an unrelated person in a manner described in section 45Z(a)(4).

Section 45Z(d)(5)(C) directs the Secretary to issue regulations or other guidance as the Secretary determines necessary to carry out the purposes of section 45Z(d)(5)(A)(iv), which excludes from the definition of ''transportation fuel'' any fuel produced from a fuel for which a credit under section 45Z is allowable.

Section 45Z(b)(1)(B)(ii) authorizes the Secretary to determine, in the case of any transportation fuel that is not a sustainable aviation fuel (SAF), whether a model is a successor model to the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model developed by the Argonne National Laboratory (ANL). Additionally, section 45Z(b)(1)(B)(i) directs the Secretary, subject to section 45Z(b)(1)(B)(ii) through (v), to annually publish a table setting forth the emissions rate for similar types and categories of transportation fuels based on the amount of lifecycle greenhouse gas (GHG) emissions as described in section 211(o)(1)(H) of the Clean Air Act (CAA) (42 U.S.C. 7545(o)(1)(H)), as in effect on August 16, 2022 (CAA–2022) for such fuels, expressed as kilograms of equivalent carbon dioxide (CO_2e) per 1,000,000 British thermal units (mmBTU), which a taxpayer must use for purposes of section 45Z. The proposed regulations cite to the CAA–2022 as enacted by section 1501(a)(2) of the Energy Policy Act of 2005, Public Law 109–58, 119 Stat. 594, 1067 (2005), amended by section 202(a)(1) of the Energy Independence and Security Act of 2007, Public Law 110–140, 121 Stat. 1492, 1521–22 (2007).

Section 45Z(b)(1)(B)(iv) authorizes the Secretary to determine the regulations or methodologies for emissions rate adjustments to exclude any emissions attributed to indirect land use change.

Section 45Z(b)(1)(B)(v)(I) requires the Secretary to provide a distinct emissions rate with respect to any transportation fuel derived from animal manure. The emissions rate must be based on the specific animal manure feedstock, which may include dairy manure, swine manure, poultry manure, and any other sources that the Secretary determines to be appropriate.

Section 45Z(b)(1)(B)(v)(II) authorizes the Secretary to provide an emissions rate less than zero with respect to any transportation fuel derived from animal manure.

Section 1361(b)(3)(A) authorizes the Secretary to prescribe regulations providing exceptions to the subparagraph's treatment of a qualified subchapter S subsidiary (as defined in section 1361(b)(3)(B)) for purposes of the Code.

Section 4101(a)(1) authorizes the Secretary to prescribe regulations related to any registration required under section 4101, including the time, form, manner, and terms and conditions of such registration.

Section 4101(c) provides that rules similar to the rules of section 4222(c) apply to registration under section 4101. Section 4222(c) authorizes the Secretary to prescribe regulations related to the denial, revocation, or suspension of any registration under section 4222 if the Secretary determines that a registrant has used such registration to avoid the payment of tax or to postpone or interfere with the collection of tax, or that such denial, revocation, or suspension is needed to protect the revenue.

Section 6001 authorizes the Secretary to prescribe regulations related to recordkeeping, statements, and special returns.

Section 6417(h) directs the Secretary to issue such regulations or other guidance as may be necessary to carry out the purposes of section 6417.

Section 6418(h) directs the Secretary to issue such regulations or other guidance as may be necessary to carry out the purposes of section 6418.

These regulations would also be issued under the express delegation of authority under section 7805(a) of the Code, which authorizes the Secretary to prescribe all needful rules and regulations for the enforcement of the Code, including all rules and regulations as may be necessary by reason of any alteration of law in relation to Internal Revenue.

Background

I. Overview

Section 45Z, added to the Code by section 13704 of Public Law 117–169, 136 Stat. 1818, 1997 (August 16, 2022), commonly known as the Inflation Reduction Act (IRA), and amended by section 70521 of Public Law 119–21, 139 Stat. 72, 276 (July 4, 2025), commonly known as the OBBBA, provides an income tax credit (section 45Z credit) for clean transportation fuel produced domestically after December 31, 2024, and sold by December 31, 2029. *See* section 13704(c) of the IRA; section 70521(d) of the OBBBA; section 45Z(g). The section 45Z credit is a general business credit under section 38 of the Code.

The section 45Z credit replaces an assortment of prior fuel incentives. Those incentives consisted of income tax credit, excise tax credit, and excise tax payment provisions for various biofuels and other alternative fuels sold for use as a fuel or used as a fuel, including biodiesel, renewable diesel, compressed natural gas, second generation biofuel, and SAF. *See* sections 40(b)(6); 40A(b)(1) and (2); 40B; 6426(c) through (e) and (k); and 6427(e).

Section 4101 authorizes the Secretary to require registration with respect to the section 4041 and section 4081 fuel excise taxes, and requires registration with respect to certain fuel tax credits, including the section 45Z credit. Section 4101(a)(1), as amended by section 70521(i) of the OBBBA, and section 45Z(f)(1)(A)(i)(I) impose a registration requirement under section 4101 (section 4101 registration) on a taxpayer claiming the section 45Z credit.

Section 6417, added to the Code by section 13801(a) of the IRA, and amended by sections 70512(j)(2) and 70522(c) of the OBBBA, allows an applicable entity to elect to treat applicable credits (as defined in section 6417(b)), including the section 45Z credit, as a payment against the tax imposed by subtitle A of the Code.

Section 6418, added to the Code by section 13801(b) of the IRA, and amended by sections 70512(h), 70513(b)(3)(B)(ii), and 70521(j)(2) of the OBBBA, allows an eligible taxpayer to elect to transfer eligible credits (as defined in section 6418(f)(1)), including the section 45Z credit.

A taxpayer making a section 6417 or section 6418 election must also complete pre-filing registration, as provided in regulations under those provisions. This pre-filing registration is distinct from the registration required for the section 45Z credit, which is done under section 4101.

II. The Section 45Z Credit

A. Credit Eligibility

Under section 45Z(a)(1)(A), if a taxpayer qualifies for a section 45Z credit, the taxpayer is eligible to claim a section 45Z credit for the taxable year in which the taxpayer sells a transportation fuel. To qualify for a section 45Z credit, a taxpayer must: (i) produce a transportation fuel that meets the requirements for suitability, emissions rate, coprocessing, and prevention of double crediting; (ii) produce the fuel at a qualified facility in the United States, including in any U.S. territories; (iii) be registered as a producer of clean fuel under section 4101 at the time of production; and (iv) sell the fuel to an unrelated person in a qualified sale during the taxable year. *See* section 45Z(a)(1) and (4), (d)(4), (d)(5)(A), and (f)(1). Transportation fuel produced after December 31, 2025, must be exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada. *See* section 45Z(f)(1)(A)(iii); section 70521(a)(2) of the OBBBA.

A taxpayer also cannot be: (i) a specified foreign entity, for taxable years beginning after July 4, 2025; or (ii) a foreign-influenced entity (other than a foreign-influenced entity described in section 7701(a)(51)(D)(i)(II) of the Code), for taxable years beginning after July 4, 2027. *See* sections 45Z(f)(8) and 7701(a)(51).

Section 45Z(d)(4) defines ''qualified facility'' as a facility used for the production of transportation fuels. However, the term ''qualified facility'' excludes any facility for which one of the following credits is allowed under section 38 for the taxable year: (i) the credit for production of clean hydrogen under section 45V of the Code (section 45V credit); (ii) the credit determined under section 46 of the Code to the extent that such credit is attributable to the energy credit determined under section 48 of the Code with respect to any specified clean hydrogen production facility for which an election is made under section 48(a)(15) (section 48(a)(15) election); and (iii) the credit for carbon oxide sequestration under section 45Q of the Code (section 45Q credit). Because these credits cannot be stacked with the section 45Z credit, this preamble refers to the section 45V credit, the section 48(a)(15) election, and the section 45Q credit collectively as the ''anti-stacking credits'' and individually as an ''anti-stacking credit.''

Section 45Z(d)(5)(A) defines ''transportation fuel'' as a fuel that meets four requirements. First, the fuel must be suitable for use as a fuel in a highway vehicle or aircraft. Second, the fuel must have a lifecycle GHG emissions rate (emissions rate) of not greater than 50 kilograms (kg) of CO_2e per mmBTU. Section 45Z(d)(1) defines ''mmBTU'' to mean 1,000,000 British thermal units; section 45Z(d)(2) defines ''CO_2e'' to mean, with respect to any GHG, the equivalent carbon dioxide (as determined based on relative global warming potential). Third, the fuel must

not be derived from coprocessing an applicable material (or materials derived from an applicable material) with a feedstock that is not biomass. Section 45Z(d)(5)(B)(i) defines ''applicable material'' to mean monoglycerides, diglycerides, and triglycerides; free fatty acids; and fatty acid esters. Section 45Z(d)(5)(B)(ii) defines ''biomass'' to have the same meaning as in section 45K(c)(3) of the Code, which provides that biomass means any organic material other than oil and natural gas (or any product thereof), and coal (including lignite) or any product thereof. Fourth, the fuel must not be produced from a fuel for which a section 45Z credit is allowable.

In the case of a taxpayer producing a transportation fuel that is SAF, section 45Z(f)(1)(A)(i)(II) requires the taxpayer to provide certification from an unrelated person.[1] For this purpose, section 45Z(a)(3) defines ''sustainable aviation fuel,'' which these proposed regulations refer to as a ''SAF transportation fuel,'' to mean the non-kerosene portion of liquid fuel that is a transportation fuel, is sold for use in an aircraft, is not derived from palm fatty acid distillates or petroleum, and meets the requirements of either: (i) ASTM International Standard D7566 or (ii) the Fischer Tropsch (FT) provisions of ASTM International Standard D1655, Annex A1.

Section 45Z(a)(4) requires a taxpayer to sell transportation fuel to an unrelated person: (i) for use by such person in the production of a fuel mixture; (ii) for use by such person in a trade or business; or (iii) who sells such fuel at retail to another person and places such fuel in the fuel tank of such other person. Section 45Z(f)(3) provides that persons are treated as related to each other if they would be treated as a single employer under the regulations prescribed under section 52(b) of the Code.[2] Section 45Z(f)(3) further provides that if a corporation is a member of an affiliated group of corporations filing a consolidated return, such corporation is treated as selling fuel to an unrelated person if another member of the group sells the fuel to an unrelated person. Section 45Z(f)(3) also authorizes the Secretary to prescribe similar sale attribution rules for other related entities, including rules for related persons with respect to which the taxpayer has reason to believe will sell fuel to an unrelated person in a manner described in section 45Z(a)(4).

Section 45Z(f)(1)(A)(i)(II) requires a taxpayer producing a SAF transportation fuel to provide certification (in such form and manner as the Secretary prescribes) from an unrelated person demonstrating compliance with: (i) any general requirements, supply chain traceability requirements, and information transmission requirements established under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA); or (ii) for any methodology similar to CORSIA that satisfies the criteria under section 211(o)(1)(H) of the CAA–2022, requirements similar to the requirements described for CORSIA. A taxpayer producing a SAF transportation fuel must also provide such other information as the Secretary may require for purposes of carrying out section 45Z.

B. Credit Amount

Under section 45Z(a)(1), a taxpayer calculates the amount of the section 45Z credit by multiplying the applicable amount per gallon or gallon equivalent with respect to a transportation fuel produced by the taxpayer and sold in a qualified sale by the emissions factor for such fuel. Per section 45Z(a)(5), if the credit amount is not a multiple of one cent, then it is rounded to the nearest cent. A taxpayer's total section 45Z credit for a taxable year is the sum of the section 45Z credit for each transportation fuel sold during the taxable year.

1. Applicable Amount

For fuel produced after December 31, 2025, the applicable amount for any transportation fuel is either $0.20 or $1.00. *See* section 45Z(a)(2); section 70521(g)(2) of the OBBBA.

For fuel produced on or before December 31, 2025, the applicable amount varies depending on whether the transportation fuel is a SAF transportation fuel or is not a SAF transportation fuel (non-SAF transportation fuel) and is higher for SAF transportation fuel than for non-SAF transportation fuel. For non-SAF transportation fuel, the applicable amount is either $0.20 or $1.00. Section 45Z(a)(2). For SAF transportation fuel, the applicable amount is either $0.35 or $1.75. Section 45Z(a)(3) (repealed for fuel produced after December 31, 2025, by section 70521(g)(2) of the OBBBA).

The increased applicable amount is available if the taxpayer produces the transportation fuel at a qualified facility that satisfies the prevailing wage and apprenticeship (PWA) requirements.

Section 45Z(c)(1) provides that for calendar years beginning after 2024, the applicable amount must be adjusted by multiplying such amount by the inflation adjustment factor for the calendar year in which the sale of the transportation fuel occurs. Section 45Z(c)(2) provides that the inflation adjustment factor for the section 45Z credit is the inflation adjustment factor determined and published by the Secretary pursuant to section 45Y(c), determined by substituting ''calendar year 2022'' for ''calendar year 1992'' in section 45Y(c)(3). The inflation adjustment factor for purposes of section 45Z means, with respect to a calendar year, a fraction the numerator of which is the gross domestic product (GDP) implicit price deflator for the preceding calendar year and the denominator of which is the GDP implicit price deflator for the calendar year 2022. In this context, the term ''GDP implicit price deflator'' means the most recent revision of the implicit price deflator for the GDP as computed and published by the Department of Commerce before March 15 of the calendar year.

If any inflation-adjusted applicable amount is not a multiple of one cent, it must be rounded to the nearest multiple of one cent. Section 45Z(c)(1).

Section 45Z(f)(6)(A) provides that rules similar to the prevailing wage requirements of section 45(b)(7) apply. Section 45Z(f)(6)(B) provides a special rule for qualified facilities placed in service before January 1, 2025, under which such a facility need only satisfy prevailing wage requirements for any alteration or repair in taxable years beginning after December 31, 2024. Section 45Z(f)(7) provides that rules similar to the apprenticeship requirements of section 45(b)(8) apply. Section 1.45Z–3 provides additional rules on the PWA requirements under section 45Z.

2. Emissions Factor and Emissions Rate

Under section 45Z(b)(1)(A), a transportation fuel's emissions factor measures the reduction in a fuel's emissions rate, expressed as kg of CO_2e per mmBTU, relative to the statutory baseline emissions rate of 50 kg of CO_2e per mmBTU, expressed as a fraction of the statutory baseline. Expressed mathematically, the emissions factor calculation is as follows:

(50 kg CO_2e per mmBTU − emissions rate) ÷ 50 kg CO_2e per mmBTU

[1] Both the preamble to the proposed regulations and the proposed regulations use the term ''unrelated person'' when describing the certification required by section 45Z(f)(1)(A)(i)(II). Section 45Z(f)(1)(A)(i)(II) refers to an ''unrelated party,'' which is synonymous with an unrelated person as used in section 45Z(a)(4) and (f)(3).

[2] In determining eligibility for the section 45Z credit, a taxpayer must apply the controlled group rules under section 52 consistent with the statutory purpose of section 45Z.

Under section 45Z(b)(2), any emissions factor determined under section 45Z(b)(1)(A) that is not a multiple of 0.1 must be rounded to the nearest multiple of 0.1.

A taxpayer determines a fuel's emissions rate by either using the annual emissions rate table published by the Secretary or obtaining a provisional emissions rate (PER) determination from the Secretary. *See* section 45Z(b)(1)(B) and (D). The emissions rate may not be less than zero for any transportation fuel produced after December 31, 2025, except for fuel derived from animal manure. *See* section 45Z(b)(1)(B)(v) and (b)(1)(E); section 70521(b) and (c)(1) of the OBBBA.

Section 45Z(b)(1)(B)(i) directs the Secretary, subject to section 45Z(b)(1)(B)(ii) through (v), to annually publish a table setting forth the emissions rates for similar types and categories of transportation fuels based on the amount of lifecycle GHG emissions as described in section 211(o)(1)(H) of the CAA–2022 for such fuels, expressed as kg of CO_2e per mmBTU. Section 211(o)(1)(H) of the CAA–2022 defines lifecycle GHG emissions as ''the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator [of the Environmental Protection Agency (EPA)], related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential.'' *See also* 42 U.S.C. 7602(a). Section 45Z(d)(3) provides that ''greenhouse gas'' has the same meaning as under section 211(o)(1)(G) of the CAA–2022.

Section 45Z divides transportation fuel into two categories for purposes of emissions rates: non-SAF transportation fuel and SAF transportation fuel. Section 45Z(b)(1)(B)(ii) and (iii) provides the methods for determining emissions rates in each case.

Section 45Z(b)(1)(B)(ii) provides that for non-SAF transportation fuel, the lifecycle GHG emissions of such fuel must be based on the most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model developed by the ANL, or a successor model as determined by the Secretary.

Section 45Z(b)(1)(B)(iii) provides that for SAF transportation fuel, the lifecycle GHG emissions of such fuel is determined in accordance with: (i) the most recent CORSIA methodologies that have been adopted by the International Civil Aviation Organization (ICAO) with the agreement of the United States; or (ii) any methodology similar to the most recent CORSIA methodologies that satisfies the criteria under section 211(o)(1)(H) of the CAA–2022.

Section 45Z(b)(1)(B)(iv) provides that for transportation fuel produced after December 31, 2025, notwithstanding section 45Z(b)(1)(B)(i) through (iii), the emissions rate must be adjusted to exclude any emissions attributed to indirect land use change. *See* section 70521(c) of the OBBBA.

Section 45Z(b)(1)(B)(v) provides that for any transportation fuel derived from animal manure and produced after December 31, 2025, a distinct emissions rate must be provided with respect to such fuel based on the specific animal manure feedstock. Such an emissions rate may be less than zero. *See* section 70521(c) of the OBBBA.

In the case of any transportation fuel for which an emissions rate has not been established in the annual emissions rate table under section 45Z(b)(1)(B), a taxpayer producing such fuel may file a petition with the Secretary for determination of the PER with respect to such fuel. *See* section 45Z(b)(1)(D).

C. Other Rules

Section 45Z(f)(2) provides that, if a facility has more than one owner, production from the facility will be allocated among the owners in proportion to their respective ownership interests in the gross sales from such facility, except to the extent provided in regulations prescribed by the Secretary.

Section 45Z(f)(4) provides that under regulations prescribed by the Secretary, rules similar to the rules of section 52(d) will apply to a pass-thru in the case of estates and trusts.

Section 45Z(f)(5) provides that rules similar to the rules of section 45Y(g)(6) will apply for the allocation of the credit to patrons of an agricultural cooperative.

III. Section 4101 Registration

Section 4101 of the Code generally provides rules for taxpayer registration. Section 4101(a)(1) provides a specific delegation of authority to the Secretary to prescribe the form and manner of registration by requiring every person required to register under section 4101 to register with the Secretary at such time, in such form and manner, and subject to such terms and conditions, as the Secretary may by regulations prescribe. Section 4101(a)(1) further provides that a section 4101 registration may be used only in accordance with regulations prescribed under section 4101. Section 4101(a)(5) requires reregistration under regulations prescribed by the Secretary in the event of certain changes in ownership.

A. Section 45Z Registration Requirement

Section 45Z(f)(1)(A)(i)(I) provides that no section 45Z credit shall be determined unless the taxpayer is registered as a producer of clean fuel under section 4101 at the time of production. Section 4101(a)(1) requires registration by ''every person producing a fuel eligible for the clean fuel production credit (pursuant to section 45Z),'' effective for transportation fuel produced after December 31, 2024.[3]

B. Denial, Revocation, or Suspension of Registration

Under section 4101(c), rules similar to the rules of section 4222(c) apply for purposes of denial, revocation, or suspension of registration under section 4101. Section 4222 generally requires registration for certain tax-free sales under section 4221. Section 4222(c) provides that under regulations prescribed by the Secretary, the registration of any person under section 4222 may be denied, revoked, or suspended if the Secretary determines: (i) that such person has used such registration to avoid the payment of any tax imposed by chapter 32 of the Code (chapter 32), or to postpone or in any manner to interfere with the collection of any such tax, or (ii) that such denial, revocation, or suspension is necessary to protect the revenue. The flush language of section 4222(c) provides that denial, revocation, or suspension under section 4222(c) is in addition to any penalty provided by law for any act or failure to act.

Section 48.4222(a)–1 provides rules for registration, including application instructions. Section 48.4222(c)–1 provides rules for revocation or suspension of registration and authorizes the IRS in certain circumstances to revoke or temporarily suspend, upon written notice, the registration of any person under section 4222.

IV. Section 6417

Section 6417 permits an applicable entity to elect to treat an applicable credit determined with respect to the

[3] See section 13704(b)(5) of the IRA, as amended by section 70521(i) of the OBBBA.

applicable entity for the taxable year as a payment against Federal income taxes imposed by subtitle A of the Code equal to the amount of the credit. Section 6417(b)(9) provides that the 45Z credit is an applicable credit.

V. Section 6418

Section 6418 permits an eligible taxpayer to elect to transfer all or a portion of an eligible credit determined with respect to such taxpayer for any taxable year to an unrelated taxpayer. Section 6418(f)(1)(A)(viii) provides that the section 45Z credit is an eligible credit.

VI. Prior Guidance and Publications

A. Notice 2022–58 (Request for Feedback)

Notice 2022–58, 2022–47 I.R.B. 483 (released November 3, 2022), requested stakeholder feedback on questions arising under section 45Z that should be addressed in guidance.

B. Treasury Decision 9988 (Elective Payment Election Regulations)

The Treasury Department and the IRS published Treasury Decision 9988 in the **Federal Register** (89 FR 17546, March 11, 2024), which finalized regulations concerning the election to treat applicable credits as a payment of Federal income tax under section 6417 (Elective Payment Election Regulations). The Elective Payment Election Regulations contain rules on section 6417 that apply with respect to an applicable credit, including the section 45Z credit. Section 1.6417–2(c)(4) requires an applicable entity or electing taxpayer to own the underlying eligible credit property except in the case of the advanced manufacturing production credit under section 45X.

C. Treasury Decision 9993 (Credit Transfer Election Regulations)

The Treasury Department and the IRS published Treasury Decision 9993 in the **Federal Register** (89 FR 34770, April 30, 2024), which finalized regulations concerning the transfer election with respect to eligible credits under section 6418 (Credit Transfer Election Regulations). The Credit Transfer Election Regulations contain rules on section 6418 that apply with respect to an eligible credit, including the section 45Z credit. Section 1.6418–2(d)(1) requires an eligible taxpayer to own the underlying eligible credit property except in the case of the advanced manufacturing production credit under section 45X.

D. Notice 2024–49 (Registration Requirement)

Notice 2024–49, 2024–26 I.R.B. 1781 (released May 31, 2024), provides guidance on the section 45Z registration requirements, including the time, form, and manner of registration. Section 3 of Notice 2024–49 also provides general definitions, initial definitions of SAF and non-SAF transportation fuels, and an initial, non-exclusive list of primary feedstocks, to help taxpayers applying for registration identify fuels and primary feedstocks that may qualify for the section 45Z credit. Notice 2025–10, 2025–6 I.R.B. 682 (released January 10, 2025), discussed later in this Background section, modifies and supersedes these definitions, and replaces them with the definitions in the Appendix to Notice 2025–10.

E. Treasury Decision 9998 (PWA Regulations)

The Treasury Department and the IRS published Treasury Decision 9998 in the **Federal Register** (89 FR 53184, June 25, 2024), which finalized regulations concerning the PWA requirements under several sections of the Code (PWA Regulations), including section 45Z. Section 1.45Z–3 provides rules on the application of the PWA requirements to section 45Z. The preamble to the PWA Regulations contains a detailed discussion of the PWA requirements, including applicability dates and transition rules with respect to the section 45Z credit. These proposed regulations only address § 1.45Z–3 for context and to the extent necessary to clarify the rules herein. The PWA Regulations are otherwise outside the scope of this rulemaking.

F. Fact Sheet FAQs

A section 45Z Fact Sheet, FS–2024–25 (released July 10, 2024), provides answers to certain frequently asked questions (FAQs) on the section 45Z registration requirements. This Fact Sheet is available at *https://www.irs.gov/newsroom/frequently-asked-questions-about-applying-for-registration-for-the-clean-fuel-production-credit-under-ss-45z.*

G. Notice 2025–10 (Notice of Intent To Propose Rules)

Notice 2025–10 announced that the Treasury Department and the IRS intended to propose regulations (forthcoming proposed regulations) addressing the section 45Z credit. In addition to providing background on the section 45Z credit, Notice 2025–10 explains the intended rules to be included in forthcoming proposed regulations and requests public feedback on the draft regulatory text in the Appendix to the notice. These proposed regulations are the forthcoming proposed regulations announced in Notice 2025–10.

H. Notice 2025–11 (Emissions Rate Guidance)

Notice 2025–11, 2025–6 I.R.B. 704 (released January 10, 2025), provides guidance regarding methodologies for determining emissions rates under section 45Z and provides the initial emissions rate table required by section 45Z(b)(1)(B)(i). Notice 2025–11 also requests feedback related to emissions rates for the section 45Z credit.

The public feedback received in response to Notice 2025–10, Notice 2025–11, and Notice 2022–58 was carefully considered in the development of these proposed regulations.

I. Notice 2025–37 (2025 Inflation Adjustment Factor)

Notice 2025–37, 2025–30 I.R.B. 198 (July 21, 2025), provides the calendar year 2025 inflation adjustment factor and applicable amounts for the section 45Z credit.

Explanation of Provisions

I. Overview

A. Section 45Z Regulations

These proposed regulations include six sections relating to section 45Z, proposed §§ 1.45Z–1, 1.45Z–2, 1.45Z–4 through 1.45Z–6, and 1.4101–1. These sections, together with existing § 1.45Z–3, comprise the ''section 45Z regulations'' referenced in this Explanation of Provisions. The section 45Z regulations would set forth provisions to determine the eligibility for, and the amount of, the section 45Z credit for the production of clean transportation fuel. These proposed regulations would also provide rules for registration and for filing claims for the section 45Z credit.

Proposed § 1.45Z–1 would provide the definitions of terms generally applicable for purposes of the section 45Z regulations. Proposed § 1.45Z–2 would provide general rules applicable to section 45Z, such as rules for determining the amount and timing of the credit, including rules for the emissions factor and emissions rate for transportation fuel and the PER process. Proposed § 1.45Z–4 would provide special rules applicable to section 45Z, including required registration, anti-stacking, anti-abuse, production attribution, facility ownership, foreign feedstock and prohibited foreign entity restrictions, and recordkeeping and

substantiation rules. Proposed § 1.45Z–5 would provide the procedures for certification of emissions rates for SAF transportation fuel. Proposed § 1.45Z–6 would provide procedures for claiming a section 45Z credit. Proposed § 1.4101–1 would provide rules for registration under section 4101.

B. Amendments to Existing Sections 6417, 6418, and 4101 Regulations

The proposed regulations would amend §§ 1.6417–2(c), 1.6418–2(d), and 48.4101–1. The proposed amendments to §§ 1.6417–2(c)(4) and 1.6418–2(d)(1) would clarify that sections 45Z and 45(d)(3)(C) do not require a taxpayer to own the underlying eligible credit property. Proposed § 48.4101–1(a)(7) would provide that a letter of registration is not a determination of tax treatment under the Code or a determination letter. Proposed § 48.4101–1(a)(8) would provide rules for reregistration in the event of a change of ownership or a change of employer identification number (EIN).

II. Definitions

Proposed § 1.45Z–1 would provide definitions that apply for purposes of section 45Z and the proposed regulations. In addition, proposed § 1.45Z–1 would clarify key statutory terms as discussed in Parts II.A. through II.M. of this Explanation of Provisions. The definitions would also adopt the statutory language for the terms ''applicable amount'' (section 45Z(a)), ''applicable material'' (section 45Z(d)(5)(B)(i)), ''biomass'' (section 45Z(d)(5)(B)(ii) (*citing* section 45K(c)(3))), ''CO_2e'' (section 45Z(d)(2)), ''emissions factor'' (section 45Z(b)(1)(A)), ''greenhouse gas (GHG)'' (section 45Z(d)(3)), ''lifecycle GHG emissions'' (section 45Z(b)(1)(B)(i)), and ''mmBTU'' (section 45Z(d)(1)), and identify abbreviations used in the proposed regulations, such as ''ASTM,'' ''Code,'' U.S. Department of Energy (DOE), EPA, ''Secretary,'' IRS, ''section 45Z credit,'' and ''section 45Z regulations.'' Further, the definitions would specify the relevant CORSIA methodologies, define an emissions rate in accordance with section 45Z(b)(1), and define terms associated with the PER process (*see* Part III.F.2. of this Explanation of Provisions).

A. 45ZCF–GREET Model

Proposed § 1.45Z–1(b)(1) would define ''45ZCF–GREET model'' as the model by that name developed by the ANL and published by the DOE for use in determining the amount of lifecycle GHG emissions for purposes of section 45Z. The 45ZCF–GREET model is a user interface designed to accept input related to a transportation fuel production facility, execute calculations in the background, and display the full lifecycle (in other words, well-to-wheel) carbon intensity of produced transportation fuel, measured in kg of CO_2e per mmBTU.[4] The 45ZCF–GREET model is currently available at *https://www.energy.gov/eere/greet.* All publicly available versions of the 45ZCF–GREET model, the accompanying user manual, additional information including FAQs, and any log of changes to the model are available at *https://www.energy.gov/eere/greet.* Part III.E.3. of this Explanation of Provisions discusses the use of the 45ZCF–GREET model for purposes of section 45Z(b)(1)(B).

B. Claim

Proposed § 1.45Z–1(b)(7) would define ''claim'' to mean a completed Form 7218, *Clean Fuel Production Credit,* including all required information and documentation that a taxpayer files with its Federal income tax return or Federal information return for the taxable year for which the section 45Z credit is determined. A ''claim'' would include the making of an election under section 6417 or section 6418. The proposed regulation would also define ''Form 7218'' to mean Form 7218 and any successor form(s). These defined terms, coupled with the claim filing procedures in proposed § 1.45Z–6, would explain how a taxpayer may claim a section 45Z credit.

C. Fuel

Proposed § 1.45Z–1(b)(19) would define ''fuel'' as any liquid or gaseous substance that can be consumed to supply heat or power. Therefore, for purposes of section 45Z, the term ''fuel'' would not include electricity. For an additional explanation, see Part II.I.2. of this Explanation of Provisions.

D. Gallon Equivalent

Section 45Z(a)(1)(A) bases the section 45Z credit on a gallon (or gallon equivalent) of transportation fuel without defining the terms or providing a baseline for non-liquid fuels. The proposed regulations would use a gallon measurement for liquid fuels and a gallon equivalent for non-liquid fuels. Proposed § 1.45Z–1(b)(20)(i) would define ''gallon equivalent'' for purposes of section 45Z(a)(1)(A) to mean, with respect to any non-liquid fuel, the amount of such fuel that has the energy equivalent of a gallon of gasoline, which refers to the amount of such fuel that has a Btu content of 116,090 (lower heating value). The proposed regulations would use gasoline as the most appropriate baseline fuel for determining gallon equivalency because gasoline is the most common transportation fuel in the United States, and section 45Z is designed to incentivize domestic production of transportation fuels that may serve as alternatives to existing fossil fuels. The use of a gasoline gallon equivalent is also consistent with the gasoline gallon equivalent requirement in section 6426(d)(3), which provided an excise tax credit for many of the same types of fuel that are eligible for the section 45Z credit. Using the gasoline gallon equivalent standard in section 6426(d)(3) in the section 45Z context is further supported by the fact that section 45Z replaced section 6426(d). Proposed § 1.45Z–1(b)(20)(ii) would provide that a fuel is considered non-liquid if it is in a gaseous state at ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit, respectively.

To facilitate implementation of a gallon equivalent standard for non-liquid fuels, it is necessary to specify whether the standard is based on a lower heating value or a higher heating value of the baseline fuel, as the two types of heating values have different energy contents. The proposed regulations would use a lower heating value, rather than a higher heating value, because it is a better representation of the useful energy provided by a transportation fuel. Proposed § 1.45Z–1(b)(20)(iii) would explain that the gallon equivalent for a non-liquid fuel is calculated by dividing the lower heating value of that fuel (measured in Btu) by the lower heating value of a gallon of gasoline (116,090 Btu), rounded to 5 decimal places. Proposed § 1.45Z–1(b)(20)(iv) and (v) would provide the lower heating values of some non-liquid fuels and an example of the calculation of a gallon equivalent, respectively.

E. Producer and Taxpayer Treated as a Producer

1. In General

Proposed § 1.45Z–1(b)(26)(i) would generally define the term ''producer'' for purposes of section 45Z as the person that engages in the production of a transportation fuel. Proposed § 1.45Z–1(b)(26)(iii) would provide examples illustrating the application of the definition. Section 45Z requires the taxpayer to be registered as a producer of clean fuel but does not specify who

[4] As used in the preamble to these proposed regulations, the term ''well-to-wheel'' includes well-to-wake with respect to aviation fuel.

the producer is if the production process involves multiple persons and multiple steps. The proposed regulations would clarify this point.

2. Producer of Alternative Natural Gas

Proposed § 1.45Z–1(b)(26)(ii) would provide that the ''producer'' of alternative natural gas, including renewable natural gas (RNG), for purposes of section 45Z is the person that processes the untreated sources of alternative natural gas (processor) to remove water, carbon dioxide, and other impurities such that it is interchangeable with fossil natural gas. This definition would be consistent with the purpose of section 45Z because the processor is the most active participant in the production process, and section 45Z incentivizes production. The definition of ''producer'' would therefore exclude any person that removes conventional or alternative natural gas (CANG) from a pipeline, compresses it further after removal, and then sells such further-compressed CANG (compressor). Compression of CANG that is already interchangeable with fossil natural gas also would not meet the proposed definition of ''production'' (see Part II.F. of this Explanation of Provisions).

Several stakeholders have raised questions about who should be considered the producer of RNG for purposes of section 45Z. The Treasury Department and the IRS understand that the processor and the compressor are typically different persons, and that the processor typically performs most of the active production and owns (or uses) a facility, as that term is defined in proposed § 1.45Z–1(b)(18). The Treasury Department and the IRS further understand that the compressor typically performs the final compression step before a fuel is used in a vehicle and typically owns (or uses) only compression equipment rather than a facility. As a result, the compressor is not engaging in production of a transportation fuel under section 45Z(a)(1) and the production standard in proposed § 1.45Z–1(b)(27), and would be unable to meet the requirement that transportation fuel be produced at a qualified facility as provided in section 45Z(d)(4) and proposed § 1.45Z–1(b)(28).

F. Production

Proposed § 1.45Z–1(b)(27)(i) would define ''production'' (except for purposes of section 45Z(a)(4)(A)) as all steps and processes used to make a transportation fuel. Production would begin with the processing of primary feedstock(s) and end with a transportation fuel ready to be sold in a qualified sale. Production would not include instances in which a person uses a primary feedstock to produce a fuel that meets the same ASTM standard as the primary feedstock. The definition of ''production'' would also incorporate the rules in section 45Z(f)(1)(A)(ii) and (f)(1)(B) requiring production to occur in the United States.

The definition of ''production'' would further clarify that minimal processing would not qualify as production for purposes of the section 45Z credit. Minimal processing would generally include creating a fuel mixture or otherwise engaging in activities that do not result in a chemical transformation. However, with respect to CANG, production would include processing untreated sources of alternative natural gas to remove water, carbon dioxide, and other impurities such that it is interchangeable with fossil natural gas. Production of CANG would not include compressing CANG that is already interchangeable with fossil natural gas to a higher pressure.

Under the proposed regulations, the blending of a transportation fuel into another fuel to create a fuel mixture, regardless of whether the fuel mixture itself satisfies the requirements of section 45Z(d)(5)(A), would not constitute production of a transportation fuel because the blending process would constitute minimal processing. For example, the blending of ethanol and gasoline would not constitute production of a transportation fuel.

Further, importing fuel that is largely finished fuel and undergoes only minimal processing in the United States would not constitute production. Proposed § 1.45Z–1(b)(27)(ii) would provide examples of minimal processing, including instances in which the same person engages in production and subsequent blending.

In enacting section 45Z, Congress replaced fuel credits and payments that specifically incentivize blending (including the credits under sections 40B and 6426(k), and the payment under section 6427(e)) with the section 45Z production credit. Congress's shift from blending incentives to a production incentive demonstrates that Congress no longer intended to incentivize blending. Therefore, equating production with blending would be contrary to Congress's purpose in enacting section 45Z.

G. Qualified Facility

1. Facility

Proposed § 1.45Z–1(b)(18) would define a ''facility,'' as used in section 45Z(d)(4) and the proposed regulations, to mean a single production line that produces a transportation fuel and would include all components that function interdependently to produce a transportation fuel. The definition of ''facility'' would also clarify the treatment of indirect, post-production, and multipurpose equipment. The definition would, for instance, exclude CANG compression equipment from a facility because it is post-production equipment. The definition would include examples involving carbon capture equipment and SAF transportation fuel.

The proposed definition of ''facility'' is neutral as to geographic proximity of the components of the production line and focuses instead on interdependent pieces of equipment used to produce transportation fuel. This definition is consistent with how provisions of the Code under which similar tax credits are determined define ''facility.'' It is also consistent with stakeholders' requests that a facility be narrowly defined to minimize overlap with other credits and their concerns that physical boundaries may be inadequate. Accordingly, the proposed definition considers that a section 45Z facility may be co-located with another credit-eligible facility, and that some production equipment may be located upstream or downstream from, or in a different building than, other equipment.

2. Qualified Facility

Proposed § 1.45Z–1(b)(28)(i) would incorporate the definitions of ''qualified facility'' in section 45Z(d)(4) and ''facility'' in proposed § 1.45Z–1(b)(18) and clarify that a ''qualified facility'' must satisfy the anti-stacking rules in section 45Z(d)(4)(B) and proposed § 1.45Z–4(b). Proposed § 1.45Z–1(b)(28)(ii) would define the term ''anti-stacking credit'' to mean any of the three credits listed in section 45Z(d)(4)(B).

H. Qualified Sale

The draft regulatory text in the Appendix to Notice 2025–10 used the term ''qualifying sale.'' The proposed regulations would instead use the term ''qualified sale.'' Proposed § 1.45Z–1(b)(29) would define a ''qualified sale'' as a sale of a transportation fuel in a manner described in section 45Z(a)(4). The definition would also: (i) clarify the term ''sold for use in a trade or business'' for purposes of section 45Z(a)(4)(B); (ii) incorporate the sale attribution rule in section 45Z(f)(3) if fuel is sold by another member of the taxpayer's consolidated group (as defined in § 1.1502–1(b) and (h),

respectively); and (iii) prescribe an additional sale attribution rule, as authorized by section 45Z(f)(3), for fuel sold by a related person if the taxpayer is not a member of a consolidated group.

The draft regulatory text in the Appendix to Notice 2025–10 defined the term ''sold for use in a trade or business'' to mean sold for use as a fuel in a trade or business within the meaning of section 162 of the Code. The term did not include a sale for blending or for further processing, including use as a primary feedstock to produce another fuel. Many stakeholders raised concerns about the interpretation of ''sold for use in a trade or business.'' They noted that in the fuel industry, many producers sell to related or unrelated intermediaries, such as wholesalers or dealers, rather than directly to unrelated final purchasers. They asserted that the ''use as a fuel'' language could prevent all sales for resale, such as those to intermediary dealers or wholesalers, from qualifying for the section 45Z credit. These stakeholders requested that the ''use as a fuel'' language be removed and that the phrase ''use . . . in a trade or business'' be incorporated as written in section 45Z(a)(4)(B). Stakeholders also said that a ''use as a fuel'' limitation could undercut the language in section 45Z(d)(5)(A), which requires only that a transportation fuel be ''suitable for use as a fuel in a highway vehicle or aircraft,'' but not actually so used.

The proposed regulations would adopt the stakeholders' suggestion to remove the ''use as a fuel'' language from the definition of ''sold for use in a trade or business.'' Under the proposed regulations, ''trade or business'' would have the same meaning as in section 162 of the Code. The meaning of ''sold for use'' would be determined under these proposed regulations and would apply solely for purposes of section 45Z. The proposed regulations would also explicitly clarify that the term ''sold for use in a trade or business'' includes the sale of fuel to an unrelated person that subsequently resells the fuel in its trade or business.

The proposed regulations retain the draft regulatory text from the Appendix to Notice 2025–10 that excludes a sale for blending from the definition of ''sold for use in a trade or business.'' A sale for blending (if made to an unrelated person) would qualify as a sale for use in the production of a fuel mixture under section 45Z(a)(4)(A) and proposed § 1.45Z–1(b)(29)(i)(A). Therefore, including a sale for blending in the ''sold for use in a trade or business'' definition, which relates to section 45Z(a)(4)(B), would render a significant part of section 45Z(a)(4)(A) superfluous.

The proposed regulations do not retain the draft regulatory text from the Appendix to Notice 2025–10 that defined ''sold for use in a trade or business'' to exclude a sale for further processing, including use as a primary feedstock to produce another fuel. To prevent double crediting, the OBBBA amended section 45Z(d)(5) to exclude from the definition of a ''transportation fuel'' any fuel produced from a fuel for which a section 45Z credit is allowable. *See* section 70521(e) of the OBBBA. This statutory revision suggests that a sale for use as a primary feedstock to produce another fuel may qualify as a sale for use in a trade or business under section 45Z(a)(4)(B). The proposed regulations would align the definition of ''sold for use in a trade or business'' with the statutory language.

The proposed regulations would further define ''sold for use in a trade or business'' to exclude a sale of fuel to a reseller that subsequently sells the fuel at retail to another person and places the fuel in the tank of such other person. Such a sale (if made to an unrelated person) would be a qualified sale under section 45Z(a)(4)(C) and proposed § 1.45Z–1(b)(29)(i)(C). Therefore, inclusion of such sales in the definition of ''sold for use in a trade or business,'' which relates to section 45Z(a)(4)(B), would render section 45Z(a)(4)(C) superfluous.

As noted earlier, the proposed definition of ''sold for use in a trade or business'' gives meaning to section 45Z(a)(4)(A) and (C) and is consistent with a plain reading of section 45Z(a)(4)(B). The proposed definition is also consistent with the ''suitable for use as a fuel in a highway vehicle or aircraft'' language in section 45Z(d)(5)(A).

The draft regulatory text in the Appendix to Notice 2025–10 incorporated the sale attribution rule in section 45Z(f)(3) for fuel sold by another member of the taxpayer's consolidated group. Many stakeholders requested the adoption of a broader ''look-through'' rule for sales made through related intermediaries, so that a taxpayer would be treated as selling fuel to an unrelated person if a related person (for example, a related intermediary dealer or wholesaler) ultimately sold the fuel to an unrelated person. The stakeholders pointed to similar look-through rules that the Treasury Department and the IRS adopted with regard to credits under sections 45 and 45J of the Code in Notice 2008–60, 2008–30 I.R.B. 178, and Notice 2023–24, 2023–13 I.R.B. 571, respectively. The stakeholders expressed that many fuel producers are not organized as corporations and cannot utilize the sale attribution rule under section 45Z(f)(3).

After the release of Notice 2025–10, the OBBBA added rulemaking authority to section 45Z(f)(3) that allows the Secretary to prescribe additional related-person sale attribution rules similar to the statutory rule. *See* section 70521(f) of the OBBBA. Based on this new grant of authority, the proposed regulations would adopt the stakeholders' suggestion regarding a broader look-through rule for sales made through related persons. Proposed § 1.45Z–1(b)(29)(iv) would provide that, for purposes of section 45Z, a taxpayer that is not a member of a consolidated group is treated as selling fuel to an unrelated person if a related person sells the fuel to the unrelated person. This rule would apply to all sales made by related persons except those specifically addressed in section 45Z(f)(3) and proposed § 1.45Z–1(b)(29)(iii).

Proposed § 1.45Z–1(b)(29)(v) would provide examples illustrating the definition of ''qualified sale,'' including the ''sold for use in a trade or business'' definition as it relates to section 45Z(a)(4)(B), the sale attribution rule for fuel sold by another member of a taxpayer's consolidated group, the sale attribution rule for fuel sold by a related person (other than another member of a taxpayer's consolidated group), and a sale made by a taxpayer that produces and subsequently blends a transportation fuel.

I. Transportation Fuel

1. In General

Proposed § 1.45Z–1(b)(34) would define ''transportation fuel'' as provided in section 45Z(d)(5)(A), and would also define associated terms. The proposed regulations would define the term ''suitable for use as a fuel in a highway vehicle or aircraft'' (suitable for use) to mean that the fuel has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft, or may be blended into a fuel mixture that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft. The proposed definition of ''suitable for use'' is consistent with longstanding excise tax rules under § 48.4081–1(c)(2) of the Manufacturers and Retailers Excise Tax Regulations, with which the fuel industry is familiar.

The proposed regulations would also clarify that actual use as a fuel in a highway vehicle or aircraft is not required. For example, diesel fuel that has practical and commercial fitness for use as a fuel in a highway vehicle or

aircraft, but is ultimately used as marine fuel, would satisfy the ''suitable for use'' standard. The proposed regulations would further provide that CANG is suitable for use once it is produced so that it is interchangeable with fossil natural gas and would require only minimal processing (for example, further compression or liquefaction) to meet the specifications of ASTM D8080. In addition, the proposed regulations would also provide that a fuel that does not require further processing and that may be blended with or used as a component of taxable fuel (within the meaning of section 4083 of the Code) is suitable for use.

The proposed regulations would define the term ''produced from a fuel for which a section 45Z credit is allowable,'' as used in section 45Z(d)(5)(A)(iv), to mean that a fuel has a primary feedstock that meets the definition of a transportation fuel under section 45Z (without regard to section 45Z(d)(5)(A)(iv)). This proposed rule would prevent double crediting by ensuring that only the first transportation fuel in a production chain qualifies for a section 45Z credit. *See* section 70521(e) of the OBBBA. Thus, if one fuel is used as a primary feedstock to produce a second fuel, and the first fuel qualifies as a transportation fuel for purposes of section 45Z, the second fuel would not qualify for a section 45Z credit. For instance, SAF produced from ethanol as a primary feedstock, and hydrogen produced from RNG as a primary feedstock, may not qualify as transportation fuel for purposes of section 45Z. However, a fuel could still qualify for a section 45Z credit if its production process uses a transportation fuel solely as a process fuel or other non-primary-feedstock input.

The proposed regulations would provide examples illustrating the definitions of ''suitable for use'' and ''produced from a fuel for which a section 45Z credit is allowable.''

2. Electricity

The proposed regulations would not include electricity in the definition of ''transportation fuel,'' for several reasons. Electricity production would therefore be ineligible for the section 45Z credit.

First, at the time section 45Z was enacted, the Code contained an assortment of income tax credit, excise tax credit, and excise tax payment provisions for various biofuels and other alternative fuels sold for use as a fuel or used as a fuel. These included incentives for biodiesel, renewable diesel, and several different alternative fuels (including compressed natural gas and second generation biofuel). Joint Committee on Taxation, *General Explanation of Tax Legislation Enacted in the 117th Congress,* JCS 1–23, at 278 (Dec. 31, 2023). Congress designed the section 45Z credit to replace these incentives, which were only available for liquid or gaseous fuels. *See* sections 40(b)(6); 40A(b)(1) and (2); 40B; 6426(c) through (e) and (k); 6427(e). Therefore, for purposes of section 45Z, it would be reasonable to understand the term ''fuel'' as referring to a liquid or gaseous substance that can be consumed to supply heat or power. As a result, the term ''transportation fuel'' under the proposed regulations would not include electricity.

Second, the anti-stacking rules in section 45Z(d)(4)(B) disallow receiving both a section 45Z credit and certain other credits with respect to the same facility for a taxable year. *See* proposed § 1.45Z–1(b)(28)(ii) (definition of anti-stacking credit); Part IV.B. of this Explanation of Provisions (discussion of anti-stacking rules).

The inclusion of the anti-stacking rules indicates that Congress understood the potential for activity at a particular facility to generate multiple credits for a taxable year and wished to foreclose that possibility. However, the section 45Y clean electricity production credit is not included in the anti-stacking rules, which indicates that the production of electricity is not eligible for the section 45Z credit. Thus, Congress's omission of the section 45Y credit from the anti-stacking rules suggests that Congress did not understand the term ''fuel'' to include electricity for purposes of section 45Z. Further, Notice 2025–10, which stated that the forthcoming proposed regulations intended to exclude electricity as a transportation fuel, was published approximately 6 months before the enactment of the OBBBA. Though the OBBBA amended certain aspects of section 45Z discussed in Notice 2025–10, including the definition of ''transportation fuel,'' the OBBBA did not amend or clarify the definition of ''transportation fuel'' to include electricity.

Third, the Code already provides a separate credit for clean electricity production under section 45Y. When Congress created the section 45Z credit, it also created the section 45Y credit. Generally, the section 45Y credit is not limited based on how the electricity is ultimately used. If the definition of ''transportation fuel'' in section 45Z were to include electricity, there would be significant overlap between the electricity eligible for a credit under section 45Z and the electricity eligible for a credit under section 45Y. Further, a reading of section 45Z to include electricity in the definition of ''transportation fuel'' would not be consistent with Congressional intent in separately enacting section 45Y to incentivize clean electricity production and section 45Z to incentivize production of clean transportation fuel.

J. Non-SAF Transportation Fuel

Proposed § 1.45Z–1(b)(24)(i) would define ''non-SAF transportation fuel'' for purposes of section 45Z as any transportation fuel that is not a SAF transportation fuel. Proposed § 1.45Z–1(b)(24)(ii) would provide a non-exclusive list of non-SAF fuels that may qualify as a transportation fuel, as well as descriptions of such fuels. A non-SAF fuel described in proposed § 1.45Z–1(b)(24)(ii) would also need to meet all the other applicable requirements under section 45Z to qualify as a transportation fuel. The list of non-SAF fuels would generally track those fuels listed in section 3.03 of Notice 2024–49. Proposed § 1.45Z–1(b)(24)(ii) would also retain a few modifications that Notice 2025–10 made to the definitions in Notice 2024–49 to address concerns raised by stakeholders. Consistent with Notice 2025–10, the proposed regulations would clarify the description of low-GHG CANG, including the ASTM D8080 reference, and would list ASTM D1152 (neat methanol) as a specification for low-GHG methanol in addition to ASTM D5797 (fuel blend methanol).

The Treasury Department and the IRS are cognizant of existing business practices in which producers make fuel that may not meet all the proposed ASTM specifications for that particular fuel. Therefore, the proposed ASTM specifications would be both non-exhaustive and non-exclusive with respect to determining whether a fuel is a transportation fuel for purposes of section 45Z. Prescribing exclusive fuel-by-fuel specifications in these proposed regulations would be impractical and may unintentionally restrict future market developments. The Treasury Department and the IRS request comments on this general approach and whether in some cases additional specificity is needed.

K. SAF Transportation Fuel

Proposed § 1.45Z–1(b)(30) would define ''SAF transportation fuel'' to mean SAF as defined in section 45Z(a)(3), and would also define associated terms. Further, the proposed regulations would clarify that a synthetic blending component sold to a

person that blends the fuel into a fuel mixture described in ASTM D7566 is ''sold for use in an aircraft'' within the meaning of section 45Z(a)(3).

L. Types and Categories of Transportation Fuel

Proposed § 1.45Z–1(b)(35) would define the term ''type of transportation fuel'' as a particular kind of fuel, and the term ''category of transportation fuel'' as the unique primary feedstock and pathway used to produce a type of transportation fuel. The definitions would clarify those terms as used in section 45Z(b)(1)(B)(i).

M. Unrelated Person

Consistent with section 45Z(f)(3), proposed § 1.45Z–1(b)(36) would define the term ''unrelated person'' as a person not related to the taxpayer. The term ''unrelated party'' has the same meaning as ''unrelated person'' for purposes of the certification required by section 45Z(f)(1)(A)(i)(II)(aa). The definition would also incorporate the related person definition in section 45Z(f)(3).

III. General Rules

Proposed § 1.45Z–2 would provide general rules regarding the section 45Z credit. The proposed regulations would incorporate and clarify the rules in section 45Z(a) through (c) regarding the amount of the credit, the credit calculation, the timing of the credit, emissions factors, and emissions rates (including the emissions rate table and the PER process).

A. Amount of Credit

Proposed § 1.45Z–2(a)(1) would incorporate and clarify the credit calculation rules in section 45Z(a)(1). Proposed § 1.45Z–2(a)(2) would provide that the volume of a liquid fuel is measured on the basis of gallons adjusted to ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit. The proposed rule would reference proposed § 1.45Z–1(b)(20)(ii) and (iii), respectively, for the determination of whether a fuel is liquid or non-liquid and the calculation of the gallon equivalent of a non-liquid fuel.

Proposed § 1.45Z–2(a)(3) would provide rules and examples for the calculation of the section 45Z credit. Proposed § 1.45Z–2(a)(3)(i) would implement the rounding rule provided in section 45Z(a)(5) for credit amounts and would clarify that the rule applies only after multiplying the applicable amount, quantity of fuel, and emissions factor. Proposed § 1.45Z–2(a)(3)(ii) would require pro rata allocation for sales of transportation fuel produced after December 31, 2024, and held in common storage with other fuels.

Prior to the enactment of the OBBBA, the applicable amount meant either the base amount provided in section 45Z(a)(2)(A) or the alternative amount provided in section 45Z(a)(2)(B), with an increased base amount and alternative amount for SAF transportation fuel under section 45Z(a)(3)(A). Section 70521(g)(2) of the OBBBA eliminated the increased base amount and alternative amount for SAF transportation fuel produced after December 31, 2025. Proposed § 1.45Z–2(a)(4) would define the term ''applicable amount'' in accordance with section 45Z(a)(2), as amended by the OBBBA. Under the proposed definition, the alternative amount would apply in the case of any transportation fuel produced at a qualified facility that satisfies the PWA requirements. The base amount would otherwise apply in the case of any transportation fuel produced at a qualified facility that does not satisfy the PWA requirements.

Proposed § 1.45Z–2(a)(4)(iv) would implement the inflation adjustment mechanics for the applicable amount provided under section 45Z(c), including the inflation adjustment factor as provided in section 45Z(c)(2). In Notice 2025–37, the Treasury Department and the IRS published the section 45Z inflation adjustment factor for calendar year 2025. The section 45Z inflation adjustment factor for subsequent calendar years will also be published in the Internal Revenue Bulletin.

B. Timing of Credit

Proposed § 1.45Z–2(b)(1) would clarify that a taxpayer is eligible to claim the section 45Z credit only for the taxable year in which a qualified sale of a transportation fuel occurs, provided the taxpayer meets all other requirements to claim the credit. *See* section 45Z(a)(1)(A)(ii). Proposed § 1.45Z–2(b)(2) would incorporate the effective date in section 13704(c) of the IRA, which provides that section 45Z applies to transportation fuel produced after December 31, 2024.

Proposed § 1.45Z–2(b)(3)(i) would clarify that a transportation fuel may be produced in an earlier taxable year than the taxable year in which the qualified sale of the fuel occurs, but that a qualified sale may not occur before the date the fuel is produced. As a result, if a taxpayer sells transportation fuel before production, the qualified sale would occur on the date of production. Proposed § 1.45Z–2(b)(3)(ii) would provide that a qualified sale occurs at the time of the taxpayer's sale to the unrelated person, or if a related-person sale attribution rule applies, at the time of the related person's sale to the unrelated person.

C. Emissions Factor

Proposed § 1.45Z–2(c)(1) would incorporate the definition of ''emissions factor'' provided under section 45Z(b)(1)(A). Proposed § 1.45Z–2(c)(2) would incorporate the emissions factor rounding rule in section 45Z(b)(2) and provide an example.

D. Emissions Rate

Proposed § 1.45Z–2(d)(1) would incorporate the rules for determining the emissions rate of a transportation fuel in section 45Z(b)(1)(B) and (D). To determine an emissions rate for a fuel, a taxpayer would either use the applicable emissions rate table published by the Secretary or, if the applicable emissions rate table does not establish an emissions rate for the taxpayer's fuel, a PER determined by the Secretary.

Proposed § 1.45Z–2(d)(2) would incorporate section 70521(b) and (c)(1) of the OBBBA, which provide that for transportation fuel produced after December 31, 2025, the emissions rate cannot be less than zero, unless such fuel is derived from animal manure. Section 45Z(b)(1)(B)(v), which was added by section 70521(c)(1) of the OBBBA, provides that, notwithstanding that general rule, the Secretary ''may provide an emissions rate that is less than zero'' for a transportation fuel derived from an animal manure feedstock such as dairy, swine, or poultry manure. Proposed § 1.45Z–2(d)(2) would clarify that the limitation regarding negative emissions rates also applies to any transportation fuel used as a production input. The proposed rule would provide examples illustrating the negative-emissions-rate limitation and the effect of a negative emissions rate on the emissions factor calculation.

Proposed § 1.45Z–2(d)(3) would incorporate the rule in section 45Z(b)(1)(B)(iv), which was added by section 70521(c)(1) of the OBBBA, that excludes emissions attributed to indirect land use changes for transportation fuel produced after December 31, 2025.

As discussed in Part III.E. and III.F. of this Explanation of Provisions, under proposed § 1.45Z–2(e)(2), the applicable emissions rate table would direct a taxpayer to use the allowed methodologies described in section 45Z(b)(1)(B)(ii) and (iii) and set out in proposed § 1.45Z–2(e)(3), and any PER

would be determined pursuant to section 45Z(b)(1)(D) and the procedures in proposed § 1.45Z–2(f).

E. Emissions Rate Table

1. In General

Proposed § 1.45Z–2(e) would incorporate the rules in section 45Z(b)(1)(B) regarding the annual publication of a table of emissions rates for similar types and categories of transportation fuels (emissions rate table), including the requirement in section 45Z(b)(1)(B)(i) that the emissions rate table be published ''[s]ubject to'' the requirements in section 45Z(b)(1)(B)(ii) through (v).

The Treasury Department and the IRS will annually publish an emissions rate table for each calendar year in the Internal Revenue Bulletin. The annual emissions rate table for calendar year 2025 was published in Notice 2025–11.

Proposed § 1.45Z–2(e)(2) would provide rules for identifying the applicable emissions rate table that a taxpayer must use in a given taxable year. Proposed § 1.45Z–2(e)(2)(i) would clarify that the applicable emissions rate table for a taxpayer is the emissions rate table that is in effect on the first day of the taxpayer's taxable year of production. The proposed rule would also clarify that, for production after December 31, 2024, in taxable years beginning before January 1, 2025, the applicable emissions rate table is the emissions rate table effective for 2025.

In response to Notice 2025–10, stakeholders requested the ability to use an emissions rate table tied to the year construction of a facility began, regardless of when the taxpayer actually produces a transportation fuel. If a taxpayer begins constructing a facility in 2025 but such facility does not begin producing fuel until a subsequent calendar year, the stakeholders' requested rule would allow the taxpayer to use the emissions rate table for 2025 to determine the emissions rate of its fuel for all taxable years.

The proposed regulations would not adopt this suggestion. Section 45Z(b)(1)(B)(i) directs the Secretary to annually publish an emissions rate table and requires taxpayers to use such tables. The statute does not contemplate taxpayers locking in the use of old tables in later years. Additionally, the amount of the section 45Z credit depends in part on the emissions rate of the transportation fuel produced in a given taxable year. Accordingly, the emissions rate of a fuel is properly established using the emissions rate table in effect for the taxable year in which such fuel was produced. The beginning of construction date for the facility in which the fuel is produced has no significance with respect to emissions rates and is unrelated to the actual emissions associated with the production of transportation fuel after the facility is placed in service.

Proposed § 1.45Z–2(e)(2)(ii) would clarify that if a taxpayer produces a fuel for which the applicable emissions rate table establishes an emissions rate, the taxpayer must use the corresponding allowed methodologies, as specified in proposed § 1.45Z–2(e)(3), as provided in such table to determine the emissions rate for all such fuel produced during the taxpayer's taxable year.

Proposed § 1.45Z–2(e)(2)(iii)(A) would clarify that the applicable emissions rate table establishes the emissions rate for a fuel if the emissions rate table includes both the type and category of that fuel. Proposed § 1.45Z–2(e)(2)(iii)(B) would clarify that if an emissions rate table does not initially include a type or category of fuel, but an allowed methodology is updated to add such type or category of fuel during the calendar year, then that type or category of fuel is considered included in such emissions rate table.

The proposed regulations would generally require a taxpayer to use the latest annual emissions rate table (as opposed to prior annual tables) and would prevent the use of outdated modeling.

2. Allowed Methodologies

Proposed § 1.45Z–2(e)(3)(i) would provide that a taxpayer producing a fuel for which an emissions rate is established by the applicable emissions rate table must determine the fuel's emissions rate using the allowed methodologies described in proposed § 1.45Z–2(e)(3)(iv) and (v), as directed by the applicable emissions rate table.

Proposed § 1.45Z–2(e)(3)(ii) would require a taxpayer to use the first version of an allowed methodology that is publicly available in the taxable year of production and that includes the type and category of the taxpayer's fuel. However, if an updated version of an allowed methodology becomes publicly available after the first day of the taxable year of production (but still within such taxable year), then the taxpayer could choose to treat such updated version as the most recent version of such methodology. This choice would give a taxpayer the flexibility to choose the version of an allowed methodology to use with respect to taxable years for which an updated version of a methodology may be published during a taxpayer's taxable year of production. This would generally ensure that a taxpayer uses the latest modeling and benefits from favorable updates to a methodology, but would not penalize a taxpayer if a methodology is updated unfavorably during the taxable year.

The proposed regulations would address the requirement in section 45Z(b)(1)(B)(i) that the emissions rate table be published ''[s]ubject to'' the requirements in section 45Z(b)(1)(B)(ii) through (v). Proposed § 1.45Z–2(e)(3)(iv) and (v) would identify the allowed methodologies for determining emissions rates for purposes of the emissions rate table described in section 45Z(b)(1)(B)(i). If the applicable emissions rate table establishes the emissions rate for a non-SAF transportation fuel, a taxpayer producing such fuel would determine the fuel's emissions rate using the 45ZCF–GREET model, as directed by the applicable emissions rate table. If the applicable emissions rate table establishes the emissions rate for a SAF transportation fuel, a taxpayer producing such fuel would determine the fuel's emissions rate using the most recent version of the CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels lifecycle approach (CORSIA Default) or the CORSIA Methodology for Calculating Actual Life Cycle Emissions Values lifecycle approach (CORSIA Actual), with the agreement of the United States, or the 45ZCF–GREET model, as directed by the applicable emissions rate table. The proposed regulations would also clarify that, for a given type and category of SAF transportation fuel, a taxpayer must use the same methodology to calculate lifecycle GHG emissions associated with all stages of fuel feedstock production and distribution.

Section 45Z(b)(1)(B)(i) requires the emissions rate table to be based on the amount of lifecycle GHG emissions (as described in section 211(o)(1)(H) of the CAA–2022) for such fuels. Section 211(o)(1)(H) of the CAA–2022 defines lifecycle GHG emissions as the aggregate emissions from all stages of the fuel's production and use, including feedstock production and transportation, fuel production and distribution, and use of the finished fuel. This type of lifecycle analysis is referred to as ''well-to-wheel'' emissions analysis. As a result, for each type and category of transportation fuel, the 45ZCF–GREET model also uses ''well-to-wheel'' emissions to calculate lifecycle GHG emissions for all stages of fuel production, as well as emissions resulting from use of the fuel in transportation.

Section 70521(c)(1) of the OBBBA provides that for fuel produced after

December 31, 2025, notwithstanding the CAA reference in section 45Z(b)(1)(B)(i), the emissions rate of a transportation fuel shall exclude any emissions attributed to indirect land use change. *See* section 45Z(b)(1)(B)(iv).

3. 45ZCF–GREET Model

a. In General

Section 45Z(b)(1)(B)(ii) provides that in the case of non-SAF transportation fuel, the lifecycle GHG emissions of such fuel must be based on the most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model developed by the ANL, or a successor model (as determined by the Secretary). The DOE changed the name of the ''Greenhouse gases, Regulated Emissions, and Energy use in Transportation'' model to ''Greenhouse gases, Regulated Emissions, and Energy use in Technologies'' in 2020 and it is now generally referred to as the ''GREET'' model.

The GREET model refers to a suite of models, the first version of which was released in 1995 and is now called the Research & Development Greenhouse gases, Regulated Emissions, and Energy use in Technologies (R&D GREET) model. Since 1995, the DOE maintained the GREET model to enable research regarding lifecycle analyses of hundreds of different methods of producing, delivering, and using energy. The R&D GREET model was not designed to be used for determining emissions rates for tax credits, including the section 45Z credit, but the current suite of GREET models includes different versions, some of which are designed to facilitate particular regulatory regimes.

As of February 4, 2026 the DOE's GREET website lists the following different versions of the GREET model: R&D GREET, 40BSAF–GREET, 45VH2–GREET, 45ZCF–GREET, CA–GREET4.0, and ICAO–GREET. See *https://energy.gov/eere/greet.* For purposes of the section 45Z credit, the phrase ''most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model'' in section 45Z(b)(1)(B)(ii) is best understood as referring to the most recent determinations under the 45ZCF–GREET model. As discussed in Part III.E.3.b. of this Explanation of provisions, the proposed regulations would also designate the 45ZCF–GREET as a successor model to the GREET model under section 45Z(b)(1)(B)(ii).

Some stakeholders have suggested that the R&D GREET model should be used for the section 45Z credit. However, the 45ZCF–GREET model is the only appropriate GREET model to use for purposes of the section 45Z credit because the R&D GREET model is not limited to transportation fuels and includes information that is based on preliminary analyses (that is, analyses that are not yet complete, have significant technical uncertainties, or are still being reviewed by laboratory staff, the DOE staff, or independent experts). *See generally* GREET, Office of Energy Efficiency & Renewable Energy, DOE, available at *https://www.energy.gov/eere/greet.*

While the R&D GREET model is a valuable tool for characterizing the benefits and impacts of energy technologies in a directional manner and testing new and updated data and parameters, it is designed to provide flexibility in user-defined parameters and methodological choices for a wide variety of research purposes and thus not appropriate for use in policy applications without modifications. Because the R&D GREET model offers users many choices regarding analysis methodology (for example, co-product accounting method and global warming potential values), different users can calculate different emissions rates with respect to the same fuel. Many of these choices would not be appropriate for the specific context of the section 45Z credit given the potentially preliminary nature of much of the information represented in R&D GREET and given that specific representations of activities, and their emissions, are needed in a specific fashion (for example, to comply with the requirements of section 45Z). Given the limitations of some of the data underlying aspects of the R&D GREET model and the fact that the model does not predetermine for the user the methodologies and accounting parameters that are appropriate for compliance with the requirements of section 45Z, R&D GREET does not provide the analytical and methodological specificity necessary to meet the specific objectives or statutory requirements of the section 45Z credit.

ANL developed, and the DOE published, the 45ZCF–GREET model as a specific version of the GREET model to determine emissions rates that also meets three key parameters: (i) user-friendliness and consistency, (ii) technical robustness of the pathways represented, and (iii) consistency with the requirements of section 45Z. The 45ZCF–GREET model and the 45ZCF–GREET User Manual are available at *https://www.energy.gov/eere/greet.* The first version of the 45ZCF–GREET model, released on January 15, 2025, included the most commonly used types and categories of fuel that are anticipated to meet the eligibility requirements to claim the section 45Z credit. The 45ZCF–GREET model and the 45ZCF–GREET User Manual were updated in May 2025; such updates included adding pathways for alternative natural gas from coal mine methane capture and ethanol from U.S. corn wet mills. Additional types and categories of fuel may be added in future versions of the 45ZCF–GREET model.

Implementation of the section 45Z credit requires that data used to calculate emissions rates reflect a given taxpayer's specific operations and that such data be independently verifiable to the extent possible. Use of facility-specific verifiable data ensures that the section 45Z credit is available only to those fuels that meet statutory requirements. For certain parameters, bespoke inputs are unlikely to be easily measured by taxpayers and/or independently verifiable with high fidelity, given the current status of verification mechanisms. Thus, certain parameters in the 45ZCF–GREET model are fixed assumptions, referred to as ''background data,'' that are based on the best available data and may not be changed by users. Alternatively, the ''foreground data'' in the 45ZCF–GREET model are parameters that must be input by the user. The 45ZCF–GREET User Manual contains further details on background and foreground data.

b. 45ZCF–GREET as a Successor Model

The Treasury Department and the IRS recognize that the continued existence of the R&D GREET model and periodic updates to both the 45ZCF–GREET model and the R&D GREET model may create uncertainty about which GREET model to use. To address any potential uncertainty, the proposed regulations would invoke the Secretary's express delegation of authority in section 45Z(b)(1)(B)(ii) to require use of the 45ZCF–GREET model as a successor model.

In drafting the proposed regulations, the Treasury Department and the IRS considered the statutory definition of the term ''lifecycle greenhouse gas emissions'' in section 211(o)(1)(H) of the CAA–2022 and the specific objectives of section 45Z. The Treasury Department and the IRS also consulted with the DOE. Accordingly, the proposed regulations would reflect that the 45ZCF–GREET model is a model specifically developed by the ANL as a derivative of and successor to the R&D GREET model to meet the requirements and objectives of section 45Z.

c. Most Recent Determinations Under GREET

Regardless of any determination by the Secretary of a successor model, the phrase ''most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model'' in section 45Z(b)(1)(B)(ii) can be understood to refer to determinations under the most recent version of the 45ZCF–GREET model.

As discussed in Part III.E.3.a. of this Explanation of Provisions, the 45ZCF–GREET model is tailored to the administration of the section 45Z credit and includes features that make it easy for taxpayers to use. Use of the most recent version of the 45ZCF–GREET model would also ensure that the pathways and approaches provided for determining ''well-to-wheel'' emissions for various fuel production processes are of sufficient methodological certainty to be appropriate for determining eligibility for a tax credit.

d. SAF Portion of 45ZCF–GREET Model as a Similar Methodology

The proposed regulations would allow taxpayers to use the 45ZCF–GREET model to determine emissions rates for SAF transportation fuel (SAF portion of 45ZCF–GREET model). The SAF portion of the 45ZCF–GREET model is a ''similar methodology'' to CORSIA under section 45Z(b)(1)(B)(iii)(II) because, like the CORSIA fuel lifecycle methodologies, it evaluates the full fuel lifecycle, including all stages of fuel and feedstock production through to the end use of the finished fuel. The DOE worked with the Treasury Department and other Federal agencies to develop the 45ZCF–GREET model, including specifications for and limitations on background and foreground data, to satisfy the statutory requirements of section 45Z. Additionally, in the context of whether the R&D GREET model could be used to determine lifecycle GHG emissions for purposes of section 40B(e)(2),[5] the EPA identified certain necessary components of a lifecycle GHG analysis consistent with section 211(o)(1)(H) of the CAA–2022 that the R&D GREET model lacked. The EPA subsequently determined that the new 40BSAF–GREET 2024 model, created in 2024 for the now-expired SAF credit under section 40B, included the previously identified absent categories of emissions.[6] Similarly, the EPA found that the 45ZCF–GREET model includes the categories of emissions it previously identified as missing from the R&D GREET model, the lack of which made R&D GREET insufficient for calculating lifecycle GHG emissions for purposes of section 211(o)(1)(H) of the CAA–2022.[7]

The 45ZCF–GREET model contains certain necessary components of a lifecycle GHG analysis consistent with section 211(o)(1)(H) of the CAA–2022 as applied for purposes of the section 45Z regulations.[8] The 45ZCF–GREET model is consistent with the requirements of section 45Z(b)(1)(B)(iii). Therefore, emissions rates for SAF transportation fuels calculated using the 45ZCF–GREET model would also be consistent with those requirements as applied for purposes of the section 45Z regulations. *See* section 45Z(b)(1)(B)(i).

e. Other Aspects of 45ZCF–GREET Model

In the 45ZCF–GREET model, for purposes of accounting for emissions associated with hydrogen (as a production input), natural gas alternatives (as a production input or as the transportation fuel produced), electricity, and carbon capture and sequestration, rules similar to the rules under section 45V would apply unless otherwise specified by the 45ZCF–GREET model with respect to technical modeling issues or other technical differences. The proposed regulations would also clarify the similar rule for incrementality with respect to the use of energy attribute certificates in the 45ZCF–GREET model. *See also* § 1.45V–4(d).

In January 2025, the United States Department of Agriculture (USDA) published a beta version of the USDA Feedstock Carbon Intensity Calculator (USDA FD–CIC). The beta version of the USDA FD–CIC is undergoing testing, peer review, and public comment in preparation for the publication of a final version of USDA FD–CIC. Following publication of the final version of USDA FD–CIC, the Treasury Department and the IRS anticipate that a section 45Z-specific version of the Feedstock Carbon Intensity Calculator (FD–CIC) module will be included as an input to the DOE's 45ZCF–GREET model (45ZCF FD–CIC) used for calculating carbon intensity adjustments under section 45Z for feedstocks that are produced using certain agricultural practices. Such practices may include no till, reduced till, cover crops, and nutrient management. 45ZCF FD–CIC may undergo periodic updates, including incorporation of new data and methodologies from other FD–CIC versions (for example, USDA FD–CIC, R&D GREET FD–CIC (R&D FD–CIC)), to incorporate more recent data or new data sources, types of practices, feedstock types, or changes to geographic specificity. The results of the 45ZCF FD–CIC are expected to inform the emissions rates calculated under the 45ZCF–GREET model. The Treasury Department and the IRS anticipate that 45ZCF FD–CIC may be used for fuel produced and sold in 2025 even though 45ZCF FD–CIC likely will be published in 2026.

The Treasury Department and the IRS anticipate that adoption of 45ZCF FD–CIC would entail additional requirements particular to its use, such as agricultural practice implementation, recordkeeping, and verification, which may include rules similar to those provided in the USDA's technical guidelines for crops used as biofuel feedstocks in 7 CFR 2100, subparts D, E, and F. The Treasury Department and the IRS anticipate publishing additional guidance on these requirements in coordination with the publication of 45ZCF FD–CIC.

F. Provisional Emissions Rate (PER)

1. In General

Many stakeholders have expressed the urgent need for guidance to clarify the scope and mechanics of the PER process referenced in section 45Z(b)(1)(D), which provides that if the emissions rate table does not establish an emissions rate for a transportation fuel, a taxpayer producing such fuel may file a petition with the Secretary for determination of the emissions rate with respect to such fuel, known as a ''PER.''

Proposed § 1.45Z–2(f)(1) would establish the procedures a taxpayer must follow to request a PER

[5] As in section 45Z(b)(1)(B)(iii)(II), section 40B(e)(2) requires that a methodology similar to CORSIA must also satisfy the criteria under section 211(o)(1)(H) of the CAA–2022. *See also* Notice 2024–37, 2024–21 I.R.B. 1191.

[6] *See* Letter from Joseph Goffman, Principal Deputy Assistant Administrator for the Office of Air and Radiation, U.S. Environmental Protection Agency, to Lily Batchelder, Assistant Secretary for Tax Policy, U.S. Department of Treasury (December 13, 2023) (EPA December 2023 Letter), *available at https://home.treasury.gov/system/files/136/Final-EPA-letter-to-UST-on-SAF-signed.pdf.*

[7] *See* Letter from Joseph Goffman, Assistant Administrator for the Office of Air and Radiation, U.S. Environmental Protection Agency, to Aviva Aron-Dine, Deputy Assistant Secretary for Tax Policy, U.S. Department of Treasury (January 8, 2025) (EPA January 2025 Letter), *available at https://home.treasury.gov/system/files/136/January-2025-EPA-letter-to-UST-on-45zcf-GREET-signed.pdf.*

[8] The 45ZCF–GREET model includes significant indirect emissions from land use, crop production, and livestock. Due to the OBBBA, indirect emissions from land use, also known as induced or indirect land use change, will be excluded for purposes of transportation fuel produced after December 31, 2025. *See* section 45Z(b)(1)(B)(iv); section 70521(c) of the OBBBA.

determination. The proposed regulations would require a taxpayer to submit an emissions value request (EVR) to the DOE and obtain a calculated emissions value letter (CEVL) from the DOE, prior to filing a PER petition.

2. PER Terminology

Proposed § 1.45Z–1(b) would define terms associated with the PER procedures set out in proposed § 1.45Z–2(f). Proposed § 1.45Z–1(b)(12) would define ''eligible fuel,'' for purposes of the PER procedures in proposed § 1.45Z–2(f) and the associated definitions in proposed § 1.45Z–1(b), as either a type of fuel not included in the applicable emissions rate table, or a type of fuel included in the applicable emissions rate table but whose category is not included in the applicable emissions rate table.

Proposed § 1.45Z–1(b) would also define terms related to requesting an emissions value (EV) from the DOE, which would be a prerequisite to filing a PER petition. Proposed § 1.45Z–1(b)(15) would define the term ''emissions value'' or ''EV'' as the value setting forth the DOE's analytical assessment of the lifecycle GHG emissions associated with the fuel for which the EVR was made. Proposed § 1.45Z–1(b)(17) would define the term ''EV applicant'' as a taxpayer submitting an EVR for an eligible fuel to the DOE. Proposed § 1.45Z–1(b)(6) would define the term ''calculated emissions value letter'' or ''CEVL'' as the letter setting forth the emissions value and DOE control number that the DOE issues to an applicant whose EVR is completed.

3. Threshold Requirements

Proposed § 1.45Z–2(f)(2) would provide that the DOE and the IRS, respectively, will deny any EVR or PER petition for a type and category of fuel included in the applicable emissions rate table. The proposed rule would provide that a taxpayer may only request an emissions value, and subsequently a PER determination, for an eligible fuel. Because the section 45Z credit is computed for a type and category of fuel, the proposed rule would also clarify that the DOE and the IRS, respectively, will deny any EVR or PER petition based on a facility rather than a type or category of fuel.

4. Emissions Value Requests

Proposed § 1.45Z–2(f)(3) would describe the rules for requesting an EV from the DOE for an eligible fuel. Proposed § 1.45Z–2(f)(3)(i) would direct applicants to follow the guidance and procedures that the DOE will separately publish for EVRs, including the section 45Z EVR process instructions (Instructions). Proposed § 1.45Z–2(f)(3)(i) would also describe common assumptions for EVRs, including the well-to-wheel system boundary and certain accounting rules.

Proposed § 1.45Z–2(f)(3)(ii) would describe the information required by the DOE for an EVR. Proposed § 1.45Z–2(f)(3)(ii)(A) would generally require that an EV applicant provide all information required by the DOE's Instructions, including sections of a Class 3 Front-End Engineering and Design (FEED) study (or studies) or other indicator of project maturity, as determined by the DOE, and a completed Section 45Z EVR Form.

Proposed § 1.45Z–2(f)(3)(ii)(B) would provide that for an EVR for an eligible fuel that is a category of hydrogen, an EV applicant must first submit a section 45V Emissions Value Request Application in accordance with the process for a PER determination for the section 45V credit, as described in § 1.45V–4(c). The proposed rule would provide that the EV applicant must submit the letter obtained under the section 45V EVR process from the DOE stating the well-to-gate emissions value that the DOE determined with respect to the facility's hydrogen production pathway and the control number that the DOE assigned to the section 45V EVR Application. Once such applicant completes the section 45V EVR process and submits its EVR for purposes of section 45Z, the DOE may issue a CEVL, which would include an EV that fully accounts for the well-to-wheel emissions of such category of hydrogen.

The proposed rule would also clarify that if the EV applicant produces such category of hydrogen at multiple facilities, such applicant will need to provide this information for each facility. *See* Part IV.B. of this Explanation of Provisions for a discussion of the anti-stacking rules between section 45Z and section 45V.

5. Submitting a PER Petition

Proposed § 1.45Z–2(f)(4) would provide the exclusive procedures for requesting a PER determination. Proposed § 1.45Z–2(f)(4)(i) would clarify that a taxpayer requests a PER determination by filing a PER petition with the Form(s) 7218 included with the taxpayer's timely filed (including extensions) Federal income tax return or Federal information return for the first taxable year for which the taxpayer claims the section 45Z credit for the eligible fuel to which the PER petition relates. Proposed § 1.45Z–2(f)(4)(ii) would describe the required content of a PER petition, which would consist of the CEVL for each eligible fuel for which the section 45Z credit is being claimed for a given taxable year.

6. Determination of a PER

Proposed § 1.45Z–2(f)(5)(i) would provide that a properly filed PER petition is deemed accepted by the IRS, and that the deemed acceptance constitutes the Secretary's determination of the PER. As such, proposed § 1.45Z–2(f)(5)(ii) would clarify that a taxpayer may rely on the EV the DOE provides in a CEVL for purposes of calculating and claiming the section 45Z credit, provided that all information, representations, or other data the taxpayer provided to the DOE in support of the taxpayer's EVR are accurate.

G. Relation Back of Emissions Rates (Including PER)

Proposed § 1.45Z–2(g) would provide that when an emissions rate is first determined for a type and category of fuel, whether established in an applicable emissions rate table or by a PER determination, that emissions rate will relate back to January 1, 2025. The proposed rule would ensure that even if a taxpayer cannot determine the emissions rate for a type and category of fuel at the time of production, either because such type and category of fuel are not established in the applicable emissions rate table or because the Secretary has not determined a PER, such taxpayer may utilize a later-determined emissions rate for such fuel as of the date of production.

IV. Special Rules

Proposed § 1.45Z–4 would provide special rules with respect to the determination of a section 45Z credit. Generally, these rules would address the: (i) required registration at the time of production; (ii) anti-stacking rules; (iii) anti-abuse rules; (iv) attribution of production; (v) lack of ownership requirement; (v) foreign feedstocks and prohibited foreign entities; and (vi) specific recordkeeping and substantiation requirements.

A. Only Registered Production in the United States Taken Into Account

As provided in section 45Z(f)(1), proposed § 1.45Z–4(a) would provide that no section 45Z credit is determined with respect to any transportation fuel unless the taxpayer is registered as a producer of clean fuel (within the meaning of section 4101) at the time of production and the fuel is produced in the United States, which includes any territory of the United States. Proposed

§ 1.4101–1, which would provide the registration rules under section 4101, is further discussed in Part VII. of this Explanation of Provisions.

B. Anti-Stacking Rules

As previously discussed in Part II.G.2. of this Explanation of Provisions, section 45Z(d)(4)(B) disallows a section 45Z credit for fuel produced at a facility for which an anti-stacking credit (as defined in proposed § 1.45Z–1(b)(28)(ii)) is allowed. Proposed § 1.45Z–4(b) would provide anti-stacking rules that would govern the interaction between different credits if a facility both produces transportation fuel under section 45Z and engages in other credit-eligible activity. The proposed rule also includes examples. To the extent permitted by statute, the proposed rule would generally preserve taxpayer choice of which credit to claim—a section 45Z credit or an anti-stacking credit—for a taxpayer engaging in multiple credit-eligible activities at the same facility in a taxable year. For instance, a taxpayer producing hydrogen that qualifies for both a section 45V credit and a section 45Z credit can generally choose which credit to claim.

In addition to general comments on the proposed anti-stacking rules, the Treasury Department and the IRS request specific comments addressing situations in which a facility either has multiple owners or in which a taxpayer does not own the facility, including administrative and compliance issues arising under those scenarios.

Proposed § 1.45Z–4(b)(2) would provide that the determination of whether a facility is a qualified facility is made each taxable year. Therefore, under the proposed rule, a facility may be a qualified facility in one taxable year but not in another taxable year. Additionally, in the case of a taxpayer producing transportation fuel at multiple facilities, the taxpayer would separately determine for each facility whether the fuel was produced at a qualified facility. The proposed rules are consistent with the anti-stacking rules in section 45Z(d)(4)(B), which are tied to the taxable year.

Proposed § 1.45Z–4(b)(3) would provide examples illustrating the application of the anti-stacking rules to section 45Z for each of the anti-stacking credits. One example would address situations in which the person claiming an anti-stacking credit for a facility has a different taxable year than the taxpayer producing transportation fuel at that facility. The examples would also clarify that the anti-stacking rules apply regardless of whether the taxpayer or another person claims an anti-stacking credit with respect to a facility.

C. Anti-Abuse Rules

As indicated in Notice 2025–10, the Treasury Department and the IRS are cognizant of potential abuses of the section 45Z credit, including situations in which a taxpayer produces and sells transportation fuel in a manner that is inconsistent with Congressional intent in enacting section 45Z. The Treasury Department and the IRS are also concerned about other potential abuse, such as circular production, credit churning or wasteful production with no intended use, and abuse of the anti-stacking rules.

Proposed § 1.45Z–4(c) would provide that the rules of section 45Z and the section 45Z regulations must be applied in a manner consistent with the purposes of section 45Z and the section 45Z regulations (and the regulations in under sections 6417 and 6418 related to the section 45Z credit), including incentivizing the domestic production and use of clean transportation fuel and ensuring that taxpayers do not circumvent the feedstock origin and anti-stacking rules. Therefore, the proposed rule would provide that no section 45Z credit is determined if the primary purpose of the production and sale of clean transportation fuel is to obtain the benefit of the section 45Z credit in a manner that is wasteful, such as discarding, disposing of, or destroying the transportation fuel without putting it to a productive use. The proposed rule would further provide that whether the production and sale of transportation fuel is consistent with the purposes of section 45Z and the section 45Z regulations (and the regulations in this chapter under sections 6417 and 6418 related to the section 45Z credit) is based on all facts and circumstances.

Section 45Z(e) delegates authority to the Secretary to issue guidance regarding implementation of section 45Z, including the determination of section 45Z credits. Therefore, the proposed regulations would provide general anti-abuse rules that are consistent with the three prongs of the section 45Z(a)(4) definition of ''sale'' (referred to as a ''qualified sale'' in these proposed regulations) that focus on post-production uses of transportation fuel.

The Treasury Department and the IRS request comments on the need for these or additional section 45Z anti-abuse rules. The Treasury Department and the IRS also request comments on the potentially abusive scenarios that should be covered by any anti-abuse rules.

D. Production Attributable to the Taxpayer and Section 761(a) Elections

Consistent with section 45Z(f)(2), proposed § 1.45Z–4(d) would provide rules for production attributable to the taxpayer. For a facility in which more than one person has an ownership interest (and the arrangement is not classified as a partnership for Federal tax purposes), proposed § 1.45Z–4(d)(1) would provide that production from the facility is allocated among those persons in proportion to their respective ownership interests in the gross sales from the facility. The proposed rule would further provide that each owner's respective allocable share of the section 45Z credit is based on each owner's allocable share of production, determined pursuant to section 45Z and these proposed regulations. Proposed § 1.45Z–4(d)(2) would provide an example of production attributable to the taxpayer. Proposed § 1.45Z–4(d)(3) would address instances in which a facility is owned pursuant to a valid section 761(a) election.

E. Facility Ownership Not Required

Credit eligibility under section 45Z is tied to production of a transportation fuel at a qualified facility and a subsequent qualified sale of the fuel. There is no statutory requirement that the producer of the transportation fuel own the qualified facility. Proposed § 1.45Z–4(e) would address situations in which the producer does not own the qualified facility at which it produces the transportation fuel, to ensure that production is attributed fairly and accurately in those situations.

Proposed § 1.45Z–4(e)(1) would clarify that a taxpayer is not required to own the qualified facility at which it produces transportation fuel for a section 45Z credit to be determined with respect to such fuel. If a taxpayer produces transportation fuel at a qualified facility owned by another person, proposed § 1.45Z–4(e)(2) would attribute that production to the taxpayer unless otherwise specified in the Code or the section 45Z regulations. In the case of a production arrangement under which multiple taxpayers produce transportation fuel at a facility that is not owned by all the taxpayers, production would be allocated among the taxpayers in proportion to their respective interests in the gross sales from that fuel, as determined under the applicable contract or other legal arrangement with respect to the fuel.

F. Foreign Feedstock and Prohibited Foreign Entity Restrictions

Consistent with section 45Z(f)(1)(A)(iii), as added by section 70521(a) of the OBBBA, proposed § 1.45Z–4(f)(1) would provide that transportation fuel that is produced after December 31, 2025, must be exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada.

Consistent with section 45Z(f)(8), as added by section 70521(k) of the OBBBA, proposed § 1.45Z–4(f)(2) would prohibit the determination of a section 45Z credit: (i) for taxable years beginning after July 4, 2025, if the taxpayer is a specified foreign entity; and (ii) for taxable years beginning after July 4, 2027, if the taxpayer is a foreign-influenced entity (other than a foreign-influenced entity that made certain payments to a specified foreign entity). *See* section 7701(a)(51)(B) and (D) for definitions of the terms *specified foreign entity* and *foreign-influenced entity.*

G. Specific Recordkeeping and Substantiation Requirements

In addition to the general recordkeeping requirements under section 6001 and § 1.6001–1, proposed § 1.45Z–4(g) would require a taxpayer claiming the section 45Z credit to maintain records sufficient to establish the taxpayer's eligibility for the section 45Z credit and the amount of the credit claimed. It would also provide two safe harbors: (i) for substantiating emissions rates with respect to non-SAF transportation fuel; and (ii) for substantiating qualified sales of transportation fuel.

The proposed recordkeeping and substantiation requirements are necessary to ensure the accuracy of reported emissions rates and because the amount of the section 45Z credit may depend on certain operational choices, such as use of certain types of feedstocks or fuels, or engaging in certain emissions-reduction practices like carbon capture and sequestration (which may vary from year to year).

1. In General

Proposed § 1.45Z–4(g)(1) would provide that at a minimum, sufficient records include records: (i) establishing that each fuel produced is a transportation fuel; (ii) establishing any relevant information relating to the primary feedstock(s) used to produce each fuel; (iii) establishing that each fuel meets any additional specifications for the type of fuel as described in § 1.45Z–1(b)(24) or (30); (iv) substantiating how the emissions rate for each fuel was determined (including, if applicable, the specific type(s) and category(ies) under the applicable emissions rate table); (v) relating to any fuel testing obtained by the taxpayer; (vi) establishing that each facility used to produce fuel is a qualified facility; (vii) establishing the date each facility was placed in service; (viii) establishing that each fuel was sold in a qualified sale; and (ix) establishing any certification from an unrelated person and substantiating the information contained therein. A taxpayer must also keep all information, including raw data, used for or related to any petition for a PER. If a taxpayer is claiming an increased credit amount by satisfying the PWA requirements, the taxpayer must also maintain the records described in § 1.45Z–3 (referencing § 1.45–12).

Proposed § 1.45Z–4(g)(2) would provide a safe harbor for substantiating the emissions rate for a non-SAF transportation fuel that was determined using the 45ZCF–GREET model. A taxpayer relying on this safe harbor would need to obtain certification in substantially the same form and manner described in proposed § 1.45Z–5 (related to certification for a SAF transportation fuel) with respect to that non-SAF transportation fuel. The proposed § 1.45Z–5 certification requirements are discussed in Part V. of this Explanation of Provisions.

Proposed § 1.45Z–4(g)(3)(i) would provide a safe harbor for substantiating whether the sale of a transportation fuel is a qualified sale for purposes of section 45Z. A taxpayer relying on this safe harbor would need to obtain from the purchaser a certificate prepared by the purchaser under penalty of perjury in substantially the same form and manner as that described in proposed § 1.45Z–4(g)(3)(ii). Proposed § 1.45Z–4(g)(3)(ii) would include a model certificate that a taxpayer may use for purposes of meeting this safe harbor. If the certificate relates to a single purchase, the taxpayer must obtain the certificate from the purchaser prior to or at the time of sale. If the certificate relates to purchases made over a period of time, the taxpayer must obtain the certificate from the purchaser prior to or at the same time as the initial sale to which the certificate relates. The safe harbor would require that a taxpayer have no reason to believe that any information in the certificate regarding the use of the transportation fuel is false. The safe harbor would also require a taxpayer to maintain the certificate with respect to the sale of transportation fuel in its books and records.

Additionally, the Treasury Department and the IRS request comments on what types of documentation or other substantiation a taxpayer should maintain to establish: proper determination of a fuel's emissions rate, including the inputs into CORSIA Default, CORSIA Actual, or the 45ZCF–GREET model; certification from an unrelated person for non-SAF transportation fuel; existing systems, industry standards, or customary practices that may be used to substantiate emissions rate and inputs into CORSIA Default, CORSIA Actual, or the 45ZCF–GREET model (or if there are none, how such tracking and verification systems should be developed, with potential timelines regarding development).

2. Foreign Feedstocks Including Used Cooking Oil

As explained in Notice 2025–10, the Treasury Department and the IRS remain concerned about the ability to reliably distinguish between imported used cooking oil (UCO) and palm oil, and the resulting risk of crediting ineligible fuels. Furthermore, section 45Z(f)(1)(A)(ii) provides that transportation fuel that is produced after December 31, 2025, must be exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada. As previously discussed in Part IV.F. of this Explanation of Provisions, proposed § 1.45Z–4(f)(1) would implement this statutory change.

Consistent with this approach, pathways that use foreign feedstocks (including UCO) for fuel produced after December 31, 2025, will not be available in the 45ZCF–GREET model until the Treasury Department and the IRS publish further guidance. A feedstock is considered a foreign feedstock if it originates from a source (for example, a farm, restaurant, or food processor) and/or is purchased from an aggregator located outside the United States, Canada, or Mexico.

The Treasury Department and the IRS are considering appropriate substantiation and recordkeeping requirements for feedstocks imported from Canada and Mexico (including UCO), and request comments on possible approaches with respect to substantiating that any imported feedstocks meet the statutory sourcing requirement. The Treasury Department and the IRS are also interested in any industry practices to track feedstock source(s) that would mitigate potential taxpayer burden while being administrable for the IRS. For example, whether using specific existing business records, a taxpayer could demonstrate that feedstocks exclusively produced in

Canada or Mexico did not contain other feedstocks or additives that originated outside of Canada or Mexico.

The Treasury Department and the IRS also request comments on purchases from aggregators of UCO and approaches to determine the underlying source(s) of the UCO that are administrable for taxpayers and the IRS. The Treasury Department and the IRS request comments on, for instance, whether there are reliable methods that would indicate the geographic location where seeds originated or crops were grown as a precursor for use as cooking oil, which could be used to determine whether the foreign feedstock limitation in section 45Z(f)(1)(A)(iii) applies.

V. Procedures for Certification of Lifecycle Greenhouse Gas Emissions Rates

Proposed § 1.45Z–5 would provide rules for certification from an unrelated person of emissions rates for SAF transportation fuel (certification). The rules would describe the content, form, and manner of the required certification under section 45Z(f)(1)(A)(i)(II). Proposed § 1.45Z–5(b) through (f) would provide rules relating to the content of the certification. Proposed § 1.45Z–5(g) would describe the requirements for timely certification. Proposed § 1.45Z–5(h) would provide a model certification.

A. Requirements for Certifications

1. In General

In general, proposed § 1.45Z–5(b)(1) would provide that for each taxable year for which a taxpayer claims a section 45Z credit for SAF transportation fuel, the taxpayer must obtain a certification from an unrelated person and include such certification with the taxpayer's Form 7218, which is filed with the taxpayer's Federal income tax return or Federal information return, for each qualified facility at which the taxpayer produces SAF transportation fuel.

Proposed § 1.45Z–5(b)(2) would provide that the certification described in proposed § 1.45Z–5(b)(1) must be prepared by a qualified certifier (as defined in proposed § 1.45Z–5(b)(3)) and signed by the qualified certifier under penalty of perjury. Proposed § 1.45Z–5(b)(2) would further provide that the certification must include information that is in substantially the same form as the model certification provided in proposed § 1.45Z–5(h). Proposed § 1.45Z–5(b)(2)(i) through (vi) would describe the following information that a certification must contain: (i) a statement from the qualified certifier regarding the production of SAF transportation fuel (production statement); (ii) a statement from the qualified certifier regarding conflicts of interest (conflict statement); (iii) information regarding the qualified certifier, including documentation of the qualified certifier's qualifications (qualified certifier statement); (iv) certain general information about the qualified facility at which the SAF transportation fuel production undergoing certification occurred (qualified facility statement); (v) any documentation necessary to substantiate the certification process given the standards and best practices prescribed by the qualified certifier's accrediting body as they apply to the circumstances of the taxpayer and the qualified facility; and (vi) any other information or documentation required by applicable IRS tax forms or form instructions.

2. Production Statement

Proposed § 1.45Z–5(c)(1) would provide that the production statement must state that the qualified certifier performed a certification sufficient for the IRS to determine that any lifecycle GHG emissions data inputs and the operation, during the applicable taxable year, of the qualified facility that produced the SAF transportation fuel for which the section 45Z credit is claimed are accurately reflected in: (i) the number of gallons of SAF transportation fuel produced by the taxpayer that is entered on the Form 7218 with which the certification is included; and (ii) either the data the taxpayer input into the allowed methodology under proposed § 1.45Z–2(e)(3), or the data the taxpayer submitted in its PER petition and that was provided to the DOE in support of the taxpayer's request for the emissions value provided in the PER petition.

Proposed § 1.45Z–5(c)(2) would provide that, if a taxpayer submitted a PER petition, then the production statement must also specify the emissions value received from the DOE that was calculated using the data provided in support of the taxpayer's emissions value request.

Proposed § 1.45Z–5(c)(3) would provide that the production statement must specify the lifecycle GHG emissions rate and the amount of SAF transportation fuel produced by the taxpayer that are entered on the Form 7218 with which the certification is included.

3. Conflict Statement

Proposed § 1.45Z–5(d)(1) would provide that the conflict statement must state that: (i) the qualified certifier has not received a fee based to any extent on the value of any section 45Z credit that has been or is expected to be claimed by the taxpayer, and no arrangement has been made for such fee to be paid at any time in the future; (ii) the qualified certifier has not been a party to any transaction involving the sale of SAF transportation fuel the taxpayer produced or in which the taxpayer purchased primary feedstocks for the production of such SAF transportation fuel; (iii) the qualified certifier is unrelated to the taxpayer and is not an employee of the taxpayer; and (iv) the qualified certifier is not married to anyone who is related to, or an employee of, the taxpayer.

Proposed § 1.45Z–5(d)(2) would provide that if the qualified certifier is acting in his or her capacity as a partner in a partnership, an employee of any person, whether an individual, corporation, or partnership, or an independent contractor engaged by a person other than the taxpayer, the statements described in proposed § 1.45Z–5(d)(1) must also be made with respect to the partnership or the person that employs or engages the qualified certifier.

4. Qualified Certifier Statement

Proposed § 1.45Z–5(e) would provide that the qualified certifier statement must include: (i) the qualified certifier's name, address, and certifier identification number; (ii) the qualified certifier's qualifications to conduct the certification, including a description of the certification the qualified certifier received from the accrediting body; (iii) if the qualified certifier is acting in his or her capacity as a partner in a partnership, an employee of any person, whether an individual, corporation, or partnership, or an independent contractor engaged by a person other than the taxpayer, the name, address, and certifier identification number of the partnership or the person that employs or engages the qualified certifier; (iv) the signature of the qualified certifier and the date of signature; and (v) a statement that the certification was conducted for Federal tax purposes.

5. Information on Taxpayer's Qualified Facility

Proposed § 1.45Z–5(f) would provide that the certification must include: (i) the location of the qualified facility; (ii) a description of the qualified facility, including its method of producing SAF transportation fuel; (iii) the type(s) of primary feedstock(s) used by the qualified facility to produce the SAF transportation fuel during the taxable

year of production; (iv) the amount(s) of primary feedstock(s) used by the qualified facility to produce the SAF transportation fuel during the taxable year of production; (v) the location(s) from which the qualified facility sourced the primary feedstock(s) used to produce the SAF transportation fuel during the taxable year of production; (vi) a list of the metering devices used to record any data used by the qualified certifier to support the production statement under proposed § 1.45Z–5(c), along with a statement that the qualified certifier has reason to believe that the device(s) underwent industry-appropriate quality assurance and quality control, and the accuracy and calibration of the device has been tested in the year prior to the time of observation; and (vii) confirmation that the emissions rate of the SAF transportation fuel produced during the taxable year of production is accurate to the higher of +/− 5% or 2 kilograms of CO_2e per mmBTU.

B. Qualified Certifier

Proposed § 1.45Z–5(b)(3) would provide rules regarding qualified certifiers for the allowed methodologies. A qualified certifier would be required to have the relevant active accreditation as of the date it provides a certification to a taxpayer.

1. CORSIA Methodologies

Proposed § 1.45Z–5(b)(3)(i) would provide that, for taxpayers using CORSIA Default or CORSIA Actual to determine the emissions rate for SAF transportation fuel, the term *qualified certifier* means any individual or organization that is unrelated to the taxpayer and is not an employee of the taxpayer, and that has an active accreditation from International Sustainability and Carbon Certification, Roundtable on Sustainable Biomaterials, ClassNK, or other sustainability certification scheme approved by ICAO. Such individuals or organizations are experienced and familiar with evaluating information regarding CORSIA Default and CORSIA Actual.

2. 45ZCF–GREET Model

Proposed § 1.45Z–5(b)(3)(ii) would provide that, for taxpayers using the 45ZCF–GREET model to determine the emissions for SAF transportation fuel, the term *qualified certifier* means any individual or organization that is unrelated to the taxpayer and is not an employee of the taxpayer, and that has an active accreditation from: (i) the American National Standards Institute National Accreditation Board (ANAB) to conduct validation and verification in accordance with the requirements of International Organization for Standardization (ISO) 14065; or (ii) as a verifier, lead verifier, or verification body under the California Air Resources Board Low Carbon Fuel Standard (CARB LCFS) program. Such ANAB and CARB LCFS verifiers are experienced with evaluating information similar to the information included in the 45ZCF–GREET model.

C. Timely Certification Required

Proposed § 1.45Z–5(g) would provide that a certification that includes all required information is valid with respect to a particular claim only if it is signed and dated by the qualified certifier no later than: (i) the due date, including extensions, of the Federal income tax return or Federal information return for the taxable year during which the SAF transportation fuel undergoing certification is sold in a qualified sale; or (ii) in the case of a section 45Z credit first claimed for the taxable year on an amended return or administrative adjustment request (AAR), the date on which the amended return or AAR is filed.

VI. Procedures for Filing a Claim for the Clean Fuel Production Credit

Proposed § 1.45Z–6 would describe the time and manner of filing a claim for the section 45Z credit and provide special rules for cases in which the taxpayer claiming the credit is not the registered producer of a transportation fuel. Under the proposed rule, a taxpayer claiming a section 45Z credit would either be the person registered as a producer of a transportation fuel at the time of production, or a person that would be treated as the registrant.

A. Time and Manner of Filing a Claim

In general, proposed § 1.45Z–6(a) would provide that a taxpayer claims the section 45Z credit on a completed Form 7218 included with the taxpayer's timely filed (including extensions) Federal income tax return or Federal information return for the taxable year for which the taxpayer claims the section 45Z credit. Under proposed § 1.45Z–6(a), a taxpayer would need to complete a separate Form 7218 for each qualified facility at which it produces a transportation fuel for which it is claiming a credit.

B. Proper Claimant

Proposed § 1.45Z–6(b)(1) would provide the general rule that only a taxpayer that is registered by the IRS as a producer of transportation fuel at the time of production may claim the section 45Z credit.

Proposed § 1.45Z–6(b)(2)(i) through (iii) would provide special rules for situations in which a person other than a registered producer of transportation fuel may claim the section 45Z credit. These special rules would generally apply to: (i) a taxpayer that owns an entity that is disregarded as an entity separate from its owner, as defined in § 301.7701–2(c)(2)(i) (disregarded entity); (ii) an S corporation (as defined in section 1361(a)(1)) that owns a qualified subchapter S subsidiary (QSub), as defined in section 1361(b)(3)(B); and (iii) an agent for a consolidated group, as defined in § 1.1502–77. The proposed rules are consistent with the section 45Z Fact Sheet FAQs but provide additional specificity and clarity.

Proposed § 1.45Z–6(b)(2)(i) would provide that in the case of a disregarded entity that produces transportation fuel and is registered as a producer of transportation fuel at the time of production, the taxpayer that owns the disregarded entity is treated as the registered producer for purposes of claiming the section 45Z credit.

Proposed § 1.45Z–6(b)(2)(ii) would provide that in the case of a QSub that produces transportation fuel and is registered as a producer of transportation fuel at the time of production, the S corporation that owns the QSub is treated as the registered producer for purposes of claiming the section 45Z credit.

Proposed § 1.45Z–6(b)(2)(iii) would clarify that if a member of a consolidated group is registered as a producer of transportation fuel at the time of production, the agent for such consolidated group is treated as the registered producer for purposes of claiming the section 45Z credit.

VII. Section 4101 Registration

A. Section 4101 Registration Generally

Proposed § 1.4101–1 would provide rules for section 4101 registration for purposes of section 45Z, including rules addressing disregarded entities, QSubs, and members of a consolidated group, and the registration tests for purposes of section 45Z(f)(1)(A)(i)(I). The proposed rules are modeled after the longstanding registration rules in § 48.4101–1 of the Manufacturers and Retailers Excise Tax Regulations that apply for purposes of fuel excise taxes and credits. This registration requirement is distinct from the required pre-filing registration for a taxpayer that intends to make a section 6417 or section 6418 election, as provided by the Credit Transfer Election Regulations and the Elective Payment Election Regulations.

Proposed §§ 1.4101–1(a)(4) and 48.4101–1(a)(8) would provide rules for reregistration. Proposed §§ 1.4101–1(h) and 48.4101(a)(7) would provide rules regarding the effect of a Letter of Registration for purposes of section 45Z and excise tax registrations, respectively.

Proposed § 1.4101–1 would provide rules regarding the approval, denial, revocation, or suspension of registration that are similar to the rules of section 4222(c) and § 48.4222(c)–1. Additionally, many of the requirements of proposed § 1.4101–1 would be similar or identical to the existing provisions of § 48.4101–1 and to proposed § 48.4101–1(a)(7) and (8), which would facilitate consistent tax administration. The Treasury Department and the IRS are aware that many applicants for registration for purposes of the section 45Z credit and other income tax credits must also be registered under section 4101 for excise tax purposes. As a result, many applicants are already familiar with the section 4101 registration process and must maintain other section 4101 registrations (in addition to the registration required under section 45Z(f)(1)(A)(i)(I) and other income tax registrations).

B. Letter of Registration Required

Proposed § 1.4101–1(a)(2) would provide that a person is registered under section 4101 only if the IRS has issued that person a Letter of Registration under the appropriate activity letter and the registration has not been revoked or suspended. This proposed rule is similar to § 48.4101–1(a)(2).

C. Separate Entity Treatment

Proposed § 1.4101–1(a)(3)(i) would provide that each business unit that has, or is required to have, a separate EIN is treated as a separate person for purposes of registration. Proposed § 1.4101–1(a)(3)(ii) would provide that § 301.7701–2(c)(2)(i) (disregarded entity treatment for certain wholly owned entities) does not apply for purposes of registration under proposed § 1.4101–1. Under the proposed rule, a disregarded entity that has, or is required to have, an EIN would be treated as a corporation for purposes of registration. Therefore, under the proposed rule, if such an entity produces transportation fuel, it must be registered as a producer of transportation fuel at the time of production for the owner of the disregarded entity to be eligible to claim the section 45Z credit for such fuel.

Proposed § 1.4101–1(a)(3)(iii) would provide that a QSub is treated as a separate corporation for purposes of registration under proposed § 1.4101–1. As a consequence, each QSub that has an EIN and that produces transportation fuel must be registered as a producer of transportation fuel at the time of production for its S corporation owner to be eligible to claim the section 45Z credit for such fuel. For consistency and clarity, the proposed regulations would also amend the introductory clause of § 1.1361–4(a)(1) (which generally ignores a QSub's separate existence for Federal tax purposes) by adding proposed § 1.4101–1(a)(3)(iii) to the list of exceptions.

The Treasury Department and the IRS understand that many facilities that produce transportation fuel are owned by a disregarded entity. The proposed regulations would provide registration rules that would reflect this practice while also satisfying the statutory requirements. The proposed rules would be similar to and consistent with: (i) § 48.4101–1(a)(4), which provides that every business that has, or is required to have, a separate EIN is treated as a separate person for purposes of excise tax registration under section 4101; (ii) § 301.7701–2(c)(2)(v)(A)(*3*), which provides that § 301.7701–2(c)(2)(i) (concerning certain wholly-owned entities) does not apply for purposes of registration under sections 4101, 4222, and 4412; and (iii) § 1.1361–4(a)(8)(i)(C), which provides that a QSub is treated as a separate corporation for purposes of registration under sections 4101, 4222, and 4412.

The separate entity rules would also align with other related tax provisions, including sections 45V and 45Q (for which anti-stacking provisions apply), and the elective payment and credit transfer election provisions of sections 6417 and 6418, which elections are generally made on a per-facility basis. Although the proposed rules are consistent with the making of a section 6417 or section 6418 election on a facility-by-facility basis, it is important to highlight the difference between these proposed registration rules and the rules for making an election under section 6417 or section 6418.

With respect to sections 6417 and 6418, if a taxpayer is the sole owner (directly or indirectly) of a disregarded entity for Federal income tax purposes and the disregarded entity directly holds the underlying applicable credit property, then the taxpayer (and not the disregarded entity) makes the section 6417 or section 6418 election, including completing the required pre-filing registration as part of making a section 6417 or section 6418 election. *See* §§ 1.6417–2(a)(1)(ii), 1.6417–5, 1.6418–2(a)(3)(i), and 1.6418–4. For example, if a taxpayer has two qualified facilities for purposes of section 45Z that are owned by separate disregarded entities, each disregarded entity (and not the taxpayer) must be registered as a producer of transportation fuel for purposes of the section 45Z credit. However, the taxpayer (and not either disregarded entity) would ultimately make any section 6417 or section 6418 election (including completing the section 6417 or section 6418 pre-filing registration process) with respect to any section 45Z credit determined with respect to each qualified facility.

Additionally, section 45Z(f)(1)(A)(i)(I) requires registration ''under section 4101.'' This language indicates that Congress meant for the existing § 48.4101–1 regulations to apply for purposes of the section 45Z credit, including the separate entity rules of § 48.4101–1(a)(4). The special procedures that apply with respect to a taxpayer that owns a disregarded entity or a QSub that is registered under proposed § 1.4101–1 and claims the section 45Z credit are discussed in Part VI.B. of this Explanation of Provisions.

D. Reregistration

As provided in section 4101(a)(5), proposed §§ 1.4101–1(a)(4)(i) and 48.4101–1(a)(8)(i) would each require a person to reregister if after a transaction (or series of related transactions) more than 50 percent of ownership interests in, or assets of, such person are held by persons other than persons (or persons related thereto) who held more than 50 percent of such interests or assets before the transaction (or series of related transactions). Reregistration would not apply to companies whose stock is regularly traded on an established securities market. These proposed requirements would be consistent with section 4101(a)(5) and (d).

Proposed §§ 1.4101–1(a)(4)(ii) and 48.4101–1(a)(8)(ii) would each require a person to reregister if the person changes its EIN.

Proposed § 1.4101–1(a)(4)(iii) would provide a safe harbor for a person that has been registered by the IRS and must reregister due to a change in ownership or EIN. A person that is approved for reregistration would be eligible to claim a section 45Z credit as of the date the IRS received the application for reregistration, even if, at the time of such person's fuel production, the IRS had not yet approved the reregistration. The Treasury Department and the IRS recognize the urgency for a taxpayer to be issued a Letter of Registration for purposes of the section 45Z credit because, unlike other tax credits requiring section 4101 registration, section 45Z(f)(1)(A)(i)(I) requires that a

taxpayer be registered at the time of production.

E. Definitions

Proposed § 1.4101–1(b)(1) would define an ''applicant'' as a person that has applied for registration under proposed § 1.4101–1(d). The proposed definition is consistent with the definition of ''applicant'' in § 48.4101–1(b)(1).

Proposed § 1.4101–1(b)(2) would define ''Letter of Registration'' as a letter issued by the IRS to approve a registration required under section 4101. Under the proposed definition, a Letter of Registration would include the registrant's registration number and the effective date of the registration.

Proposed § 1.4101–1(b)(3) would define the phrase ''penalized for a wrongful act'' as cases in which a person has: (i) been assessed any penalty under chapter 68 of the Code (or similar provision of the law of any State) for fraudulently failing to file any return or pay any tax, and the penalty has not been wholly abated, refunded, or credited; (ii) been assessed any penalty under chapter 68 of the Code, such penalty has not been wholly abated, refunded, or credited, and the IRS determines that the conduct resulting in the penalty is part of a consistent pattern of failing to deposit, pay, or pay over a substantial amount of tax; (iii) been convicted of a crime under chapter 75 of the Code (or similar provision of the law of any State), or of conspiracy to commit such a crime, and the conviction has not been wholly reversed by a court of competent jurisdiction; (iv) been convicted, under the laws of the United States or any State, of a felony for which an element of the offense is theft, fraud, or the making of false statements, and the conviction has not been wholly reversed by a court of competent jurisdiction; (v) been assessed any tax under section 4103 of the Code and the tax has not been wholly abated, refunded, or credited; or (vi) had its registration under section 4101, section 4222, section 4662, or section 4682 of the Code revoked. This proposed definition is similar to the definition of the phrase ''penalized for a wrongful act'' in § 48.4101–1(b)(4).

Proposed § 1.4101–1(b)(4) would define a ''related person'' for purposes of registration under section 4101 as a person that: (i) directly or indirectly exercises control over an activity of the applicant; (ii) owns, directly or indirectly, five percent or more of the applicant; (iii) is under a duty to assure the payment of a tax for which the applicant is responsible; (iv) is a member, with the applicant, of a group of organizations (as defined in § 1.52–1(b) of this chapter) that would be treated as a group of trades or businesses under common control for purposes of § 1.52–1; or (v) distributed or transferred assets to the applicant in a transaction in which the applicant's basis in the assets is determined by reference to the basis of the assets in the hands of the distributor or transferor. This proposed definition is consistent with the definition of ''related person'' in § 48.4101–1(b)(5).

Proposed § 1.4101–1(b)(5) would define a ''registrant'' as a person who has registered under section 4101 in accordance with proposed § 1.4101–1(f)(3) and whose registration has not been revoked or suspended. This proposed definition is consistent with the definition of ''registrant'' in § 48.4101–1(b)(6).

F. Requirement To Register

Proposed § 1.4101–1(c)(1) would require every person producing a transportation fuel, as defined in proposed § 1.45Z–1(b)(34), to register with the IRS in accordance with proposed § 1.4101–1. The proposed rule incorporates the registration requirement described in section 4101(a)(1), as amended by section 70521(i) of the OBBBA, and is similar to § 48.4101–1(c)(1). The proposed rule is also consistent with section 45Z(f)(1)(A)(i)(I).

Proposed § 1.4101–1(c)(2) would articulate the consequences of failing to register under section 4101 by citing to penalties under sections 6719, 7232, and 7272 of the Code. The proposed rule is similar to § 48.4101–1(c)(3), which was published before the enactment of section 6719 and cites to penalties under sections 7232 and 7272. Section 7232 imposes a criminal penalty for failure to register or reregister as required by section 4101 or for a willful false statement in an application for registration or reregistration. Sections 6719 and 7272 impose civil penalties for failure to register or reregister under section 4101.

G. Application Instructions

Proposed § 1.4101–1(d) would require applicants to apply for section 4101 registration using Form 637, *Application for Registration (For Certain Excise Tax Activities),* or such other form as the IRS may designate, in accordance with the instructions to such form. An applicant would be required to apply for registration under activity letter CN if seeking registration as a producer of non-SAF transportation fuel, and under activity letter CA if seeking registration as a producer of SAF transportation fuel, or under such other activity letter(s) as the IRS may designate. The proposed rule is consistent with §§ 48.4101–1(e) and 48.4222(a)–1(b).

H. Registration Tests

Proposed § 1.4101–1(e)(1) would provide that the IRS will register an applicant only if the applicant meets the activity test of proposed § 1.4101–1(e)(2), the acceptable risk test of proposed § 1.4101–1(e)(3), and the satisfactory tax history test of proposed § 1.4101–1(e)(4), which are collectively called the ''registration tests.'' The registration tests under proposed § 1.4101–1(e) are similar to the registration tests under § 48.4101–1(f).

The proposed registration tests are consistent with sections 4101(c) and 4222(c), because their purposes are to confirm whether an applicant is actually engaging in the activity for which it is requesting to be registered, to prevent an applicant from becoming registered and being able to claim a tax credit if it is not engaged in such an activity, and to ensure that an applicant has satisfied all of its tax obligations under the Code, similar to section 4222(c) and §§ 48.4222(a)–1 and 48.4222(c)–1. These tests are necessary to protect the revenue and to prevent applicants from using their registration to avoid payment of tax (by erroneously claiming an income tax credit).

1. Activity Test

Under proposed § 1.4101–1(e)(2), an applicant would meet the activity test only if the IRS determines that the applicant: (i) is, in the course of its trade or business, regularly engaged in the activity for which it is requesting registration; or (ii) is likely to be (because of such factors as the applicant's business experience, financial standing, or trade connections), in the course of its trade or business, regularly engaged in the activity for which it is requesting registration within 6 months after becoming registered under section 4101. Proposed § 1.4101–1(e)(2) is similar to § 48.4101–1(f)(2).

The purpose of the activity test is to prevent applicants that are not engaged in the activity required for the section 45Z credit from becoming registered under section 4101, which is a prerequisite to claiming the section 45Z credit. For example, if an applicant seeking registration for purposes of the section 45Z credit represents on its application for registration that it is not yet (or likely to be within 6 months) engaged in the activity of producing a

transportation fuel, such applicant would not be approved for registration because it fails the activity test.

2. Acceptable Risk Test

Under proposed § 1.4101–1(e)(3)(i), an applicant would meet the acceptable risk test only if neither the applicant nor a related person (as defined in proposed § 1.4101–1(b)(4)) has been penalized for a wrongful act. Additionally, if an applicant or a related person has been penalized for a wrongful act, the IRS would be able to determine that an applicant meets the acceptable risk test based on consideration of the factors enumerated in proposed § 1.4101–1(e)(3)(ii). The acceptable risk test under proposed § 1.4101–1(e)(3) is similar to the acceptable risk test under § 48.4101–1(f)(3).

The purpose of the acceptable risk test under proposed § 1.4101–1(e)(3) is to ensure that the applicant and persons related to the applicant have met their obligations to pay taxes and file returns under the Code and also have not been convicted of a crime that indicates that the applicant would be dishonest in its representations to the IRS for purposes of protecting the revenue, similar to section 4222(c).

3. Satisfactory Tax History Test

Proposed § 1.4101–1(e)(4)(i) would provide that an applicant meets the satisfactory tax history only if the IRS determines that the applicant has a satisfactory tax history. Proposed § 1.4101–1(e)(4)(ii) would provide that an applicant has a satisfactory tax history only if the IRS determines that the filing, deposit, and payment history for all Federal taxes of the applicant and any related person (as defined in proposed § 1.4101–1(b)(4)) supports the conclusion that the applicant will comply with its obligations under proposed § 1.4101–1. Proposed § 1.4101–1(e)(4) is similar to the adequate security test of § 48.4101–1(f)(4), and the definition of ''satisfactory tax history'' in proposed § 1.4101–1(e)(4)(ii) is similar to the definition in § 48.4101–1(f)(4)(iii).

The purpose of the satisfactory tax history test under proposed § 1.4101–1(e)(4) is to ensure that the applicant and persons related to the applicant have met their obligations to pay taxes and file returns under the Code and also have not been convicted of a crime that indicates that the applicant would be dishonest in its representations to the IRS for purposes of protecting the revenue, similar to section 4222(c).

I. Action on Application by the IRS

Proposed § 1.4101–1(f)(1) would provide that the IRS may investigate the accuracy and completeness of any representations made by an applicant and request any additional relevant information from the applicant. Proposed § 1.4101–1(f)(2) would provide that if the IRS determines that an applicant does not meet all the registration tests described in proposed § 1.4101–1(e), the IRS will notify the applicant, in writing, that its application for registration is denied and state the basis for the denial. Proposed § 1.4101–1(f)(3) would provide that if the IRS determines that an applicant meets all the registration tests described in proposed § 1.4101–1(e), the IRS will register the applicant under section 4101 and issue the applicant a Letter of Registration that includes the effective date of the registration and the appropriate activity letter(s). The proposed rule would also provide that a copy of an application for registration (Form 637) is not a Letter of Registration. Proposed § 1.4101–1(f) is similar to § 48.4101–1(g).

J. Terms and Conditions of Registration

Proposed § 1.4101–1(g)(1) would require each applicant or registrant to: (i) make deposits, file returns, and pay taxes required by the Code and the regulations; (ii) keep records sufficient to show production of a transportation fuel; and (iii) notify the IRS of any change (such as a change in ownership) in the information the registrant submitted in connection with its application for registration or previously submitted under proposed § 1.4101–1(g)(1)(iii), within 10 days after the change occurs. Proposed § 1.4101–1(g)(1) is similar to § 48.4101–1(h)(1).

Proposed § 1.4101–1(g)(2) would provide that an applicant or registrant may not sell, lease, or otherwise allow another person to use its registration (except as otherwise provided in proposed § 1.45Z–6(b)(2)) or make any false statement to the IRS in connection with a submission under section 4101. Proposed § 1.4101–1(g)(2) is similar to § 48.4101–1(h)(2).

Requiring registrants to comply with their tax deposits, payments, and filing burdens under the Code protects the revenue, similar to section 4222(c) and § 48.4222(c)–1. Requiring registrants to notify the IRS of any change in information that the registrant submitted in connection with its application ensures the IRS is aware of relevant changes and can ensure the registrant continues to be eligible to retain its registration.

For example, if a registrant that produces a transportation fuel changes the type of fuel it produces, the registrant should inform the IRS of this change so that the IRS can review the fuel being produced to ensure that the registrant still meets a condition of registration by producing a transportation fuel. Prohibiting a registrant from allowing another person to use its registration and make false statements to the IRS ensures that the IRS can rely upon the information and representations provided by a registrant, and protects the revenue by preventing fraud and abuse of section 4101 registration.

K. Effect of Letter of Registration

Proposed § 1.4101–1(h) and proposed § 48.4101–1(a)(7) would provide that a Letter of Registration is not a determination of liability for tax, eligibility for a tax credit or deduction, or any other tax treatment under the Code. The proposed rules would also provide that a Letter of Registration is not a determination letter, as defined in § 601.201(a)(3) of this chapter.

The proposed rules are consistent with section 4101 and the overall statutory scheme. Section 4101 addresses only registration and not eligibility for underlying tax credits for which registration is required. Additionally, for each tax credit that requires registration under section 4101, registration is one of multiple requirements for credit eligibility. A taxpayer must meet all of the statutory requirements for each credit and cannot rely solely on a Letter of Registration to prove entitlement to such credit because doing so would make the other requirements in the tax credit statutes superfluous. *See, e.g.,* sections 40(b)(6)(E), 40A, 40B, 45Z, and 6426(k). Additionally, in the case of excise tax credits, courts have held that a Letter of Registration indicates only that the registrant is registered under section 4101 and is not a determination that the registrant is entitled to claim such credit. *See Affordable Bio Feedstock, Inc.* v. *United States,* 529 F. Supp. 3d 1298, 1304–07 (M.D. Fla. 2021), *aff'd,* 42 F.4th 1288 (11th Cir. 2022).

L. Adverse Actions by the IRS Against a Registrant

Proposed § 1.4101–1(i)(1) would provide that the IRS will revoke or suspend a registration if the IRS determines at any time that the registrant: (i) does not meet one or more of the registration tests under proposed § 1.4101–1(e) and has not corrected the deficiency within a reasonable period of time after notification by the IRS; (ii)

has used its registration to evade, or attempt to evade, the payment of any tax, or to postpone or in any manner to interfere with the collection of any such tax, or to make a fraudulent claim for a credit or payment; (iii) has aided or abetted another person in evading, or attempting to evade, payment of any tax, or in making a fraudulent claim for a credit or payment; or (iv) has sold, leased, or otherwise allowed another person to use its registration, except as otherwise provided in proposed § 1.45Z–6(b)(2).

Proposed § 1.4101–1(i)(2) would provide that if the IRS determines that a registrant has, at any time, failed to comply with the terms and conditions of registration under proposed § 1.4101–1(g), made a false statement to the IRS in connection with its application for registration (or reregistration) or for retention of registration, or otherwise used its registration in a manner that creates a significant risk of nonpayment or late payment of tax, then the IRS may revoke or suspend the registrant's registration.

Proposed § 1.4101–1(i)(3) would provide that if the IRS revokes or suspends a registration, the IRS will notify the registrant in writing and state the basis for the revocation or suspension and the activity letter(s) to which the revocation or suspension relates. The effective date of the revocation or suspension may not be earlier than the date on which the IRS notifies the registrant.

These proposed rules, which are similar to the rules of § 48.4101–1(i), are necessary because they enable the IRS to revoke or suspend registrations as needed to prevent registrants that violate the rules of section 4101 from using their registration to avoid payment of tax (by erroneously claiming an income tax credit).

VIII. Ownership Clarification for Section 6417 Elective Payment Election and Section 6418 Credit Transfer Election

Both sections 6417(a) and 6418(a) require a credit (applicable credit or eligible credit) to be determined with respect to the taxpayer before an election may be made. The underlying credit provisions confirm whether a taxpayer, to determine a credit, must own the relevant underlying eligible credit property or only conduct the activities giving rise to a credit. Current §§ 1.6417–2(c)(4) and 1.6418–2(d)(1) provide rules on determining the credit with respect to a taxpayer and include that a credit is determined with respect to a taxpayer if the taxpayer owns the underlying eligible credit property and conducts the activities giving rise to the credit, or in the case of section 45X (under which ownership of eligible credit property is not required), is considered (under the regulations under section 45X) the taxpayer with respect to which the section 45X credit is determined.

The preambles to the Elective Payment Election Regulations and the Credit Transfer Election Regulations both explain with respect to §§ 1.6417–2(c)(4) and 1.6418–2(d)(1), respectively, that the only credit for which ownership is not required is the section 45X credit. However, a taxpayer also is not required to own the underlying eligible credit property to determine the section 45Z credit. Section 45Z requires only that a taxpayer produce transportation fuel at a qualified facility and sell the fuel in a qualified sale, without requiring ownership of the qualified facility. *See* section 45Z(a)(1), regarding general credit eligibility, and section 45Z(d)(4), defining ''qualified facility.''

The proposed regulations would amend both §§ 1.6417–2(c)(4) and 1.6418–2(d)(1) to indicate that facility ownership is not required for the section 45Z credit. The proposed amendments would only require a taxpayer to conduct the activities giving rise to the section 45Z credit. It would be consistent with proposed § 1.45Z–4(e)(1), which would state that facility ownership is not required for a section 45Z credit to be determined. The proposed amendments would also clarify that ownership is not required for the section 45(d)(3)(C) credit and include clarifying language to acknowledge contract manufacturing arrangements for the section 45X credit. In addition, the proposed regulations would amend both §§ 1.6417–2(f) and 1.6418–2(g) to provide different applicability dates for the proposed changes. The Treasury Department and the IRS request comments on the ownership language with respect to sections 45Z and 45(d)(3)(C), and whether to add language on contract manufacturing or toll processing arrangements for the section 45Z credit.

IX. Proposed Applicability Dates and Reliance

Proposed §§ 1.45Z–1, 1.45Z–2 (except for paragraph (e)), and 1.45Z–4 through 1.45Z–6, would apply to qualified sales occurring in taxable years ending on or after the date the final regulations are published in the **Federal Register**. Proposed § 1.45Z–2(e) would apply to qualified sales occurring in taxable years ending on or after January 10, 2025. Proposed § 1.4101–1 and proposed § 48.4101–1(a)(7) and (8) would apply to persons producing transportation fuel in taxable years ending on or after the date the final regulations are published in the **Federal Register**. Proposed § 1.6417–2(c)(4) and (f), proposed § 1.6418–2(d)(1) and (g), and the proposed amendment to § 1.1361–4(a)(1) would apply to taxable years ending on or after the date the final regulations are published in the **Federal Register**. Taxpayers may rely on these proposed regulations until final regulations are published in the **Federal Register**, provided taxpayers follow them in their entirety and in a consistent manner.

Special Analyses

I. Regulatory Planning and Review

Executive Orders 12866 and 13563 direct agencies to assess costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility.

These proposed regulations have been designated by the Office of Management and Budget's (OMB) Office of Information and Regulatory Affairs (OIRA) as subject to review under Executive Order 12866 pursuant to the Memorandum of Agreement (July 4, 2025) between the Treasury Department and OMB regarding review of tax regulations. OIRA has determined that this proposed rulemaking is economically significant and subject to review under section 3(f) of Executive Order 12866 and section 1(c) of the Memorandum of Agreement. Accordingly, these proposed regulations have been reviewed by OMB.

A. Need for Regulations

Section 45Z of the Internal Revenue Code provides an income tax credit for the production of clean transportation fuel, which is divided into two broad categories: sustainable aviation fuel (SAF) and non-SAF transportation fuel. The statute directs the Secretary of the Treasury or the Secretary's delegate (Secretary) to issue guidance regarding implementation of section 45Z, including the calculation of emissions rates and the annual publication of an emissions rate table. A taxpayer determines a transportation fuel's emissions rate by either using the annual emissions rate table or obtaining

a provisional emissions rate (PER) determination from the Secretary. The proposed regulations provide procedures for taxpayers to obtain a PER if the emissions rate table does not establish an emissions rate for the type and category of transportation fuel produced. The statute also authorizes the Secretary to issue guidance on taxpayer registration and certification for purposes of the section 45Z credit. The proposed regulations also clarify the meaning of several statutory terms, such as ''gallon equivalent,'' ''suitable for use,'' and ''sold for use in a trade or business.''

Pursuant to section 6(a)(3)(B) of Executive Order 12866, the following qualitative analysis provides further details regarding the anticipated impacts of the proposed regulations. The statute, prior guidance, and proposed regulations are briefly summarized in Part I.B. of this Special Analyses. The economic analysis of these proposed regulations is described in Part I.C. of this Special Analyses. Specifically, Part I.C.1. explains the baseline used for the economic analysis; Part I.C.2. discusses the types of entities affected by the proposed regulations; and Part I.C.3. provides the qualitative assessment of the potential economic effects, including the benefits and costs, of the proposed regulations compared to the baseline.

B. Statute, Prior Guidance, and Proposed Regulations

Section 45Z provides an income tax credit for clean transportation fuel produced domestically after December 31, 2024, and sold by December 31, 2029. Originally enacted in 2022 and extended and modified by Public Law 119–21, 139 Stat. 72 (July 4, 2025), commonly known as the One, Big, Beautiful Bill Act (OBBBA), the section 45Z credit replaces an assortment of prior fuel incentives. Those incentives consisted of income tax credit, excise tax credit, and excise tax payment provisions for various biofuels and other alternative fuels sold for use as a fuel or used as a fuel, including biodiesel, renewable diesel, compressed natural gas, second generation biofuel, and SAF. Transportation fuel is divided into two broad categories: SAF and non-SAF. Transportation fuel produced after December 31, 2025, must be exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada.

Following the statute, a taxpayer calculates the amount of the section 45Z credit by multiplying the applicable amount per gallon or gallon equivalent with respect to a transportation fuel by the emissions factor for that fuel. If a taxpayer produces the transportation fuel at a qualified facility that satisfies the prevailing wage and apprenticeship (PWA) requirements, the applicable amount is increased. A transportation fuel's emissions factor measures the reduction in a fuel's emissions rate relative to the statutory baseline emission rate, expressed as a fraction of the statutory baseline emission rate. The amount of the section 45Z credit is generally larger as the emissions rate of the transportation fuel approaches zero. Transportation fuel produced after December 31, 2025, cannot have an emissions rate of less than zero unless it is derived from animal manure.

The primary method for determining the emissions rate for non-SAF is the United States Department of Energy's (DOE) 45ZCF–GREET model. Producers of SAF have the option of using the 45ZCF–GREET model, the CORSIA Default methodology, or the CORSIA Actual methodology. Taxpayers can request a PER determination if the annually published emissions rate table does not establish an emissions rate for the type and category of transportation fuel produced. In January 2025, the United States Department of Agriculture (USDA) published a beta version of USDA Feedstock Carbon Intensity Calculator (FD–CIC) for testing, peer review, and public comment in preparation of a final version of USDA FD–CIC. Following publication of the final version of USDA FD–CIC, the Treasury Department anticipates that 45ZCF FD–CIC, a section 45Z-specific version of the FD–CIC module, will be included as an input to the DOE's 45ZCF–GREET model to be used for calculating carbon intensity adjustments under section 45Z for feedstocks that are produced using certain agricultural practices.

The Treasury Department and the IRS have issued several notices providing initial guidance on the section 45Z credit. Notice 2024–49 provided guidance on the section 45Z registration requirements, including the time, form, and manner of registration. Notice 2025–10 announced forthcoming proposed regulations addressing the section 45Z credit. These proposed regulations are the forthcoming proposed regulations announced in Notice 2025–10. Additionally, Notice 2025–11 provided guidance regarding methodologies for determining emissions rates under section 45Z and provided the initial emissions rate table.

The proposed regulations provide definitions and general rules on the section 45Z credit, such as on credit eligibility, credit amount, credit timing, and emissions rates. The statute directs taxpayers to use a gallon equivalent for non-liquid fuels but does not provide a baseline standard. The proposed rules define ''gallon equivalent'' to mean, with respect to any non-liquid fuel, the amount of such fuel that has the energy equivalent of a gallon of gasoline determined at the lower heating value. The higher heating value and lower heating value of a fuel refer to the amount of energy released during combustion, but they differ in how they account for the water produced. The higher heating value assumes that all water produced is condensed back into liquid, while the lower heating value assumes it remains as vapor, thus excluding the heat of vaporization from the total energy.

To qualify for the credit, the fuel must be suitable for use as a fuel in a highway vehicle or aircraft (suitable for use). The proposed regulations define suitable for use to mean that the fuel either has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft or may be blended into a fuel mixture that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft. The rules clarify that actual use as a fuel in a highway vehicle or aircraft is not required.

In addition to being suitable for use, section 45Z(a)(4) requires a taxpayer to sell transportation fuel to an unrelated person: (i) for use by such person in the production of a fuel mixture; (ii) for use by such person in a trade or business; or (iii) who sells such fuel at retail to another person and places such fuel in the fuel tank of such other person. The proposed regulations would explicitly clarify that the term ''sold for use in a trade or business'' includes fuel sold to an unrelated person that subsequently resells the fuel in its trade or business.

The proposed PER process would require a taxpayer to submit an emissions value request (EVR) to the DOE to obtain an emissions value, which the taxpayer would use to file a petition requesting the determination of a PER. The proposed regulations also provide various special rules, including with respect to required registration, anti-stacking, production attribution, facility ownership, foreign feedstock limitation, and recordkeeping. Finally, the proposed regulations provide procedures for certification of emissions rates for SAF transportation fuel, filing procedures for claiming the section 45Z credit, and rules for registration.

C. Economic Analysis

1. Baseline

The Treasury Department and the IRS have assessed the benefits and the costs of these proposed regulations relative to a no-action baseline reflecting anticipated Federal-income-tax-related behavior in the absence of these regulations.

2. Affected Taxpayers

These proposed regulations could affect both domestic corporations and pass-through entities. The IRS Research, Applied Analytics, and Statistics Division estimates that there will be 260 facilities registering to produce transportation fuel. The Treasury Department and the IRS understand that, for many producers, each facility is owned by a disregarded entity. Each disregarded entity and qualified subchapter S subsidiary (QSub) that has an EIN and is a producer of transportation fuel for purposes of section 45Z would need to register as a producer of clean fuel for its owner to be eligible to claim the section 45Z credit. Therefore, the number of approved registrants is expected to exceed the number of facilities and credit claimants, though there is uncertainty in the magnitude.

The DOE estimated that there would be 200 PER applicants per year for section 45Z credits in the June 2024 *Supporting Statement for Lifecycle Greenhouse Gas Emissions Value Analysis: Clean Fuel Production Credit.* However, due to more recent analysis utilizing the actual number of PER requests for the section 45V credit, the estimate has been reduced to 30 PER requests in the first year and declining over time as more pathways are added to the 45ZCF–GREET model.

3. Summary of Economic Effects

The proposed regulations define terms, incorporate and clarify rules, and provide certainty for taxpayers intending to claim the section 45Z credit. In the absence of regulations on the section 45Z credit, taxpayers could take differing positions on eligibility or file claims for credits that do not meet the statutory criteria. Clearly defined terms, rules, and requirements also provide for more efficient tax administration, the preservation of tax revenues, accurate filings, and the harmonization of rules across multiple tax credits.

The Treasury Department and the IRS have not undertaken quantitative estimates of the economic effects of these proposed regulations. The Treasury Department and the IRS do not have readily available data or models to estimate with reasonable precision the effect on the timing and scale of investment behavior that could result from these proposed regulations. In the absence of such quantitative estimates, the Treasury Department and the IRS have undertaken a qualitative analysis of the economic effects of specific provisions of these proposed regulations relative to a no-action baseline.

The proposed regulations incorporate and implement the statutory requirement to publish an emissions rate table by directing the identified allowed methodologies for the established type and categories of fuel to the 45ZCF–GREET and CORSIA Default and Actual models. The emission rate table thus allows taxpayer flexibility by reflecting a given taxpayer's specific operations as inputs to the appropriate model. The initial emissions rate table provided in the Appendix of IRS Notice 2025–11 includes the fuels listed in the table below.

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Fuels & Pathways from Section 45Z Emissions Rate Table		
Type of Fuel	**Category of Fuel**	
	Pathway	**Primary Feedstock**
Ethanol	Fermentation	U.S. corn starch U.S. sorghum grain Brazilian sugarcane (for use as a feedstock for SAF Alcohol-to-Jet (ATJ) only)
	Hydrolysis & Fermantation	U.S. corn stover
Biodiesel	Transesterification	U.S. soybean oil U.S. / Canadian canola oil/rapeseed oil U.S. used cooking oil (UCO) Tallow U.S. distillers corn oil (DCO) U.S. carinata oil (intermediate crop) U.S. camelina oil (intermediate crop) U.S. pennycress oil (intermediate crop)
Renewable Diesel	Hydroprocessed esters and fatty acids (HEFA)	U.S. soybean oil U.S. / Canadian canola oil/rapeseed oil U.S. UCO Tallow U.S. DCO U.S. carinata oil (intermediate crop) U.S. camelina oil (intermediate crop) U.S. pennycress oil (intermediate crop)
	ATJ	Ethanol (from fermantation pathways listed above)
	Gasification & Fischer-Tropsch	U.S. corn stover
Renewable Natural Gas	Anaerobic Digestion and Biogas Upgrading	U.S. wastewater sludge U.S. animcal manures U.S. landfill gas
Propane	HEFA	U.S. soybean oil U.S. / Canadian canola oil/rapeseed oil U.S. UCO Tallow U.S. DCO U.S. carinata oil (intermediate crop) U.S. camelina oil (intermediate crop) U.S. pennycress oil (intermediate crop)
Naphtha	HEFA	U.S. soybean oil U.S. / Canadian canola oil/rapeseed oil U.S. UCO Tallow U.S. DCO U.S. carinata oil (intermediate crop) U.S. camelina oil (intermediate crop) U.S. pennycress oil (intermediate crop)
Hydrogen	Various, as defined in the user manual for the most recent 45VH2-GREET model*	Various, as defined in the user manual for the most recent 45VH2-GREET model*
Sustainable Aviation Fuel (SAF)	HEFA	U.S. soybean oil U.S. / Canadian canola oil/rapeseed oil U.S. UCO Tallow U.S. DCO U.S. carinata oil (intermediate crop) U.S. camelina oil (intermediate crop) U.S. pennycress oil (intermediate crop)
	ATJ	Ethanol (from fermentation pathways above)
	Gasification & Fischer-Tropsch	U.S. corn stover
	Any pathway established in CORSIA Default or CORSIA Actual for a transportation fuel that is SAF and that is not represented above	Any pathway established in CORSIA Default or CORSIA Actual for a transportation fuel that is SAF and that is not represented above

*The 45VH2-GREET model and the 45H2-GREET User Manual are both available at https://www.energy.gov/eere/greet

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The statute directs taxpayers to use a gallon equivalent for non-liquid fuels but does not provide a baseline standard. These proposed regulations define ''gallon equivalent'' to mean, with respect to any non-liquid fuel, the amount of such fuel that has the energy equivalent of a gallon of gasoline, which

refers to the amount of such fuel that has a Btu content of 116,090 (lower heating value). The proposed regulations use gasoline as the baseline fuel for testing gallon equivalency because gasoline is the most common transportation fuel in the United States, and section 45Z is designed to incentivize domestic production of transportation fuels that may serve as alternatives to existing fossil fuels. According to the U.S. Energy Information Administration (EIA), ''in 2023, petroleum products accounted for about 89% of total U.S. transportation sector energy use. Biofuels contributed about 6%, most of which was blended with petroleum fuels (gasoline, diesel fuel, and jet fuel).'' [9] The chart below using data from EIA's Annual Energy Outlook 2025 shows that in 2024, motor gasoline made up almost 59% of the total of petroleum and other fuels used in transportation. Additionally, in the interest of harmonizing rules, the use of a gasoline gallon equivalency is consistent with the gasoline gallon equivalent requirement in section 6426(d)(3), which applies to many of the same types of fuel as section 45Z in the context of a credit that section 45Z replaces.

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Petroleum and Other Fuels Used in Transportation*		
(quadrillion Btu)		
	2024	Share
Propane	0.01	0.0%
Motor Gasoline	16.21	58.9%
Ethanol used in E85	0.00	
Ethanol used in Gasoline Blending	1.16	
Jet Fuel	3.58	13.0%
Diesel fuel for on-road, rail, marine, and military	7.00	25.4%
Residual Fuel Oil	0.55	2.0%
Other Petroleum	0.16	0.6%
Total	27.51	
*Data is from Annual Energy Outlook 2025, Tables 2 and 17.		
https://www.eia.gov/outlooks/aeo/		

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Other definitions of gallon equivalency were considered, including diesel gallon equivalency and ethanol gallon equivalency. These definitions would have the effect of decreasing (diesel) or increasing (ethanol) the amount of the calculated section 45Z credit without changing the characteristics of the fuels eligible for the credits. For example, the diesel gallon equivalent of gasoline is 0.88 gallons, therefore using a diesel gallon equivalent would generally reduce any available credit by 12 percent for non-liquid fuels. Neither of these equivalency definitions would have provided the equivalency of the most common transportation fuel currently in use nor provided the same consistency with the gasoline gallon equivalent requirement in section 6426(d)(3).

Non-liquid fuels comprise a small portion of the transportation fuel market. Renewable natural gas (RNG) accounted for approximately 84 percent of the nearly 64 billion cubic feet of all the natural gas used as transportation fuel in the United States.[10] Natural gas, however, accounted for less than 1% of total transportation fuel use.[11] In addition, much of the supply for RNG is due to clean fuel programs such as the national Renewable Fuel Standard (RFS) so a small change in the credit rate for non-liquid fuels resulting from a different choice for the gallon equivalent for non-liquid fuels is unlikely to have a significant effect on overall transportation fuel supply.

To facilitate implementation of a gallon equivalency standard for non-liquid fuels, these proposed regulations must specify whether the equivalency is based on a lower heating value or a higher heating value of the baseline fuel, as the two types of heating values have different energy contents. The proposed regulations use a lower heating value rather than a higher heating value because it is a better representation of the useful energy provided by transportation fuel. To provide clarity and to ensure consistency across section 45Z claims, the proposed regulations provide the lower heating values of some common non-liquid fuels and an example for determining the number of gallon equivalents using the listed values.

Section 45Z requires a transportation fuel, in part, to be suitable for use as a fuel in a highway vehicle or aircraft but does not define the term ''suitable for use.'' The proposed regulations define ''suitable for use'' to mean: (i) that the fuel has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft, or (ii) may be blended into a fuel mixture that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft. The proposed regulations further clarify that actual use as a fuel in a highway vehicle or aircraft is not required.

The definition of ''suitable for use'' in these proposed regulations is consistent with a plain reading of the statutory

[9] *See https://www.eia.gov/energyexplained/use-of-energy/transportation.php.*

[10] *See New Renewable Fuel Standard volume targets facilitate renewable natural gas production—U.S. Energy Information Administration (EIA).*

[11] *See Alternative Fuels Data Center: Natural Gas Fuel Basics.*

language. Other options considered include defining ''suitable for use'' to require actual use as a fuel in a highway vehicle or aircraft. Such an interpretation would reduce the amount of fuel eligible for the credit and thus constrain the cost of the section 45Z credit. However, such an interpretation would not be consistent with a plain reading of the statutory language.

In addition to the suitable for use requirement, section 45Z(a)(4) requires a taxpayer to sell transportation fuel to an unrelated person: (i) for use by such person in the production of a fuel mixture; (ii) for use by such person in a trade or business; or (iii) who sells such fuel at retail to another person and places such fuel in the fuel tank of such other person. The proposed regulations explicitly clarify that the term ''sold for use in a trade or business'' includes fuel sold to an unrelated person that subsequently resells the fuel in its trade or business. The proposed definition responds to stakeholder concern that more restrictive definitions could prevent all fuel sales for resale, such as those to intermediary dealers or wholesalers, from qualifying for the section 45Z credit.

Stakeholders explained that, in the fuel industry, many producers sell to related or unrelated intermediaries, such as wholesalers or dealers, rather than directly to unrelated final purchasers. This common practice allows efficient distribution and the availability of biofuels across regions of the United States because resellers have the infrastructure, capacity, and expertise to deliver fuel where it is needed that producers do not.[12] The proposed regulatory definition promotes flexibility while maintaining adherence to the statutory language. The proposed regulatory definition reduces the costs to those producers who would need to alter their current distribution practices to take advantage of the tax credit and therefore creates an incentive for more clean fuel production.

In considering the definition of ''sold for use in a trade or business,'' the Treasury Department and the IRS evaluated the potential for double crediting. To address that concern, the draft regulatory text in the Appendix to Notice 2025–10 defined the term ''sold for use in a trade or business'' to mean sold for use as a fuel in a trade or business within the meaning of section 162 of the Code. The draft term did not include a sale for blending or for further processing, including use as a primary feedstock to produce another fuel.

[12] *See https://www.eia.gov/energyexplained/gasoline/where-our-gasoline-comes-from.php.*

After the publication of Notice 2025–10, OBBBA amended section 45Z(d)(5)(A) to exclude from the definition of ''transportation fuel'' any fuel produced from a fuel for which a section 45Z credit is allowable. This revision indicates that a sale for use as a primary feedstock to produce another fuel may qualify as a sale for use in a trade or business under section 45Z(a)(4)(B). The OBBBA amendment thus eliminated the double-crediting potential of transportation fuel used for further processing, including use as a primary feedstock to produce another fuel. As a result, the proposed definition of ''sold for use in a trade or business'' in these proposed regulations responds to stakeholder feedback by removing the phrase ''sold for use as a fuel'' from the definition without the risk of double crediting for transportation fuels.

Many stakeholders have expressed the urgent need for guidance to clarify the scope and mechanics of the PER process. Proposed § 1.45Z–2(f) implements the statutory language regarding the PER process and provide this urgent guidance to taxpayers. The proposed regulations provide clarity to taxpayer requests for a PER determination by delineating the proper forms and how to file them, as well as describing the content required and explaining the manner and effect of a PER determination. In addition, the proposed regulations direct applicants to follow the DOE's published instructions as well as describe common assumptions and the information required by the DOE for an EVR. The proposed regulations also harmonize rules for eligible fuels that are a category of hydrogen by outlining the interaction between the PER processes for the section 45V credit and the section 45Z credit.

The certainty provided by these proposed regulations would foster consistent treatment across credit claimants, allow taxpayers producing eligible transportation fuel to make informed investment decisions, and facilitate commercial market transactions with respect to contracts between suppliers and buyers.

II. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520) (PRA) generally requires that a Federal agency obtain the approval of OMB before collecting information from the public, whether such collection of information is mandatory, voluntary, or required to obtain or retain a benefit. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid control number assigned by the OMB.

The collections of information in these proposed regulations contain reporting, third-party disclosure, and recordkeeping requirements that are necessary to ensure that the taxpayer qualifies for the clean fuel production credit. The collections will be used by the IRS for tax compliance purposes and by taxpayers to ensure the fuel qualifies for the credit.

The proposed regulations describe reporting and recordkeeping that are part of the registration requirements, as detailed in proposed § 1.4101–1(a), (d), (f), and (g). These collections are used to determine whether an applicant meets the requirements to be registered under section 4101, a requirement to qualify for the section 45Z credit. The registration requirements, including the Form 637, are already approved by the OMB under control number 1545–1835 with the PRA procedures under 5 CFR 1320.10. The proposed regulations are not creating or changing these already approved collections.

The collections of information in the proposed regulations describe reporting related to claiming the clean fuel production credit, as detailed in proposed § 1.45Z–6. The burden for these requirements is included with Form 7218 and its instructions. The Form 7218 and its instructions are already approved by OMB under the following control numbers: 1545–0123 for businesses, 1545–0074 for individuals, 1545–0047 for non-profit organizations, and 1545–0092 for trusts and estates with the PRA procedures under 5 CFR 1320.10. The proposed regulations are not creating or changing these already approved collections.

The collections of information in the proposed regulations would include reporting requirements that taxpayers claiming the section 45Z credit for SAF transportation fuel provide a certification from an unrelated person with their Federal income tax return or information return for each taxable year for which they claim the section 45Z credit as required by section 45Z(f)(1)(A)(i)(II) and as detailed in proposed § 1.45Z–5. The proposed regulations would also include a third-party reporting and disclosure requirement that such a certification be prepared and certified by an unrelated person. The certification must contain an attestation regarding the taxpayer's production of SAF transportation fuel, conflicts of interest, the certifier's qualifications, the taxpayer's facility, and documentation necessary to substantiate the certification process. The taxpayer must submit the

certification to the IRS by including it with the Form 7218. The burden for these requirements is already included within the Form 7218 and its instructions. Form 7218 and its instructions are already approved by OMB under the following control numbers: 1545–0123 for businesses, 1545–0074 for individuals, 1545–0047 for tax-exempt organizations, and 1545–0092 for trusts and estates. The proposed regulations are not creating or changing these already approved collections.

The proposed regulations reference the DOE's process for an emissions value applicant (EV applicant) to request an emissions value from the DOE that could then be used to file a petition with the Secretary for a PER determination as detailed in proposed § 1.45Z–2. The petition made to IRS will be performed by including the calculated emissions value letter obtained from the DOE with Form 7218. The burden for the petition to the IRS is already included within the Form 7218 and its instructions. Form 7218 and its instructions are already approved by OMB under the following control numbers: 1545–0123 for businesses, 1545–0074 for individuals, 1545–0047 for tax-exempt organizations, and 1545–0092 for trusts and estates. The proposed regulations would not create or change these already approved collections.

The proposed regulations would describe the collection of information associated with the process for taxpayers to request an EV from the DOE and is reflected in the DOE's PRA submission relating to such process. These proposed regulations would not create or change any of the collection requirements submitted by the DOE to OMB for approval. Approval of the DOE's PRA submission is pending OMB approval. The proposed regulations would not create or change any of the collection requirements being approved by OMB under the DOE OMB Control Number 1910–NEW.

The collections of information in the proposed regulations describe third-party disclosure and recordkeeping requirements that provide safe harbor methods for the substantiation of emissions rates and qualified sales, as detailed in proposed § 1.45Z–4. The certificates described in the proposed regulations may be used to establish, in part, the taxpayer's eligibility for the section 45Z credit and the amount of the credit claimed on the taxpayer's return. The burden associated with these information collections will be included within the following OMB control numbers: 1545–0123 for businesses, 1545–0074 for individuals, 1545–0047 for tax-exempt organizations, and 1545–0092 for trusts and estates with the PRA procedures under 5 CFR 1320.10.

The collections of information in the proposed regulations include recordkeeping requirements related to claiming the section 45Z credit. A taxpayer would use these records to establish its eligibility for the section 45Z credit and the amount of the credit claimed. The recordkeeping requirements would include that taxpayers keep records about emissions rates, production, and sale. These recordkeeping requirements are considered general tax records under § 1.6001–1(e). For PRA purposes, general tax records are already approved by OMB under the following control numbers: 1545–0123 for businesses, 1545–0074 for individuals, 1545–0047 for non-profit organizations, and 1545–0092 for trusts and estates.

III. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) (RFA) imposes certain requirements with respect to Federal rules that are subject to the notice and comment requirements of section 553(b) of the Administrative Procedure Act (5 U.S.C. 551 *et seq.*) and that are likely to have a significant economic impact on a substantial number of small entities. Unless an agency determines that a proposal is not likely to have a significant economic impact on a substantial number of small entities, section 603 of the RFA requires the agency to present an initial regulatory flexibility analysis (IRFA) of the proposed rule. The Treasury Department and the IRS have not determined whether the proposed rule, when finalized, will likely have a significant economic impact on a substantial number of small entities. This determination requires further study. However, because there is a possibility of significant economic impact on a substantial number of small entities, an IRFA is provided in these proposed regulations. The Treasury Department and the IRS invite comments on both the number of entities affected and the economic impact on small entities.

Pursuant to section 7805(f) of the Code, this notice of proposed rulemaking has been submitted to the Chief Counsel of the Office of Advocacy of the Small Business Administration for comment on its impact on small business.

A. Need for and Objectives of the Rule

The proposed regulations would provide needed guidance for taxpayers on eligibility for the section 45Z credit, the amount and timing of the section 45Z credit, the use of the 45ZCF–GREET model and CORSIA methodologies to determine the lifecycle GHG emissions rates of transportation fuel, procedures for petitioning the Secretary for a PER determination, requirements for the certification of emissions rates for SAF transportation fuel, filing procedures for claiming a section 45Z credit, and rules for registration under section 4101 for purposes of section 45Z.

B. Affected Small Entities

The RFA directs agencies to provide a description of, and if feasible, an estimate of, the number of small entities that may be affected by the proposed regulations, if adopted. The Small Business Administration's Office of Advocacy estimates in its 2023 FAQs that 99.9 percent of American businesses meet the definition of a small business. The applicability of these proposed regulations does not depend on the size of the business, as defined by the Small Business Administration. As described more fully in the preamble to this proposed regulation and in this IRFA, sections 45Z, 4101, 6417, and 6418, and these proposed regulations may affect a variety of different businesses across several different industries. Because the potential credit claimants can vary widely and the credit first went into effect in 2025, it is difficult to estimate at this time the compliance costs and quantifiable burdens of these proposed regulations, if any, on small businesses. Although there is uncertainty as to the exact number of small businesses within this group, the current estimated number of taxpayers subject to these proposed regulations is 260 taxpayers of which 35 percent are small.

The Treasury Department and the IRS expect to receive more information on the impact on small businesses through comments on these proposed regulations and again after taxpayers start using the guidance and procedures provided in these proposed regulations to claim the section 45Z credit.

C. Impact of the Rules

The proposed regulations would provide rules for how taxpayers can claim the section 45Z credit. Taxpayers that claim the section 45Z credit would have administrative costs related to reading and understanding the rules as well as recordkeeping and reporting requirements because of the certification and Federal income tax return or information return requirements. The costs would vary across different-sized entities and across the type(s) of

project(s) in which such entities are engaged.

To claim a section 45Z credit, a taxpayer producing a transportation fuel must determine the lifecycle GHG emissions rate(s) for all transportation fuel sold during a taxable year. In general, a taxpayer must use the emissions rate table that is in effect on the first day of the taxable year in which the taxpayer produces a section 45Z clean transportation fuel. If an updated emissions rate table is published during a taxpayer's taxable year of production, then a taxpayer may choose to use the updated emissions rate table. If the transportation fuel, pathway, or primary feedstock used by the taxpayer to produce such transportation fuel is not included in the applicable emissions rate table, the taxpayer must petition the Secretary for a PER. As part of the PER petition process, a taxpayer must apply to the DOE for an emissions value that it then uses to submit a PER petition.

To claim a section 45Z credit for SAF transportation fuel, in addition to determining the lifecycle GHG emissions rate of the fuel, a taxpayer must submit a certification from a qualified certifier attesting to the taxpayer's production of SAF transportation fuel, the amount of SAF transportation fuel sold by the taxpayer, certain general information about the qualified facility at which the SAF transportation fuel being certified was produced, conflicts of interest, the certifier's qualifications, and documentation necessary to substantiate the certification process. Additionally, a taxpayer would need to retain records sufficient to establish compliance with these proposed regulations for as long as may be relevant.

Although the Treasury Department and the IRS do not have sufficient data to determine precisely the likely extent of the increased costs of compliance, the estimated burden of complying with the recordkeeping and reporting requirements are described in Part II. of this Special Analyses regarding the PRA.

D. Alternatives Considered

The Treasury Department and the IRS considered alternatives to approaches taken in the proposed regulations. The proposed regulations were designed to minimize burdens for taxpayers while ensuring that the statutory requirements of section 45Z are met. Many of the compliance burdens in the proposed regulations are statutory requirements, but in an effort to reduce these burdens the Treasury Department and the IRS considered and included safe harbors for substantiation of emissions rates and substantiation of qualified sales to allow greater certainty for taxpayers. Additionally, in providing rules related to the information required to be submitted to claim the section 45Z credit, the Treasury Department and the IRS considered whether the production and sale of SAF transportation fuel could be certified by an unrelated person without requiring the unrelated person to possess certain qualifications or conflict of interest characteristics. Such an option would, however, increase the opportunity for fraud or excessive payments under section 45Z.

Section 45Z(e) authorizes the IRS to issue guidance regarding implementation of the section 45Z credit and the determination of clean fuel production credits under section 45Z. As described in the preamble to these proposed regulations, these proposed rules carry out that Congressional intent, as the certification requirements allow the IRS to verify the taxpayer's entitlement to the section 45Z credit.

Comments are requested on the requirements in the proposed regulations, including specifically whether there are less burdensome alternatives that do not increase the risk of duplication, fraud, or improper payments under section 45Z.

E. Duplicative, Overlapping, or Conflicting Federal Rules

The proposed regulations would not duplicate, overlap, or conflict with any relevant Federal rules. As discussed previously, the proposed regulations would merely provide procedures and definitions to allow taxpayers to claim the section 45Z credit. The Treasury Department and the IRS invite comments on identifying and avoiding overlapping, duplicative, or conflicting requirements.

IV. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 requires that agencies assess anticipated costs and benefits and take certain other actions before issuing a final rule that includes any Federal mandate that may result in expenditures in any one year by a State, local, or Tribal government, in the aggregate, or by the private sector, of $100 million (updated annually for inflation). These proposed regulations do not include any Federal mandate that may result in expenditures by State, local, or Tribal governments, or by the private sector, in excess of that threshold.

V. Executive Order 13132: Federalism

Executive Order 13132 (Federalism) prohibits an agency from publishing any rule that has federalism implications if the rule either imposes substantial direct compliance costs on State and local governments and is not required by statute, or preempts State law, unless the agency meets the consultation and funding requirements of section 6 of the Executive order. This proposed rule does not have federalism implications and does not impose substantial direct compliance costs on State and local governments or preempt State law within the meaning of the Executive order.

Comments and Public Hearing

Before these proposed amendments to the regulations are adopted as final regulations, consideration will be given to comments regarding the notice of proposed rulemaking that are submitted timely to the IRS as prescribed in the preamble under the **ADDRESSES** section. The Treasury Department and the IRS request comments on all aspects of the proposed regulations. All comments will be made available at *https://www.regulations.gov* or upon request. Once submitted to the Federal eRulemaking Portal, comments cannot be edited or withdrawn.

A public hearing with respect to this notice of proposed rulemaking has been scheduled for May 28, 2026, beginning at 10 a.m. ET, in the Auditorium at the Internal Revenue Building, 1111 Constitution Avenue NW, Washington, DC. Due to building security procedures, visitors must enter at the Constitution Avenue entrance. In addition, all visitors must present photo identification to enter the building. Because of access restrictions, visitors will not be admitted beyond the immediate entrance area more than 30 minutes before the hearing starts. Participants may alternatively attend the public hearing by telephone.

The rules of 26 CFR 601.601(a)(3) apply to the public hearing. Persons who wish to present oral comments at the public hearing must submit an outline of the topics to be discussed and the time to be devoted to each topic by April 6, 2026. A period of 10 minutes will be allotted to each person for making comments. An agenda showing the scheduling of the speakers will be prepared after the deadline for receiving outlines has passed. Copies of the agenda will be available free of charge at the public hearing. If no outline of the topics to be discussed at the public hearing is received by April 6, 2026, the public hearing will be cancelled. If the

public hearing is cancelled, a notice of cancellation of the public hearing will be published in the **Federal Register**.

Individuals who want to testify in person at the public hearing must send an email to *publichearings@irs.gov* to have their name(s) added to the building access list. The subject line of the email must contain the regulation number REG–121244–23 and the language TESTIFY In Person. For example, the subject line may say: Request to TESTIFY In Person at Hearing for REG–121244–23.

Individuals who want to testify by telephone at the public hearing must send an email to *publichearings@irs.gov* to receive the telephone number and access code for the public hearing. The subject line of the email must contain the regulation number REG–121244–23 and the language TESTIFY Telephonically. For example, the subject line may say: Request to TESTIFY Telephonically at Hearing for REG–121244–23.

Individuals who want to attend the public hearing in person without testifying must also send an email to *publichearings@irs.gov* to have their name(s) added to the building access list. The subject line of the email must contain the regulation number REG–121244–23 and the language ATTEND In Person. For example, the subject line may say: Request to ATTEND Hearing In Person for REG–121244–23. Requests to attend the public hearing must be received by 5 p.m. ET on May 26, 2026.

Individuals who want to attend the public hearing by telephone without testifying must also send an email to *publichearings@irs.gov* to receive the telephone number and access code for the hearing. The subject line of the email must contain the regulation number REG–121244–23 and the language ATTEND Hearing Telephonically. For example, the subject line may say: Request to ATTEND Hearing Telephonically for REG–121244–23. Requests to attend the public hearing must be received by 5 p.m. ET on May 26, 2026.

Public hearings will be made accessible to people with disabilities. To request special assistance during a public hearing, please contact the Publications and Regulations Section of the Office of Associate Chief Counsel (Procedure and Administration) by sending an email to *publichearings@irs.gov* (preferred) or by telephone at (202) 317–6901 (not a toll-free number) by May 22, 2026.

Statement of Availability of IRS Documents

Guidance cited in this preamble is published in the Internal Revenue Bulletin and is available from the Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402, or by visiting the IRS website at *https://www.irs.gov.*

Drafting Information

The principal authors of these proposed regulations are Jennifer Golden, Danielle Mayfield, Andrew Clark, and Alexander Scott of the Office of Associate Chief Counsel (Energy, Credits, and Excise Tax). However, other personnel from the Treasury Department, the DOE, the EPA, the USDA, the Federal Aviation Administration (FAA), and the IRS participated in their development.

List of Subjects

26 CFR Part 1

Income taxes, Reporting and recordkeeping requirements.

26 CFR Part 48

Reporting and recordkeeping requirements.

Proposed Amendments to the Regulations

Accordingly, the Treasury Department and the IRS propose to amend 26 CFR parts 1 and 48 as follows:

PART 1—INCOME TAXES

■ **Paragraph 1.** The authority citation for part 1 is amended by adding entries for §§ 1.45Z–1, 1.45Z–2, 1.45Z–4 through 1.45Z–6, 1.1361–4, and 1.4101–1 in numerical order to read in part as follows:

Authority: 26 U.S.C. 7805 * * *

* * * * *

Section 1.45Z–1 also issued under 26 U.S.C. 45Z(b), (d), (e), and (f).

Section 1.45Z–2 also issued under 26 U.S.C. 45Z(b) and (e).

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Section 1.45Z–4 also issued under 26 U.S.C. 45Z(e) and (f).

Section 1.45Z–5 also issued under 26 U.S.C. 45Z(e) and (f).

Section 1.45Z–6 also issued under 26 U.S.C. 45Z(e).

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Section 1.1361–4 also issued under 26 U.S.C. 1361(b)(3)(A).

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Section 1.4101–1 also issued under 26 U.S.C. 45Z(e), 4101(a)(1) and (c), and 4222(c).

* * * * *

■ **Par. 2.** Sections 1.45Z–1 through 1.45Z–2 are added to read as follows:

§ 1.45Z–1 Clean fuel production credit; definitions.

(a) *Overview.* For purposes of section 38 of the Code, the section 45Z clean fuel production credit is determined under section 45Z of the Code and the section 45Z regulations. This section provides an overview and definitions that apply for purposes of section 45Z and the section 45Z regulations. Section 1.45Z–2 provides general rules for determining the amount and timing of the section 45Z credit, including rules on the emissions factor and the emissions rate for transportation fuels. Section 1.45Z–3 provides rules relating to the increased credit amount for satisfying prevailing wage and apprenticeship (PWA) requirements. Section 1.45Z–4 provides rules on required registration (under section 4101 of the Code and § 1.4101–1), anti-stacking, anti-abuse, production attribution, facility ownership, foreign feedstock and prohibited foreign entity restrictions, and recordkeeping and substantiation. Section 1.45Z–5 provides procedures for the certification of emissions rates. Section 1.45Z–6 provides procedures for filing a claim for the section 45Z credit. Section 1.4101–1 provides the rules for registration under section 4101.

(b) *Definitions.* The definitions in this section apply for purposes of section 45Z and the section 45Z regulations.

(1) *45ZCF–GREET model.* The term *45ZCF–GREET model* means the model by that name developed by the Argonne National Laboratory (ANL) and published by the U.S. Department of Energy (DOE) for use in determining the amount of lifecycle greenhouse gas (GHG) emissions for purposes of section 45Z. Additional information about the 45ZCF–GREET model is available at *https://www.energy.gov/eere/greet.*

(2) *Applicable amount.* The term *applicable amount* means the applicable amount as described in section 45Z(a) and § 1.45Z–2(a)(4).

(3) *Applicable material.* The term *applicable material* means, pursuant to section 45Z(d)(5)(B)(i)—

(i) Monoglycerides, diglycerides, and triglycerides;

(ii) Free fatty acids; and

(iii) Fatty acid esters.

(4) *ASTM.* The term *ASTM* means the standards published by ASTM International, formerly known as the American Society for Testing and Materials. Additional information about ASTM International is available at *https://www.astm.org/.*

(5) *Biomass.* The term *biomass* means, pursuant to sections 45Z(d)(5)(B)(ii) and 45K(c)(3), any organic material other than—

(i) Oil and natural gas (or any product thereof); and

(ii) Coal (including lignite) or any product thereof.

(6) *Calculated emissions value letter (CEVL).* The term *calculated emissions value letter* or *CEVL* means the letter issued by the DOE to an emissions value (EV) applicant. A CEVL includes the EV that the DOE determined with respect to the fuel that is the subject of the EV applicant's emissions value request (EVR) and the control number that the DOE assigned to the EV applicant's EVR.

(7) *Claim; Form 7218*—(i) *Claim.* The term *claim* means a completed Form 7218, *Clean Fuel Production Credit,* including all information and documentation that the form instructions and the section 45Z regulations require, that a taxpayer files with its Federal income tax return or Federal information return for the taxable year for which the section 45Z credit is determined. The term includes the making of an election under section 6417 or section 6418 and the regulations thereunder, as applicable, by an applicable entity or eligible taxpayer.

(ii) *Form 7218.* The term *Form 7218* means Form 7218, *Clean Fuel Production Credit,* and any successor form(s). *See* § 601.602 of this chapter.

(8) *CO_2e.* The term *CO_2e* means, with respect to any GHG, the equivalent carbon dioxide (as determined based on relative global warming potential). *See* section 45Z(d)(2).

(9) *Code.* The term *Code* means the Internal Revenue Code.

(10) *CORSIA methodologies*—(i) *In general.* The term *CORSIA methodologies* means the fuel lifecycle methodologies used under Volume IV of Annex 16 to the Chicago Convention, Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which has been adopted by the International Civil Aviation Organization (ICAO) with the agreement of the United States. *See* section 45Z(b)(1)(B)(iii)(I). Additional information about CORSIA is available at *https://www.icao.int/environmental-protection/CORSIA/Pages/default.aspx* as of February 4, 2026.

(ii) *CORSIA Default; CORSIA Actual.* The term *CORSIA Default* means determinations from fuel pathways approved under the CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels lifecycle approach (CORSIA Default) with the agreement of the United States. The term *CORSIA Actual* means determinations from fuel pathways approved under the CORSIA Methodology for Calculating Actual Life Cycle Emissions Values lifecycle approach (CORSIA Actual) with the agreement of the United States. Additional information about CORSIA Default and CORSIA Actual is available at *https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Eligible-Fuels.aspx.*

(iii) *Agreement of the United States required.* The terms CORSIA methodologies, CORSIA Default, and CORSIA Actual do not include any portion of or any approach within such methodologies to which the United States has not agreed. *See* section 45Z(b)(1)(B)(iii)(I).

(11) *DOE.* The term *DOE* means the United States Department of Energy.

(12) *Eligible fuel*—(i) *In general.* The term *eligible fuel,* for purposes of the provisional emissions rate procedures described in section 45Z(b)(1)(D) and § 1.45Z–2(f) and the associated definitions in this paragraph (b), means a fuel that, for the taxable year during which such fuel is produced, is either—

(A) A type of fuel not included in the applicable emissions rate table (as described in § 1.45Z–2(e)(2)); or

(B) If the type of fuel is included in the applicable emissions rate table, such fuel's category is not included in the applicable emissions rate table.

(ii) *Other requirements.* An eligible fuel must also meet the requirements of section 45Z(d)(5)(A)(i), (iii), and (iv).

(13) *Emissions factor.* The term *emissions factor* means the emissions factor as described in section 45Z(b)(1)(A) and § 1.45Z–2(c)(1).

(14) *Emissions rate.* The term *emissions rate* means the emissions rate for a transportation fuel as described in section 45Z(b)(1)(B) and (D) and § 1.45Z–2(d).

(15) *Emissions value (EV).* The term *emissions value* or *EV* means the value obtained from the DOE setting forth the DOE's analytical assessment of the lifecycle GHG emissions associated with the production of an eligible fuel using a particular primary feedstock and pathway.

(16) *EPA.* The term *EPA* means the United States Environmental Protection Agency.

(17) *EV applicant.* The term *EV applicant* means a taxpayer submitting a request to the DOE for an emissions value for an eligible fuel for purposes of obtaining a provisional emissions rate (PER) determination as provided in section 45Z(b)(1)(D) and § 1.45Z–2(f).

(18) *Facility*—(i) *In general.* For purposes of the definition of *qualified facility* in section 45Z(d)(4) and paragraph (b)(28) of this section, the term *facility* means a single production line that produces a transportation fuel. For this purpose, a single production line includes all components that function interdependently to produce a transportation fuel through a process that results in the lifecycle GHG emissions rate used to determine the credit. Components function interdependently to produce a transportation fuel if the use of each component is dependent upon the use of each of the other components to produce a transportation fuel. A component that functions interdependently with other components to produce a transportation fuel need not be located in the same building as, or within a certain geographic proximity to, the other components. A facility includes carbon capture equipment if such carbon capture equipment contributes to the lifecycle GHG emissions rate of the transportation fuel for which the credit is determined. A single production line includes all steps of the production process from the processing of feedstock through to the transportation fuel that the taxpayer sells in a qualified sale.

(ii) *Certain indirect production and post-production equipment.* The term *facility* does not include—

(A) Equipment that is used to condition, such as equipment used to blend transportation fuel into a fuel mixture, pressurize a fuel for use in transportation, or transport a transportation fuel beyond the point of production; or

(B) Notwithstanding paragraph (b)(18)(iii) of this section, feedstock-related equipment (including production, purification, recovery, transportation, or transmission equipment) or electricity production equipment used to power the transportation fuel production process, including any carbon capture equipment associated with the electricity production process.

(iii) *Multipurpose components.* Components that have a purpose in addition to the production of a transportation fuel may be part of a facility if such components function interdependently with other components to produce a transportation fuel.

(iv) *Examples.* The following examples illustrate the definition of the term *facility.*

(A) *Example 1. Effect of geographic proximity; carbon capture equipment.* Z produces a transportation fuel at a facility that is equipped with carbon capture equipment (as defined in § 1.45Q–2(c)), as distinguished from the carbon capture equipment described in paragraph (b)(18)(ii)(B) of this section. One purpose of the equipment is to capture carbon oxides. Without the

carbon capture equipment, the facility could not produce a fuel that has an emissions rate that would qualify for the section 45Z credit. Because the carbon capture equipment functions interdependently with other components to produce the transportation fuel, the carbon capture equipment is part of the facility under paragraph (b)(18)(i) of this section. The analysis in this example is the same regardless of the geographic distance between the carbon capture equipment and the rest of the components comprising the facility.

(B) *Example 2. Single production line with components functioning interdependently; sustainable aviation fuel (SAF) transportation fuel.* X produces SAF transportation fuel that is a synthetic blending component that meets the requirements of ASTM D7566, Annex A2. X sells the SAF transportation fuel to Y, an unrelated person. Y blends the SAF transportation fuel with kerosene to create a fuel mixture that qualifies as jet fuel under ASTM D7566. X uses equipment and components that function interdependently to produce the SAF transportation fuel that is sold to Y. X's equipment and components constitute a facility for section 45Z purposes. As described in paragraph (b)(18)(ii)(A) of this section, Y's equipment and components used to make a transportation fuel mixture are blending equipment and are not a facility for section 45Z purposes.

(19) *Fuel.* The term *fuel* means any liquid or gaseous substance that can be consumed to supply heat or power. Therefore, for purposes of section 45Z, the term *fuel* does not include electricity.

(20) *Gallon equivalent*—(i) *In general.* For purposes of section 45Z(a)(1)(A), the term *gallon equivalent* means, with respect to any non-liquid fuel, the amount of such fuel that has the energy equivalent of a gallon of gasoline, which refers to the amount of such fuel that has a British thermal unit (Btu) content of 116,090 (lower heating value).

(ii) *Non-liquid fuel.* A fuel is considered non-liquid if it is in a gaseous state at ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit, respectively.

(iii) *Calculation*—(A) *In general.* For any non-liquid fuel, the gallon equivalent of such fuel is equal to that fuel's lower heating value divided by the lower heating value of a gallon of gasoline. Expressed mathematically: Gallon equivalent = lower heating value of the fuel (measured in Btu) ÷ lower heating value of a gallon of gasoline (116,090 Btu).

(B) *Rounding.* The gallon equivalent determined under paragraph (b)(20)(iii)(A) of this section must be rounded to 5 decimal places.

(iv) *Certain lower heating values.* This paragraph (b)(20)(iv) provides the lower heating values of some non-liquid fuels.

(A) The lower heating value of low-GHG compressed conventional or alternative natural gas (CANG) is 20,267 Btu per pound.

(B) The lower heating value of low-GHG dimethyl ether is 12,417 Btu per pound.

(C) The lower heating value of low-GHG hydrogen is 51,585 Btu per pound.

(D) The lower heating value of low-GHG liquefied CANG is 20,908 Btu per pound. For this purpose, low-GHG liquefied CANG is a non-liquid fuel at ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit.

(E) The lower heating value of low-GHG liquefied petroleum gas (LPG) (other than propane from hydroprocessed esters and fatty acids (HEFA)) is 19,873 Btu per pound. For this purpose, low-GHG LPG (other than propane from HEFA) is a non-liquid fuel at ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit.

(F) The lower heating value of low-GHG LPG (propane from HEFA) is 18,568 Btu per pound. For this purpose, low-GHG LPG (propane from HEFA) is a non-liquid fuel at ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit.

(v) *Example.* X produced 100,000 pounds of low-GHG compressed CANG. To determine the number of gallon equivalents of low-GHG compressed CANG that X produced, X must divide the lower heating value of low-GHG compressed CANG (20,267 Btu per pound), by the lower heating value of a gallon of gasoline (116,090 Btu). Rounded to 5 decimal places, on an energy equivalent basis, each pound of low-GHG compressed CANG is equal to 0.17458 gallon equivalents (20,267 Btu per lb. ÷ 116,090 Btu). Thus, X produced 17,458 gallon equivalents (0.17458 gallon equivalents × 100,000 lbs.) of low-GHG compressed CANG.

(21) *Greenhouse gas (GHG).* The term *greenhouse gas,* or *GHG,* has the same meaning given that term under section 211(o)(1)(G) of the Clean Air Act (CAA) (42 U.S.C. 7545(o)(1)(G)), as in effect on August 16, 2022. *See* section 45Z(d)(3).

(22) *Lifecycle GHG emissions.* The term *lifecycle GHG emissions* means the lifecycle GHG emissions as described in section 211(o)(1)(H) of the CAA (42 U.S.C. 7545(o)(1)(H)), as in effect on August 16, 2022. *See* section 45Z(b)(1)(B)(i).

(23) *mmBTU.* The term *mmBTU* means 1,000,000 British thermal units. *See* section 45Z(d)(1).

(24) *Non-SAF transportation fuel*—(i) *In general.* The term *non-SAF transportation fuel* means any transportation fuel that is not a SAF transportation fuel.

(ii) *Low-GHG non-SAF fuels.* This paragraph (b)(24)(ii) provides a non-exclusive list of fuels that are not sustainable aviation fuel (non-SAF fuels) that may qualify as a transportation fuel, as well as descriptions of such fuels. A listed non-SAF fuel that meets the applicable description in this paragraph (b)(24)(ii) must also meet all the other applicable requirements under section 45Z and the section 45Z regulations to qualify as a transportation fuel.

(A) *Low-GHG biodiesel.* The term *low-GHG biodiesel* means the monoalkyl esters of long chain fatty acids that meet the specifications of ASTM D6751 and that have an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(B) *Low-GHG butanol.* The term *low-GHG butanol* means any mixture of n-butyl, sec-butyl, and iso-butyl alcohols that meets the specifications of ASTM D7862 and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(C) *Low-GHG diesel fuel.* The term *low-GHG diesel fuel* means liquid fuel, including renewable diesel, that meets the specifications of ASTM D975 and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(D) *Low-GHG dimethyl ether.* The term *low-GHG dimethyl ether,* which includes renewable dimethyl ether, means a gaseous fuel that meets the specifications of ASTM D7901 and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(E) *Low-GHG ethanol.* The term *low-GHG ethanol* means ethyl alcohol that is a liquid fuel that meets the specifications of ASTM D4806 for denatured fuel ethanol or ASTM D8651 for undenatured fuel ethanol for blending with gasoline and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(F) *Low-GHG gasoline.* The term *low-GHG gasoline,* which includes renewable gasoline, means liquid fuel that meets the specifications of ASTM D4814 and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(G) *Low-GHG hydrogen.* The term *low-GHG hydrogen* means any gaseous or liquid fuel that meets the requirements of the Society of Automotive Engineers

(SAE) J2719 standard and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU. Information about SAE standards is available at *https://www.sae.org/standards.*

(H) *Low-GHG liquefied petroleum gas (LPG).* The term *low-GHG LPG,* which includes low-GHG propane, means liquefied gases that meet the specifications of ASTM D1835 and that have an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(I) *Low-GHG methanol.* The term *low-GHG methanol* means a methyl alcohol that is a liquid fuel that meets the specifications of ASTM D1152 or ASTM D5797 and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(J) *Low-GHG conventional or alternative natural gas (CANG).* The term *low-GHG CANG,* which includes renewable natural gas (RNG), means a pipeline-quality compressed or liquefied gas that is interchangeable with fossil natural gas, requires only minimal processing (for example, further compression or liquefaction), to meet the specifications of ASTM D8080, and that has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU.

(25) *Prevailing wage and apprenticeship requirements (PWA requirements).* The term *prevailing wage and apprenticeship requirements* or *PWA requirements* means the requirements described in section 45Z(f)(6) and (7) and § 1.45Z–3.

(26) *Producer*—(i) *In general.* Except as provided in paragraph (b)(26)(ii) of this section, the term *producer* means the person that engages in the production of a transportation fuel.

(ii) *Alternative natural gas.* With respect to alternative natural gas, including RNG, the term *producer* means the person that processes the untreated sources of alternative natural gas to remove water, carbon dioxide, and other impurities such that it is interchangeable with fossil natural gas.

(iii) *Examples.* The following examples illustrate the definition of the term *producer.*

(A) *Example 1. SAF producer.* X uses vegetable oil to make 10,000 gallons of a synthetic blending component via a HEFA production pathway described in ASTM D7566, Annex A2, that qualifies as a SAF transportation fuel. X sells the synthetic blending component to Y, a blender that makes a 20,000-gallon SAF blend, consisting of 50 percent synthetic blending component and 50 percent petroleum-based kerosene, that meets the requirements of ASTM D7566. X and Y are unrelated. X is the producer of the 10,000 gallons of synthetic blending component that it sold to Y. Y is not the producer of any of the 20,000 gallons of fuel that it blended because blending is not production.

(B) *Example 2. RNG producer.* X collects biogas from an anaerobic digester and processes it into RNG that qualifies as a transportation fuel. X sells 10,000 gallon equivalents of RNG to Y, a RNG wholesaler and distributer. X injects the 10,000 gallon equivalents of RNG into a pipeline. Y removes 10,000 gallon equivalents of CANG from the pipeline, further compresses it, and sells it to a municipality that uses it to fuel compressed natural gas buses. X and Y are unrelated. X is the producer of the 10,000 gallon equivalents of RNG. Y is not the producer because Y merely took a post-production transportation fuel and further compressed it.

(27) *Production*—(i) *In general.* The term *production* (except for purposes of section 45Z(a)(4)(A) and paragraph (b)(29)(i)(A) of this section) means all steps and processes used to make a transportation fuel. Production begins with the processing of primary feedstock(s) and ends with a transportation fuel ready to be sold in a qualified sale. Production must involve substantial processing by the producer to create a transportation fuel. Production does not include instances in which a person engages in minimal processing, such as creating a fuel mixture or, except as provided for CANG in this paragraph (b)(27)(i), otherwise engaging in activities that do not result in a chemical transformation. In the case of CANG, production includes the act of processing the untreated sources of alternative natural gas to remove water, carbon dioxide, and other impurities such that it is interchangeable with fossil natural gas. Production of CANG does not include compressing CANG that is already interchangeable with fossil natural gas to a higher pressure. Production does not include instances in which a person uses a primary feedstock to produce a fuel that meets the same ASTM standard as the primary feedstock. Production must occur in the United States, which includes any territory of the United States.

(ii) *Examples.* The following examples illustrate the definition of the term *production.*

(A) *Example 1. Minimal processing for stabilizing biodiesel; production in the United States.* X, a domestic corporation, imports fatty acid methyl ester (FAME) from Canada that does not meet the ASTM D6751 specifications for biodiesel. After importation into the United States, X adds a stabilizing additive so that the FAME meets the specifications of ASTM D6751. The resulting fuel is ASTM-compliant biodiesel that qualifies as a transportation fuel. X has not produced the ASTM-compliant biodiesel, as X merely engaged in minimal processing by adding an additive to the imported FAME. Further, X did not produce the ASTM-compliant biodiesel in the United States, as X did not engage in substantial processing in the United States. Substantial processing, and thus production, occurred before X imported the FAME into the United States.

(B) *Example 2. Minimal processing for dehydrating hydrous ethanol; production in the United States.* Y, a domestic corporation, imports hydrous ethanol from Mexico into the United States. The hydrous ethanol has excessive water content and does not meet the ASTM D4806 specifications for ethanol. After importation into the United States, Y reduces the water content of the hydrous ethanol. The resulting fuel is ASTM-compliant anhydrous ethanol that qualifies as a transportation fuel. Y has not produced the ASTM-compliant anhydrous ethanol, as Y merely engaged in minimal processing by dehydrating the imported hydrous ethanol. Further, Y did not produce the ASTM-compliant anhydrous ethanol in the United States, as Y did not engage in substantial processing in the United States. Substantial processing, and thus production, occurred before Y imported the hydrous ethanol into the United States.

(C) *Example 3. Minimal processing for blending ethanol and gasoline.* Z, a domestic corporation, buys ethanol that qualifies as a transportation fuel and blends the ethanol with gasoline. Z has not produced a transportation fuel, as Z merely engaged in minimal processing by blending the ethanol with gasoline to create a fuel mixture.

(D) *Example 4. Production and subsequent blending by same person.* Z, a domestic corporation, produces ethanol that qualifies as a transportation fuel and then blends the ethanol with gasoline. Z has engaged in production of a transportation fuel with respect to the ethanol, notwithstanding Z's subsequent blending of the ethanol with gasoline. However, Z's blending, alone, does not constitute production, as Z engaged in minimal processing by blending the ethanol with gasoline to create a fuel mixture.

(28) *Qualified facility*—(i) *In general.* The term *qualified facility* means a facility (as defined in paragraph (b)(18) of this section) used to produce transportation fuel and excludes any

facility for which an anti-stacking credit is allowed under section 38 for the taxable year. *See* section 45Z(d)(4). For more information on the application of the anti-stacking rules, *see* § 1.45Z–4(b).

(ii) *Anti-stacking credit.* The term *anti-stacking credit* means any one of the following credits listed in section 45Z(d)(4)(B):

(A) The credit for production of clean hydrogen under section 45V (section 45V credit).

(B) The credit determined under section 46 to the extent that such credit is attributable to the energy credit determined under section 48 with respect to any specified clean hydrogen production facility for which an election is made under section 48(a)(15) (section 48(a)(15) election).

(C) The credit for carbon oxide sequestration under section 45Q (section 45Q credit).

(29) *Qualified sale*—(i) *In general.* The term *qualified sale* means a sale of transportation fuel in a manner described in section 45Z(a)(4). The term refers to a sale of transportation fuel by the taxpayer to an unrelated person if—

(A) The fuel is sold for use in the production of a fuel mixture by such person;

(B) The fuel is sold for use in a trade or business by such person; or

(C) Such person sells such fuel at retail to another person and places such fuel in the fuel tank of such other person.

(ii) *Sold for use in a trade or business.* The term *sold for use in a trade or business* means sold for use in a trade or business, with *trade or business* having the same meaning as in section 162 of the Code. The term *sold for use in a trade or business* includes fuel sold to an unrelated person that subsequently resells the fuel in its trade or business. The term does not include a sale for blending or a sale to a purchaser that sells the fuel at retail to another person and places the fuel in the fuel tank of such other person.

(iii) *Sale by another member of a consolidated group.* In the case of a corporation that is a member of an affiliated group of corporations filing a consolidated return (that is, a member of a consolidated group (as defined in § 1.1502–1(b) and (h), respectively)), that corporation will be treated as selling fuel to an unrelated person if that fuel is sold to the unrelated person by another member of that consolidated group. *See* section 45Z(f)(3).

(iv) *Sale by related person (other than another member of a consolidated group).* Except in the case of a taxpayer described in paragraph (b)(29)(iii) of this section, and in accordance with section 45Z(f)(3), a taxpayer will be treated as selling fuel to an unrelated person if such fuel is sold to the unrelated person by a related person (within the meaning of section 45Z(f)(3) and paragraph (b)(36) of this section).

(v) *Examples.* The following examples illustrate the definition of the term *qualified sale.*

(A) *Example 1. Qualified sale for use in a trade or business; ethanol to SAF.* X produces ethanol and sells the ethanol to Y, an unrelated person. As part of its trade or business, Y uses the ethanol to produce a synthetic blending component under ASTM D7566, Annex A5 (ATJ–SPK). Y then blends the synthetic blending component with petroleum-based kerosene to make a sustainable aviation fuel mixture. X has made a qualified sale of the ethanol to Y under paragraphs (b)(29)(i)(B) and (b)(29)(ii) of this section because X sold the ethanol for use in Y's trade or business. See paragraphs (b)(34)(iii) and (b)(34)(iv)(B) of this section regarding the application of the definition of transportation fuel to Y's synthetic blending component.

(B) *Example 2. Qualified sale for use in a trade or business; RNG.* X produces RNG that qualifies as a transportation fuel and sells the RNG to Y, an unrelated intermediary wholesaler and distributor. X injects the RNG into a pipeline for resale and distribution by Y. Y's business consists of purchasing RNG from different producers, distributing it through a pipeline, and reselling it to customers who may be dealers, distributors, retailers, or end users of fuel. Y subsequently resells X's RNG as part of Y's business. X has made a qualified sale of the RNG to Y under paragraphs (b)(29)(i)(B) and (b)(29)(ii) of this section because X sold the RNG for use in Y's trade or business.

(C) *Example 3. Qualified sale made through another member of consolidated group.* X, a fuel producer, and Y, an intermediary dealer, are members of an affiliated group of corporations filing a consolidated return. X produces transportation fuel and sells the fuel to Y. Y resells the fuel to Z, an unrelated person. Z then sells the fuel at retail to a customer and places the fuel in the customer's fuel tank. X is treated as selling the fuel to Z under paragraph (b)(29)(iii) of this section. X has made a qualified sale of the fuel to Z under paragraph (b)(29)(i)(C) of this section.

(D) *Example 4. Qualified sale made through related person (other than another member of consolidated group).* Same facts as in paragraph (b)(29)(v)(C) of this section (*Example 3*), except that X and Y are non-corporate entities under common control and would be treated as a single employer under the regulations prescribed under section 52(b) of the Code. X and Y are thus related persons within the meaning of section 45Z(f)(3) and paragraph (b)(36) of this section. X is treated as selling the fuel to Z under paragraph (b)(29)(iv) of this section. X has made a qualified sale of the fuel to Z under paragraph (b)(29)(i)(C) of this section.

(E) *Example 5. Qualified sale by taxpayer that produces and subsequently blends a fuel.* X produces 9,000 gallons of renewable diesel that qualifies as a transportation fuel. After production, X blends the 9,000 gallons of renewable diesel with 1,000 gallons of petroleum-based diesel fuel that does not qualify as a transportation fuel. X sells the resulting 10,000-gallon fuel blend to an unrelated person for use in that person's trade or business. X has made a qualified sale of the 9,000 gallons of renewable diesel, as part of the fuel blend, under paragraphs (b)(29)(i)(B) and (b)(29)(ii) of this section.

(30) *SAF transportation fuel*—(i) *In general.* The term *SAF transportation fuel* means sustainable aviation fuel as defined in section 45Z(a)(3). That term means the non-kerosene portion of any liquid fuel that is a transportation fuel, is sold for use in an aircraft, and:

(A) Meets the requirements of—

(*1*) ASTM D7566; or

(*2*) The Fischer Tropsch (FT) provisions of ASTM D1655, Annex A1; and

(B) Is not derived from palm fatty acid distillates or petroleum.

(ii) *Synthetic blending component.* The term *synthetic blending component* means the SAF portion of a fuel mixture described in ASTM D7566 that meets the specifications of one of the ASTM D7566 Annexes and is not derived from palm fatty acid distillates or petroleum.

(iii) *Sold for use in an aircraft.* A synthetic blending component sold to a person that blends the fuel into a fuel mixture described in ASTM D7566 is sold for use in an aircraft within the meaning of section 45Z(a)(3) and paragraph (b)(30)(i) of this section.

(iv) *FT hydrocarbons.* The term *FT hydrocarbons* means the FT hydrocarbons that are derived from biomass, used to produce jet fuel described in section A1.2.2.2 of ASTM D1655, Annex A1, and not derived from palm fatty acid distillates or petroleum.

(v) *ASTM D7566 Annexes.* The term *ASTM D7566 Annexes* means any of the annexes in ASTM D7566 that provide the specifications for a pathway to create a synthetic blending component

that can be blended with ASTM D1655-compliant kerosene.

(vi) *ASTM D1655, Annex A1.* The term *ASTM D1655, Annex A1* means the FT provisions of ASTM D1655, Annex A1 that are contained in section A1.2.2.2, which provides a pathway for coprocessing up to five percent of FT hydrocarbons with petroleum to make a liquid fuel that qualifies as jet fuel. For purposes of this definition, the term *petroleum* includes any conventionally sourced hydrocarbons permitted under ASTM D1655, Annex A1. Liquid fuel produced in accordance with section A1.2.2.1 of ASTM D1655, Annex A1 does not qualify for the section 45Z credit because section A1.2.2.1 defines a pathway for producing a liquid fuel from coprocessing an applicable material (or materials derived therefrom) with a non-biomass feedstock. *See* section 45Z(d)(5)(A)(iii).

(31) *Secretary; IRS*—(i) *Secretary.* The term *Secretary* means the Secretary of the Treasury or the Secretary's delegate. *See* section 7701(a)(11)(B).

(ii) *IRS.* The term *IRS* means the Internal Revenue Service.

(32) *Section 45Z credit.* The term *section 45Z credit* means the clean fuel production credit determined under section 45Z of the Code and the section 45Z regulations.

(33) *Section 45Z regulations.* The term *section 45Z regulations* means the regulations in this section, §§ 1.45Z–2 through 1.45Z–6, and 1.4101–1.

(34) *Transportation fuel*—(i) *In general.* The term *transportation fuel* means, pursuant to section 45Z(d)(5)(A), a fuel that—

(A) Is suitable for use as a fuel in a highway vehicle or aircraft;

(B) Has an emissions rate that is not greater than 50 kilograms of CO_2e per mmBTU;

(C) Is not derived from coprocessing an applicable material (or materials derived from an applicable material) with a feedstock that is not biomass; and

(D) Is not produced from a fuel for which a section 45Z credit is allowable.

(ii) *Suitable for use as a fuel in a highway vehicle or aircraft (suitable for use)*—

(A) *In general.* A fuel is *suitable for use as a fuel in a highway vehicle or aircraft (suitable for use)* if the fuel has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft, or may be blended into a fuel mixture that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft. A fuel may possess this practical and commercial fitness even though use in a highway vehicle or aircraft is not the fuel's predominant use. However, a fuel does not possess this practical and commercial fitness solely by reason of its possible or rare use as a fuel in a highway vehicle or aircraft. A fuel is suitable for use at the point at which no further production, refinement, or other step is necessary before the fuel may be sold in a qualified sale, except, as specified in paragraph (b)(34)(ii)(B) of this section, for CANG. To be considered suitable for use, a fuel need not actually be used as a fuel in a highway vehicle or aircraft.

(B) *CANG.* CANG is suitable for use once it is produced so that it is interchangeable with fossil natural gas and would require only minimal processing (for example, further compression or liquefaction) to meet the specifications of ASTM D8080.

(C) *Fuels not requiring further processing.* A fuel that does not require further processing and that may be blended with or used as a component of taxable fuel (within the meaning of section 4083 of the Code) is suitable for use.

(iii) *Produced from a fuel for which a section 45Z credit is allowable.* A fuel is *produced from a fuel for which a section 45Z credit is allowable* if a primary feedstock of the fuel meets the definition of a transportation fuel under paragraph (b)(34)(i) of this section, without regard to paragraph (b)(34)(i)(D) of this section.

(iv) *Examples.* The following examples illustrate the definition of the term *transportation fuel.*

(A) *Example 1. Suitable for use.* X produces diesel fuel that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft. The diesel fuel meets the description of low-GHG diesel fuel in paragraph (b)(24)(ii)(C) of this section, and no further production, refinement, or other step is necessary before the fuel may be sold in a qualified sale. X sells the diesel fuel to a purchaser that uses it as marine diesel fuel. X's diesel fuel satisfies the suitable for use standard under paragraph (b)(34)(ii) of this section, notwithstanding that the diesel fuel ultimately is not used in a highway vehicle or aircraft.

(B) *Example 2. Produced from a fuel for which a section 45Z credit is allowable.* Y buys ethanol and uses it as a primary feedstock to produce a synthetic blending component under ASTM D7566, Annex A5 (ATJ–SPK). The ethanol meets the definition of a transportation fuel under paragraph (b)(34)(i) of this section. Under paragraph (b)(34)(iii) of this section, Y has produced the synthetic blending component from a fuel for which a section 45Z credit is allowable. Y's synthetic blending component is not a transportation fuel for purposes of section 45Z.

(35) *Types and categories of transportation fuel.* As used in section 45Z(b)(1)(B)(i), the term *type of transportation fuel* refers to a particular kind of transportation fuel. For example, ethanol is one type of transportation fuel. As used in section 45Z(b)(1)(B)(i), the term *category of transportation fuel* means the unique primary feedstock and pathway (also known as production process) used to produce a type of transportation fuel. For example, fermentation of U.S. corn starch is one category of ethanol.

(36) *Unrelated person.* The term *unrelated person* means a person not related to the taxpayer. The term has the same meaning as the term *unrelated party* for purposes of the certification required by section 45Z(f)(1)(A)(i)(II)(aa). Persons are treated as related to each other if such persons would be treated as a single employer under the regulations prescribed under section 52(b) of the Code. *See* section 45Z(f)(3).

(c) *Applicability date.* This section applies to qualified sales occurring in taxable years ending on or after [date of publication of final regulations in the **Federal Register**].

§ 1.45Z–2 General rules.

(a) *Amount of credit*—(1) *In general.* For purposes of section 38, the section 45Z credit for any taxable year, with respect to a given transportation fuel, is an amount equal to the product of—

(i) The applicable amount for such fuel;

(ii) The total gallons or gallon equivalents of such fuel that were—

(A) Produced by the taxpayer at a qualified facility; and

(B) Sold by the taxpayer in a qualified sale during the taxable year; and

(iii) The emissions factor for such fuel.

(2) *Determination of whether fuel is liquid or non-liquid; measurement.* Whether a fuel is liquid or non-liquid is determined according to § 1.45Z–1(b)(20)(ii). The volume of a liquid fuel is measured on the basis of gallons adjusted to ambient pressure and temperature of 1 atmosphere and 60 degrees Fahrenheit. The gallon equivalent of a non-liquid fuel is calculated according to § 1.45Z–1(b)(20)(iii).

(3) *Calculation rules*—(i) *Rounding.* If the amount of any section 45Z credit, as calculated under paragraph (a)(1) of this section, is not a multiple of one cent, a taxpayer must round such amount to the nearest cent. A taxpayer must round up any amount ending in 0.5 cents or more

and round down any amount ending in less than 0.5 cents.

(ii) *Pro rata allocation required for sales of transportation fuel in common storage*—(A) *In general.* If a taxpayer sells transportation fuel that is held in common storage with other fuels that have different emissions rates, the taxpayer is treated as selling a pro rata portion of each fuel produced after December 31, 2024, and held in such common storage. As described in § 1.45Z–1(b)(27), the blending of fuels while such fuels are held in common storage does not constitute production of a transportation fuel with a distinct emissions rate.

(B) *Example.* In 2025, X produces 1,000,000 gallons of ethanol at three different facilities: 200,000 gallons, or 20%, at Facility 1; 250,000 gallons, or 25%, at Facility 2; and 550,000 gallons, or 55%, at Facility 3. The ethanol produced at Facility 1 has an emissions factor of 0.5. The ethanol produced at Facility 2 has an emissions factor of 0.1. The ethanol produced at Facility 3 is not a transportation fuel and no section 45Z credit may be determined with respect to it. X places 1,000,000 gallons of ethanol in common storage tanks. In 2025, X sells 600,000 gallons of ethanol from the common storage tanks in qualified sales. Of the 600,000 gallons sold, 120,000 gallons (20%) are allocated to Facility 1, 150,000 gallons (25%) are allocated to Facility 2, and 330,000 gallons (55%) are allocated to Facility 3. X otherwise satisfies the requirements of the section 45Z credit, and Facility 1 and 2 satisfy the prevailing wage and apprenticeship (PWA) requirements. Therefore, X's section 45Z credit amount is calculated as follows: ($1.06 × 120,000 × 0.5) + ($1.06 × 150,000 × 0.1) = ($127,200 × 0.5) + ($159,000 × 0.1) = $63,600 + $15,900 = $79,500. The result does not change if ethanol produced before January 1, 2025, was also in the common storage tanks.

(4) *Applicable amount*—(i) *In general.* The applicable amount is either the base amount for transportation fuel produced at a qualified facility that does not satisfy the PWA requirements, or the alternative amount for transportation fuel produced at a qualified facility that satisfies the PWA requirements. The applicable amount is subject to inflation adjustment for calendar years beginning after 2024, as described in paragraph (a)(4)(iv) of this section.

(ii) *Base amount.* The base amount is either—

(A) For transportation fuel produced on or before December 31, 2025, 20 cents for transportation fuel which is not sustainable aviation fuel (non-SAF transportation fuel) and 35 cents for SAF transportation fuel; or

(B) For transportation fuel produced after December 31, 2025, 20 cents.

(iii) *Alternative amount.* The alternative amount is either—

(A) For transportation fuel produced on or before December 31, 2025, $1.00 for non-SAF transportation fuel and $1.75 for SAF transportation fuel; or

(B) For transportation fuel produced after December 31, 2025, $1.00.

(iv) *Inflation adjustment*—(A) *In general.* For calendar years beginning after 2024, the applicable amount for any transportation fuel is adjusted by multiplying such amount by the inflation adjustment factor for the calendar year in which the qualified sale of the transportation fuel occurs. If any inflation adjusted amount is not a multiple of one cent, such amount will be rounded to the nearest multiple of one cent. *See* section 45Z(c)(1). A taxpayer must round up any amount ending in 0.5 cents or higher and round down any amount ending in less than 0.5 cents.

(B) *Inflation adjustment factor.* The term *inflation adjustment factor* means the inflation adjustment factor determined and published by the Secretary of the Treasury or the Secretary's delegate (Secretary) pursuant to section 45Y(c) of the Code, determined by substituting ''calendar year 2022'' for ''calendar year 1992'' in section 45Y(c)(3). *See* section 45Z(c)(2). Accordingly, the inflation adjustment factor is, with respect to a calendar year, a fraction whose numerator is the gross domestic product (GDP) implicit price deflator for the preceding calendar year and whose denominator is the GDP implicit price deflator for the calendar year 2022. The term *GDP implicit price deflator* means the most recent revision of the implicit price deflator for the GDP as computed and published by the Department of Commerce before March 15 of the calendar year. *See* section 45Y(c)(3).

(C) *Publication of inflation adjustment factor.* The Secretary will publish guidance in the Internal Revenue Bulletin (*see* § 601.601 of this chapter) no more frequently than annually that will provide the inflation adjustment factor.

(b) *Timing of credit*—(1) *In general.* A taxpayer is eligible to claim the section 45Z credit only for the taxable year in which the qualified sale of a transportation fuel occurs, provided the taxpayer meets all other requirements to claim the credit.

(2) *Credit not allowed for production before January 1, 2025.* The section 45Z credit is not allowed for transportation fuel produced before January 1, 2025.

(3) *Qualified sale timing*—(i) *Production.* Production of a transportation fuel may take place in an earlier taxable year than the taxable year in which the qualified sale of such fuel occurs. However, a qualified sale cannot take place before the date the fuel is produced.

(ii) *Sale to unrelated person.* A qualified sale occurs at the time of the sale to the unrelated person. If a taxpayer is treated as selling transportation fuel to an unrelated person under § 1.45Z–1(b)(29)(iii) or (iv) (involving sales by related persons), the qualified sale occurs at the time the related person sells the fuel to an unrelated person.

(iii) *Example of qualified sale timing for member of consolidated group.* X, a fuel producer, and Y, an intermediary dealer, are members of an affiliated group of corporations filing a consolidated return. The affiliated group, including X and Y, uses the calendar year as its taxable year. In 2025, X produces transportation fuel and sells the fuel to Y. In 2026, Y resells the fuel to Z, an unrelated person. Z then sells the fuel at retail to a customer and places the fuel in the customer's fuel tank. For purposes of section 45Z, X is treated as selling the fuel to Z under § 1.45Z–1(b)(29)(iii) and has made a qualified sale. X's qualified sale to Z occurs in 2026 when Y sells the fuel to Z. Thus, X may only claim a section 45Z credit for that fuel for the 2026 taxable year (assuming all other requirements for the section 45Z credit are met).

(c) *Emissions factor*—(1) *In general.* Under section 45Z(b)(1)(A), the emissions factor of a transportation fuel is an amount equal to the quotient of—

(i) An amount equal to—

(A) 50 kilograms (kg) of equivalent carbon dioxide (CO_2e) per 1,000,000 British thermal units (mmBTU); minus

(B) The emissions rate for such fuel; divided by—

(ii) 50 kg of CO_2e per mmBTU.

(2) *Rounding*—(i) *In general.* If the emissions factor of a transportation fuel is not a multiple of 0.1, a taxpayer must round such amount to the nearest multiple of 0.1. A taxpayer must round up if the digit in the hundredths place is a 5 or higher, and round down if the digit in the hundredths place is less than 5.

(ii) *Example.* Y produces a transportation fuel with an emissions rate of 21.25 kg of CO_2e per mmBTU. The emissions factor of Y's fuel is initially calculated as follows: $(50 - 21.25) \div 50 = 0.575$. 0.575 is not a multiple of 0.1, so Y must round the

emissions factor to the nearest multiple of 0.1. Thus, the emissions factor of Y's fuel is 0.6. If instead the emissions rate of Y's fuel were 23 kg of CO_2e per mmBTU, resulting in an initial calculation of the emissions factor as 0.54, Y must round the emissions factor down to 0.5.

(d) *Emissions rate*—(1) *In general.* The emissions rate for a transportation fuel is such fuel's lifecycle greenhouse gas (GHG) emissions expressed as kg of CO_2e per mmBTU, either as established in the applicable emissions rate table published by the Secretary (pursuant to section 45Z(b)(1)(B) and paragraph (e) of this section), or, in the case of any transportation fuel for which an emissions rate has not been established in the applicable emissions rate table, a provisional emissions rate (PER) determined by the Secretary with respect to such fuel (pursuant to section 45Z(b)(1)(D) and paragraph (f) of this section).

(2) *Negative emissions rates*—(i) *In general.* The emissions rate of a transportation fuel produced after December 31, 2025, may not be less than zero (with a resulting emissions factor greater than one), unless such fuel is produced from a primary feedstock that is an animal manure. This limitation also applies to any transportation fuel (as defined in § 1.45Z–1(b)(34)) used as a production input.

(ii) *Examples.* The following examples illustrate the rules regarding negative emissions rates.

(A) *Example 1. Prohibition of negative emissions rate except for transportation fuel produced from animal manure.* In 2026, X produces renewable natural gas (RNG) by anaerobic digestion and biogas upgrading of an animal manure, and Y produces RNG by anaerobic digestion and biogas upgrading of landfill gas. The emissions rates of X's and Y's fuels are both, without further adjustment, -10 kg of CO_2e per mmBTU. X's fuel is produced from animal manure, so no adjustment of the emissions rate is necessary and the emissions factor for X's fuel is 1.2. However, because Y's fuel is not produced from animal manure, the emissions rate for Y's fuel must be adjusted up to 0, so the emissions factor for Y's fuel is 1.0.

(B) *Example 2. Prohibition of negative emissions rate for transportation fuel used as production input.* In 2026, Z produces ethanol by fermentation of U.S. corn starch. As part of the ethanol production process, Z buys alternative natural gas and uses it as process fuel. The alternative natural gas meets the definition of a transportation fuel under § 1.45Z–1(b)(34) and has an emissions rate of -100 kg of CO_2e per mmBTU. However, the alternative natural gas is not derived from animal manure and serves only as a process fuel, not the primary feedstock (*see* § 1.45Z–1(b)(34)(iii), § 1.45Z–1(b)(35), and paragraph (e) of this section), for Z's ethanol. For purposes of accounting for the alternative natural gas when calculating the emissions rate for Z's ethanol, Z must adjust the emissions rate of the alternative natural gas up to 0 kg of CO_2e per mmBTU.

(3) *Indirect land use change excluded.* For transportation fuel produced after December 31, 2025, the emissions rate of a fuel does not include any emissions attributed to indirect land use change. *See* section 45Z(b)(1)(B)(iv).

(e) *Emissions rate table*—(1) *In general.* As required by section 45Z(b)(1)(B)(i), the Secretary will annually publish a table that establishes the emissions rate for similar types and categories of transportation fuels (as defined in § 1.45Z–1(b)(35)) based on the lifecycle GHG emissions for such fuels expressed as kg of CO_2e per mmBTU (*emissions rate table*), which a taxpayer must use for purposes of the section 45Z credit. The emissions rate table for each calendar year will be published in the Internal Revenue Bulletin (*see* § 601.601 of this chapter). A taxpayer must use the applicable emissions rate table as specified in paragraph (e)(2) of this section.

(2) *Applicable emissions rate table*—(i) *In general.* For taxable years beginning after December 31, 2024, the applicable emissions rate table for a taxpayer is the emissions rate table that is in effect on the first day of the taxpayer's taxable year of production. For production after December 31, 2024, in taxable years beginning before January 1, 2025, the applicable emissions rate table is the emissions rate table effective for 2025.

(ii) *Use of applicable emissions rate table.* A taxpayer that produces a fuel for which the applicable emissions rate table establishes an emissions rate must use the corresponding allowed methodologies, as specified in paragraph (e)(3) of this section, provided in such table to determine the emissions rate for all such fuel produced during the taxpayer's taxable year.

(iii) *Emissions rate established in emissions rate table*—(A) *In general.* An emissions rate table establishes the emissions rate for a fuel if the emissions rate table includes both the type and category of fuel. An emissions rate table does not establish the emissions rate for a fuel if such table includes the type but not the category of fuel.

(B) *Effect of additions to methodology.* If an emissions rate table does not initially include a type or category of fuel but an allowed methodology is updated to add such type or category of fuel during the calendar year, then that type or category of fuel will be considered included in such emissions rate table.

(iv) *Examples.* The following examples illustrate the rules regarding the applicable emissions rate table.

(A) *Example 1. General rule for identifying applicable emissions rate table.* X, a calendar year taxpayer, is a fuel producer. In 2025, X produces biodiesel by transesterification of U.S. soybean oil. The emissions rate table for calendar year 2025 includes both biodiesel, the type of fuel X produces, and transesterification of U.S. soybean oil, the category of biodiesel X produces. Therefore, the emissions rate table for calendar year 2025 establishes the emissions rate for X's biodiesel and is the applicable emissions rate table for all of X's production of such biodiesel in 2025.

(B) *Example 2. Type or category of fuel added to allowed methodology.* Y, a calendar year taxpayer, is a fuel producer. In 2025, Y produces biodiesel by transesterification of Canadian soybean oil. The emissions rate table for calendar year 2025 includes the type of fuel Y produces, biodiesel. However, the 2025 emissions rate table for calendar year 2025 does not include transesterification of Canadian soybean oil, the category of biodiesel Y produces. The initial version of the 45ZCF–GREET model, an allowed methodology, released January 15, 2025, also includes the type but not the category of fuel Y produces. On June 1, 2025, the U.S. Department of Energy (DOE) publicly releases an updated version of the 45ZCF–GREET model that adds the transesterification of Canadian soybean oil for biodiesel. Because the update to the 45ZCF–GREET model adds the category of biodiesel Y produces during the calendar year, the emissions rate table for calendar year 2025 is considered to include the category of fuel Y produces. As such, the emissions rate table for calendar year 2025 establishes the emissions rate for Y's biodiesel and is the applicable emissions rate table for all of Y's production of such biodiesel in 2025.

(3) *Allowed methodologies for emissions rate table*—(i) *In general.* A taxpayer producing a fuel for which an emissions rate is established by the applicable emissions rate table must determine the fuel's emissions rate using the methodologies allowed under paragraphs (e)(3)(iv) and (v) of this

section (*allowed methodologies* or *allowed methodology*), as directed by the applicable emissions rate table.

(ii) *Use of most recent version of allowed methodology*—(A) *In general.* A taxpayer must use the first version of an allowed methodology that is publicly available in the taxable year of production and that includes the type and category of such fuel (*most recent version of an allowed methodology*). If an allowed methodology is updated with respect to an included type or category of fuel and such updated methodology becomes publicly available after the first day of the taxable year of production but still within such taxable year, then the taxpayer may, at its discretion, treat such updated version as the most recent version of such methodology.

(B) *Examples.* The following examples illustrate the rules regarding allowed methodologies.

(*1*) *Example 1. Choice after methodology update.* X, a calendar year taxpayer, is a fuel producer. In 2025, X produces biodiesel by transesterification of U.S. soybean oil. The 2025 emissions rate table is the applicable emissions rate table; it identifies the 45ZCF–GREET model as the only allowed methodology. The initial version of the 45ZCF–GREET model, released January 15, 2025, includes the type and category of the fuel X produces. On June 1, 2025, the DOE publicly releases a version of the 45ZCF–GREET model that updates the transesterification pathway. Under paragraph (e)(3)(ii)(A) of this section, X may use either the January 15, 2025, or the June 1, 2025, version of the 45ZCF–GREET model to calculate the emissions rate for all biodiesel produced using such pathway in 2025.

(*2*) *Example 2. Addition of type or category of fuel to methodology without further updates.* Y, a calendar year taxpayer, is a fuel producer. In 2025, Y produces biodiesel by transesterification of Canadian soybean oil. The initial version of the 45ZCF–GREET model, released January 15, 2025, includes the type, but not the category, of fuel Y produces. On June 1, 2025, the DOE publicly releases an updated version of the 45ZCF–GREET model that adds the transesterification of Canadian soybean oil for biodiesel. As such, the 2025 emissions rate table is considered to include Y's type and category of fuel; it identifies the 45ZCF–GREET model as the only allowed methodology. Under paragraph (e)(3)(ii)(A) of this section, because the June 1, 2025, version of the 45ZCF–GREET model is the first publicly available version that includes Y's type and category of fuel, Y must use the June 1, 2025, version of the 45ZCF–GREET model to calculate the emissions rate for all biodiesel it produced by transesterification of Canadian soybean oil in 2025.

(*3*) *Example 3. Choice of methodology after addition of type or category of fuel to methodology.* Same facts as in paragraph (e)(3)(ii)(B)(*2*) of this section (*Example 2*), except that on September 1, 2025, the DOE publicly releases a version of the 45ZCF–GREET model that updates the transesterification of Canadian soybean oil pathway. Under paragraph (e)(3)(ii)(A) of this section, Y cannot use the January 15, 2025, version of the 45ZCF–GREET model, but may use either the June 1, 2025, or the September 1, 2025, version of the 45ZCF–GREET model to calculate the emissions rate for all biodiesel it produced using such pathway in 2025.

(iii) *45ZCF–GREET model as a successor model*—(A) *In general.* For purposes of section 45Z(b)(1)(B)(ii), the 45ZCF–GREET model is a successor model.

(B) *Certain emissions accounting rules*—(*1*) *In general.* In the 45ZCF–GREET model, for purposes of accounting for emissions associated with hydrogen (as a production input), natural gas alternatives (as a production input or as the transportation fuel produced), electricity, and carbon capture and sequestration, rules similar to the rules under section 45V of the Code apply, unless otherwise specified by the 45ZCF–GREET model with respect to technical modeling issues that are subsequently identified by the DOE or technical differences arising from the application of the section 45V rules to the 45ZCF–GREET model.

(*2*) *Similar rule for use of energy attribute certificates (EACs); incrementality.* With respect to the use of an EAC within the 45ZCF–GREET model, rules similar to § 1.45V–4(d) apply. When applying the incrementality rules in § 1.45V–4(d)(3)(i) for purposes of the 45ZCF–GREET model, a taxpayer's facility is considered placed in service in the first taxable year it produces a transportation fuel. Thus, the electricity-generating facility that produced the unit of electricity to which the EAC relates must have a commercial operations date (COD) that is no more than 36 months before the first day of the taxable year that the facility for which the EAC is retired first produced a transportation fuel, or, if the electricity represented by the EAC is produced by an electricity-generating facility that uses carbon capture and sequestration (CCS) technology, such technology has a placed in service date that is no more than 36 months before the first day of the taxable year that the facility for which the EAC is retired first produced a transportation fuel.

(*3*) *Example. Similar incrementality rules applied to existing fuel production facility.* X owns and operates Facility, which has produced ethanol by fermentation of U.S. corn starch since 2002. On January 1, 2024, X finishes upgrading Facility, so that the ethanol produced at Facility has an emissions rate that is less than 50 kg of CO_2e per mmBTU. For purposes of accounting for emissions associated with electricity, X purchases and retires EACs and uses those EACs when calculating the emissions rate of its ethanol. Although Facility has been operating since 2002, it only began producing a transportation fuel on January 1, 2024. For purposes of applying the incrementality rules to EACs used within the 45ZCF–GREET model, Facility is considered placed in service on January 1, 2024. Thus, an electricity generating facility that produced a unit of electricity to which the EACs relate must have a COD no earlier than January 1, 2021.

(iv) *Methodology for non-SAF transportation fuel.* If the applicable emissions rate table establishes the emissions rate for a non-SAF transportation fuel, then a taxpayer producing such fuel must determine the fuel's emissions rate using the 45ZCF–GREET model, as directed by the applicable emissions rate table.

(v) *Methodologies for SAF transportation fuel.* If the applicable emissions rate table establishes the emissions rate for a SAF transportation fuel, then a taxpayer producing such fuel must determine the fuel's emissions rate using the most recent version of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) Default Life Cycle Emissions Values for CORSIA Eligible Fuels lifecycle approach (CORSIA Default) or the CORSIA Methodology for Calculating Actual Life Cycle Emissions Values lifecycle approach (CORSIA Actual) (as described in § 1.45Z–1(b)(10)(ii)), or the 45ZCF–GREET model, as directed by the applicable emissions rate table. A taxpayer may choose, for each type and category of SAF transportation fuel that it produces, which of these methodologies to use. For a given type and category of SAF transportation fuel, a taxpayer must use the same methodology to calculate lifecycle GHG emissions associated with all stages of SAF production, from feedstock production through distribution. *See* § 1.45Z–5, *Procedures for certification of lifecycle greenhouse gas emissions rates,* for information on how to certify compliance with these

methodologies. For purposes of section 45Z(b)(1)(B)(iii)(II), the 45ZCF–GREET model is a similar methodology to CORSIA.

(vi) *Additional instructions on methodologies.* A taxpayer must use an allowed methodology in accordance with the applicable emissions rate table, accurately enter all information requested by such methodology, and follow all publicly available instructions for the use of such methodology.

(f) *Provisional emissions rate (PER)*—(1) *In general.* If a taxpayer produces an eligible fuel, as defined in § 1.45Z–1(b)(12), then the taxpayer may file a petition with the Secretary for a determination of the emissions rate (*provisional emissions rate (PER)*) for such eligible fuel (*PER petition*). *See* section 45Z(b)(1)(D). Before filing a PER petition, the taxpayer must first submit a request to the DOE for an emissions value (EV) for an eligible fuel (*emissions value request (EVR)*). The DOE will consider such taxpayer the emissions value applicant (*EV applicant*). The EV applicant must receive a calculated emissions value letter (CEVL) from the DOE for such fuel. Before submitting an EVR, an EV applicant must review the applicable emissions rate table and the most recent version of the allowed methodologies to ensure that the applicable emissions rate table has not already established the emissions rate for the EV applicant's type and category of fuel. After obtaining a CEVL, the taxpayer may then file a PER petition for the eligible fuel that is the subject of the CEVL. The EV applicant must submit an EVR to the DOE in accordance with the procedures described in paragraph (f)(3) of this section. The taxpayer must submit a PER petition in accordance with the procedures described in paragraph (f)(4) of this section. The DOE and the IRS, respectively, will deny any EVR or PER petition that does not follow the procedures in this paragraph (f).

(2) *Threshold requirements.* An EV applicant may submit an EVR, and subsequently a PER petition, only for an eligible fuel. The DOE and the IRS, respectively, will deny any EVR or PER petition for a type and category of fuel included in the applicable emissions rate table. Additionally, the DOE and the IRS, respectively, will deny any EVR or PER petition based on a facility rather than a type or category of fuel.

(3) *Procedures for requesting emissions value from DOE*—(i) *In general.* The DOE will publish specific guidance and procedures for an EV applicant to submit an EVR to the DOE. An EV applicant that submits an EVR must follow the procedures specified by the DOE to request and obtain such emissions value, including the DOE's Section 45Z EVR process instructions (Instructions). The DOE will evaluate an EVR using the same well-to-wheel system boundary that the 45ZCF–GREET model employs. As used in this paragraph (f)(3), the term *well-to-wheel* includes well-to-wake with respect to aviation fuel. Additionally, the DOE will treat background data parameters in the 45ZCF–GREET model (fixed data that a 45ZCF–GREET model user cannot change) as background data (fixed data that an EV applicant cannot change) in evaluating an EVR. For purposes of accounting for emissions associated with hydrogen (as a production input), natural gas alternatives (as a production input or as the transportation fuel produced), electricity, and carbon capture and sequestration, rules similar to the rules under section 45V apply, unless otherwise specified by the DOE with respect to subsequent technical modeling issues or technical differences arising from the application of the section 45V rules to an eligible fuel. The DOE may decline to review an EVR that is not responsive, including an EVR that is not for an eligible fuel or an EVR that is incomplete. An EV applicant seeking a new emissions value for a given type and category of fuel after the DOE has completed its analysis may reapply only if the EV applicant wishes to resubmit its EVR with new or revised technical information or clarifications related to the information previously submitted. An EVR is complete once the DOE either issues the EV applicant a CEVL or denies the EVR.

(ii) *Required information for an EVR*—(A) *EVR for an eligible fuel that is not a category of hydrogen.* An EV applicant submitting an EVR for an eligible fuel that is not a category of hydrogen must submit the following information to the DOE:

(*1*) Specific sections of the Class 3 front-end engineering and design (FEED) study (or studies) as defined by the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R–97, or similar indication of project maturity such as project specification and cost estimation sufficient to inform a final investment decision, as determined by the DOE, that has been completed for each qualified facility at which the applicant produces the eligible fuel, as described further in the Instructions; and

(*2*) A completed Section 45Z EVR Form, as described in the Instructions.

(B) *EVR for an eligible fuel that is a category of hydrogen.* An EV applicant submitting an EVR for an eligible fuel that is a category of hydrogen must first submit a section 45V Emissions Value Request Application under the process for a provisional emissions rate determination for the section 45V credit, as described in § 1.45V–4(c). An EV applicant submitting an EVR for an eligible fuel that is a category of hydrogen must submit to the DOE, in addition to the general requirements in paragraph (f)(3)(ii)(A) of this section, the letter obtained under the section 45V emissions value request process from the DOE stating the well-to-gate emissions value that the DOE determined with respect to the facility's hydrogen production pathway and the control number that the DOE assigned to the section 45V Emissions Value Request Application. If the EV applicant produces that category of hydrogen at multiple facilities, such applicant will need to provide this information for each facility. Once such an EV applicant goes through the section 45V emissions value request process and then submits their EVR for purposes of section 45Z, the DOE may issue a CEVL that includes an emissions value that fully accounts for the well-to-wheel emissions of that category of hydrogen.

(4) *Procedures for requesting PER determination*—(i) *In general.* To request a PER determination, a taxpayer must file a PER petition with the Form(s) 7218 included with the taxpayer's timely filed (including extensions) Federal income tax return or Federal information return for the first taxable year for which the taxpayer claims the section 45Z credit for the eligible fuel to which the PER petition relates.

(ii) *Required information for a PER petition.* A PER petition must include the CEVL received from the DOE with respect to the eligible fuel. If the taxpayer obtained more than one emissions value from the DOE, the taxpayer must include the CEVL for each eligible fuel for which it is claiming a section 45Z credit for a given taxable year with the relevant Form(s) 7218. The CEVL(s) included with the Form(s) 7218 constitutes the PER petition.

(5) *Determination of a PER*—(i) *In general.* Upon the taxpayer's filing of a PER petition pursuant to paragraph (f)(4) of this section, the PER petition will be deemed accepted by the IRS. The IRS's deemed acceptance of such PER petition is the Secretary's determination of the PER.

(ii) *Reliance on emissions value.* A taxpayer may rely upon an emissions value provided by the DOE in a CEVL for purposes of calculating and claiming the section 45Z credit, provided that all

information, representations, or other data provided to the DOE in support of the emissions value request are accurate. If an applicable emissions rate table subsequently establishes an emissions rate for a fuel subject to a CEVL, a taxpayer must use the applicable emissions rate table and may no longer rely on the CEVL for the fuel.

(6) *Not an examination of books and records.* The Secretary's PER determination is not an examination or inspection of books of account for purposes of section 7605(b) of the Code and does not preclude or impede the IRS (under section 7605(b) or any administrative provisions adopted by the IRS) from later examining a return or inspecting books or records with respect to any taxable year for which the section 45Z credit is claimed. For example, any information, representations, or other data provided to the DOE in an EVR are still subject to examination. Further, a PER determination does not signify that the IRS has determined that any other requirements of the section 45Z credit have been satisfied for any taxable year.

(g) *Emissions rates (including PER) relate back to January 1, 2025.* The first emissions rate determined for a type and category of fuel, whether established in an applicable emissions rate table or through the PER process, relates back to January 1, 2025.

(h) *Applicability date.* This section applies to qualified sales occurring in taxable years ending on or after [date of publication of final regulations in the **Federal Register**], except that paragraph (e) of this section applies to qualified sales occurring in taxable years ending on or after January 10, 2025.

■ **Par. 3.** Sections 1.45Z–4 through 1.45Z–6 are added to read as follows:

§ 1.45Z–4 Special Rules.

(a) *Registered production in the United States required.* No section 45Z credit is determined with respect to any transportation fuel unless the taxpayer is registered, or is treated as being registered, as a producer of clean fuel under section 4101 of the Code at the time of production and the fuel is produced in the United States, which includes any territory of the United States. *See* § 1.45Z–6(b) for special rules regarding registration if the taxpayer is not the producer. *See* § 1.4101–1 for the registration rules that apply for purposes of the section 45Z credit.

(b) *Anti-stacking rules*—(1) *In general.* This paragraph (b) provides rules for determining whether an anti-stacking credit (as defined in § 1.45Z–1(b)(28)(ii)) has been allowed for a taxable year with respect to a facility. Section 45Z(d)(4)(B).

(2) *Determination of qualified facility*—(i) *In general.* The determination of whether a facility is a qualified facility must be made separately for each taxable year. Whether a facility is a qualified facility for a given taxable year depends on whether the facility produced transportation fuel sold during that taxable year and whether an anti-stacking credit was allowed for that taxable year with respect to the facility. A facility may be a qualified facility in one taxable year but not in another taxable year. If a taxpayer produces transportation fuel at multiple facilities, the determination of whether the fuel was produced at a qualified facility is made separately for each facility.

(ii) *Section 48(a)(15) election.* A section 48(a)(15) election is irrevocable, and if made, will permanently disqualify a facility from being a qualified facility for purposes of section 45Z for the taxable year of the election and all subsequent taxable years.

(iii) *Carbon capture equipment at a facility.* In the case of any transportation fuel produced at a facility that includes carbon capture equipment for which the section 45Q credit is allowed for the taxable year, that facility is not a qualified facility, and no section 45Z credit will be determined with respect to the facility for the taxable year.

(3) *Examples.* The following examples illustrate the application of the anti-stacking rules. For purposes of these examples, assume that X and Y are unrelated C corporations and that all other requirements for an anti-stacking credit are met.

(i) *Example 1. Interaction of section 45Z and section 45V credits; transportation fuel and qualified clean hydrogen produced at the same facility by persons with the same taxable year.* During 2025 and 2026, X, a calendar year taxpayer, produces transportation fuel at a facility and sells the fuel in qualified sales in 2025 and 2026. X is otherwise eligible to claim the section 45Z credit with respect to the transportation fuel it produces at the facility. During 2025 and 2026, Y, a calendar year taxpayer, produces qualified clean hydrogen (as defined in section 45V(c)(2)) at the same facility. Y claims and is allowed a section 45V credit with respect to the facility for 2025, but not for 2026. No other person is allowed a section 45V credit with respect to the facility for 2025 or 2026. Because Y is allowed a section 45V credit with respect to the facility for 2025, the facility is not a qualified facility for purposes of section 45Z for 2025 and X is not eligible to claim a section 45Z credit with respect to the facility for 2025. Because no section 45V credit is allowed with respect to the facility for 2026, the facility is a qualified facility for purposes of section 45Z for 2026. Therefore, X is eligible to claim a section 45Z credit with respect to the facility for 2026.

(ii) *Example 2. Interaction of section 45Z and section 45V credits; transportation fuel and qualified clean hydrogen produced at the same facility by persons with different taxable years.* During 2025, X, a calendar year taxpayer, produces transportation fuel at a facility and sells the fuel in a qualified sale. X is otherwise eligible to claim the section 45Z credit with respect to the facility. During 2025, Y produces qualified clean hydrogen (as defined in section 45V(c)(2)) at the same facility. Y has a taxable year of October 1 to September 30. Y claims and is allowed a section 45V credit with respect to the facility for its taxable year of October 1, 2024, to September 30, 2025, but not for its taxable year of October 1, 2025, to September 30, 2026. No other person is allowed a section 45V credit with respect to the facility for any portion of 2025. The facility is not a qualified facility for purposes of section 45Z for the period in 2025 for which Y is allowed a section 45V credit (that is, January 1 through September 30, 2025). However, the facility is a qualified facility for purposes of section 45Z for the period in 2025 for which no section 45V credit is allowed with respect to the facility (that is, October 1 through December 31, 2025). Therefore, X is eligible to claim a section 45Z credit with respect to the facility for 2025, but only for the period during which the facility is a qualified facility (that is, October 1 through December 31, 2025).

(iii) *Example 3. Interaction of section 45Z credit and section 48(a)(15) election.* During 2025, X, a calendar year taxpayer, produces transportation fuel at a facility and sells the fuel in a qualified sale. During 2025, X also produces qualified clean hydrogen (as defined in section 45V(c)(2)) at the same facility, which is a specified clean hydrogen production facility (as defined in section 48(a)(15)(C)). X is otherwise eligible to claim the section 45Z credit and to make a section 48(a)(15) election with respect to the facility. For 2025, X makes an election under section 48(a)(15) to treat the facility as energy property for purposes of the energy credit under section 48. X claims and is allowed the section 48 credit. Because the transportation fuel and the qualified clean hydrogen are produced at the same facility, and X is allowed a section

48 credit attributable to a section 48(a)(15) election with respect to the facility for 2025, the facility is not a qualified facility for purposes of section 45Z for 2025. Because the section 48(a)(15) election is irrevocable, the facility also will not be a qualified facility for purposes of section 45Z for any subsequent taxable year. Therefore, X is not eligible to claim the section 45Z credit with respect to the facility for 2025 or for any subsequent taxable year.

(iv) *Example 4. Interaction of section 45Z and section 45Q credits; transportation fuel produced at a facility that includes carbon capture equipment.* During 2025 and 2026, X, a calendar year taxpayer, produces transportation fuel at a facility and sells the fuel in a qualified sale. X is otherwise eligible to claim the section 45Z credit with respect to the facility. The facility includes carbon capture equipment (within the meaning of section 45Q). Y, a calendar year taxpayer, owns and uses the carbon capture equipment at the facility to capture carbon oxide. During 2025, Y utilizes or disposes of the carbon oxide in a manner that qualifies for the section 45Q credit. Y claims and is allowed a section 45Q credit with respect to the facility for 2025, but not for 2026. No other person is allowed a section 45Q credit with respect to the facility for 2025 or 2026. Because Y is allowed a section 45Q credit with respect to the facility for 2025, the facility is not a qualified facility for purposes of section 45Z for 2025, and X is not eligible to claim a section 45Z credit with respect to the facility for 2025. Because no section 45Q credit is allowed with respect to the facility for 2026, the facility is a qualified facility for purposes of section 45Z for 2026. Therefore, X is eligible to claim a section 45Z credit with respect to the facility for 2026.

(c) *Anti-abuse rules.* The rules of section 45Z and the section 45Z regulations must be applied in a manner consistent with the purposes of section 45Z and the section 45Z regulations (and the regulations in this chapter under sections 6417 and 6418 related to the section 45Z credit). These purposes include incentivizing the domestic production and use of clean transportation fuel and ensuring that taxpayers do not circumvent the feedstock origin and anti-stacking rules. Therefore, no section 45Z credit is determined if a taxpayer's primary purpose in producing and selling a transportation fuel is to obtain the benefit of the section 45Z credit in a manner that is wasteful, such as discarding, disposing of, or destroying the transportation fuel without putting it to a productive use. Whether the production and sale of transportation fuel is consistent with the purposes of section 45Z and the section 45Z regulations (and the regulations in this chapter under sections 6417 and 6418 related to the section 45Z credit) is based on all facts and circumstances.

(d) *Production attributable to the taxpayer*—(1) *In general.* Except as provided in paragraph (e)(2) of this section, in the case of a facility in which more than one person has an ownership interest (and the arrangement is not classified as a partnership for Federal tax purposes), production from the facility is allocated among those persons in proportion to their respective ownership interests in the gross sales from the facility. Each owner's respective allocable share of the section 45Z credit is based on each owner's allocable share of production, determined pursuant to section 45Z and the section 45Z regulations. *See* section 45Z(f)(2).

(2) *Example.* X, Y, and Z are all calendar year taxpayers, and each owns an interest in Facility, which is a qualified facility. X has a 45 percent ownership interest in Facility, Y has a 35 percent ownership interest in Facility, and Z has a 20 percent ownership interest in Facility. Gross sales from Facility are allocated among X, Y, and Z in proportion to their ownership interests. During 2025, Facility produced 10 million gallons of transportation fuel. X, Y, and Z will each determine the amount of their section 45Z credit for 2025 based on their allocable share of the 10 million gallons of transportation fuel produced at Facility during 2025. Thus, X will determine the amount of its section 45Z credit based on 4.5 million gallons, Y will determine the amount of its section 45Z credit based on 3.5 million gallons, and Z will determine the amount of its section 45Z credit based on 2 million gallons.

(3) *Section 761(a) election.* If a facility is owned through an unincorporated organization that has made a valid election under section 761(a) of the Code, each member's undivided ownership interest in the facility will be treated as a separate facility owned by the member.

(e) *No requirement of facility ownership*—(1) *In general.* A taxpayer is not required to own the qualified facility at which the taxpayer produces transportation fuel in order for a section 45Z credit to be determined with respect to that fuel.

(2) *Application of production attribution rules if taxpayer does not own facility.* If a taxpayer produces transportation fuel at a facility owned by another person, production of that fuel will be attributed to the taxpayer unless otherwise specified in the Code or in the section 45Z regulations. In the case of a production arrangement under which multiple taxpayers produce transportation fuel at a facility that is not owned by all those taxpayers, production of the transportation fuel will be allocated among the taxpayers in proportion to their respective interests in the gross sales from that fuel, as determined under the applicable contract or other legal arrangement with respect to the fuel.

(f) *Foreign feedstock and prohibited foreign entity restrictions*—(1) *Foreign feedstock restrictions.* Transportation fuel that is produced after December 31, 2025, must be exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada. *See* section 45Z(f)(1)(A)(iii).

(2) *Prohibited foreign entity restrictions*—(i) *Specified foreign entity.* No section 45Z credit is determined for any taxable year of a taxpayer beginning after July 4, 2025, if the taxpayer is a specified foreign entity (as defined in section 7701(a)(51)(B) of the Code). *See* section 45Z(f)(8)(A).

(ii) *Other prohibited foreign entity.* No section 45Z credit is determined for any taxable year of a taxpayer beginning after July 4, 2027, if the taxpayer is a foreign-influenced entity (as defined section 7701(a)(51)(D) of the Code, without regard to section 7701(a)(51)(D)(i)(II)). *See* section 45Z(f)(8)(B).

(g) *Recordkeeping and substantiation*—(1) *In general.* A taxpayer claiming a section 45Z credit must maintain records sufficient to establish the taxpayer's eligibility for the section 45Z credit and the amount of the credit claimed on the return. At a minimum, those records must include records:

(i) Establishing that each fuel produced is a transportation fuel;

(ii) Establishing any relevant information relating to the primary feedstock(s) used to produce each such fuel;

(iii) Establishing that each fuel meets any additional specifications for the type of fuel described in § 1.45Z–1(b)(24) or (30);

(iv) Substantiating how the emissions rate for each fuel was determined (including, if applicable, the specific type(s) and category(ies) under the applicable emissions rate table);

(v) Relating to any fuel testing obtained by the taxpayer;

(vi) Establishing that each facility used to produce fuel is a qualified facility;

(vii) Establishing the date each facility was placed in service;

(viii) Establishing that each fuel was sold in a qualified sale;

(ix) Establishing any certification from an unrelated person and substantiating the information therein; and

(x) Used for or related to any petition for a provisional emissions rate (PER), including raw data.

(2) *Safe harbor for substantiation of emissions rate.* A taxpayer may substantiate the emissions rate for a transportation fuel which is not sustainable aviation fuel (non-SAF transportation fuel) that was determined using the 45ZCF–GREET model by obtaining certification with respect to that fuel in substantially the same form and manner described in § 1.45Z–5 for certifying an emissions rate for SAF transportation fuel determined using the 45ZCF–GREET model. A taxpayer must provide the qualified certifier with all information necessary to provide the certification, as described in § 1.45Z–5. The Secretary may provide other methods through which a taxpayer may substantiate the emissions rate for a non-SAF transportation fuel. The Secretary will prescribe any such methods in guidance published in the Internal Revenue Bulletin or in IRS forms, instructions, or publications. *See* §§ 601.601 and 601.602 of this chapter.

(3) *Safe harbor for substantiation of qualified sale*—(i) *In general.* A taxpayer may substantiate a qualified sale of transportation fuel by obtaining from the purchaser a certificate in substantially the same form as described in paragraph (g)(3)(ii) of this section. If the certificate relates to a single purchase, the taxpayer must obtain the certificate from the purchaser prior to or at the time of sale. If the certificate relates to purchases made over a period of time, the taxpayer must obtain the certificate from the purchaser prior to or at the same time as the first of the sales to which the certificate relates. A taxpayer receiving a certificate from a purchaser must have no reason to believe that any information in the certificate regarding the use of the transportation fuel is false. The Secretary of the Treasury or the Secretary's delegate (Secretary) may provide other methods through which a taxpayer may substantiate a qualified sale. The Secretary will prescribe any such methods in guidance published in the Internal Revenue Bulletin or in IRS forms, instructions, or publications. *See* §§ 601.601 and 601.602 of this chapter.

(ii) *Qualified sale model certificate*—

Certificate for Qualified Sale of Transportation Fuel

(To support a taxpayer's claim under section 45Z of the Internal Revenue Code.)

_____

_____

_____

(Name, address, and Employer Identification Number (''EIN'') of Taxpayer)

The undersigned purchaser of transportation fuel (''Purchaser'') hereby certifies the following under the penalty of perjury:

_____

Name of Purchaser

Type of transportation fuel purchased:

_____

The transportation fuel to which this certificate applies will be (mark below):

_____Used by Purchaser in the production of a fuel mixture;

_____Used by Purchaser in a trade or business; or

_____Sold by Purchaser at retail to another person and placed in the fuel tank of such other person.

This certificate applies to the following (complete as applicable):

_____This is a single purchase certificate:

1. _____Invoice or delivery ticket number
2. _____Number of gallons

_____This is a certificate covering all purchases under a specified account or order number:

1. _____Effective date
2. _____Expiration date (period not to exceed 1 year after the effective date)
3. _____Purchaser's account number

Purchaser agrees to provide the person liable for tax with a new certificate if any information in this certificate changes.

Purchaser is unrelated (within the meaning of section 52(b) of the Code and the regulations thereunder) to the Taxpayer selling the transportation fuel to which this certificate relates.

Purchaser understands that it may be liable for the penalty under section 6701 of the Code (relating to aiding and abetting an understatement of tax liability) if this is an erroneous certification.

Purchaser understands that the fraudulent use of this certificate may subject Purchaser and all parties making any fraudulent use of this certificate to a fine or imprisonment, or both, together with the costs of prosecution.

_____

Signature and date signed

_____

Printed or typed name of person signing

_____

Title of person signing

_____

EIN of Purchaser

_____

Address of Purchaser

(h) *Applicability date.* This section applies to qualified sales occurring in taxable years ending on or after [date of publication of final regulations in the **Federal Register**].

§ 1.45Z–5 Procedures for certification of lifecycle greenhouse gas emissions rates.

(a) *In general.* This section provides rules on certification from an unrelated person for sustainable aviation fuel (SAF) transportation fuel pursuant to section 45Z(f)(1)(A)(i)(II) of the Code.

(b) *Certification requirements*—(1) *In general.* For each taxable year for which a taxpayer claims a section 45Z credit for SAF transportation fuel, the taxpayer must obtain certification from an unrelated person and include such certification with the taxpayer's Form 7218, which is filed with the taxpayer's Federal income tax return or Federal information return, for each qualified facility at which the taxpayer produces SAF transportation fuel.

(2) *Content.* The certification described in paragraph (b)(1) of this section must be prepared by a qualified certifier and signed by the qualified certifier under penalty of perjury. The certification must contain information that is in substantially the same form as the model certification provided in paragraph (h) of this section and must contain all information necessary to complete the model certification. Specifically, the certification must include—

(i) A production statement described in paragraph (c) of this section from the qualified certifier regarding the production of SAF transportation fuel, including that the inputs used to determine the lifecycle greenhouse gas (GHG) emissions rate of the production process are accurate;

(ii) A conflict statement described in paragraph (d) of this section from the qualified certifier regarding conflicts of interest;

(iii) A qualified certifier statement described in paragraph (e) of this section from the qualified certifier providing information regarding the qualified certifier, including documentation of the qualified certifier's qualifications;

(iv) A qualified facility statement described in paragraph (f) of this section from the qualified certifier providing

certain general information about the qualified facility at which the SAF transportation fuel production undergoing certification occurred;

(v) Any documentation necessary to substantiate the certification process given the standards and best practices prescribed by the qualified certifier's accrediting body as they apply to the circumstances of the taxpayer and the qualified facility; and

(vi) Any other information or documentation required by applicable IRS tax forms or form instructions.

(3) *Qualified certifier*—(i) *CORSIA methodologies.* For taxpayers using the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) Default Life Cycle Emissions Values for CORSIA Eligible Fuels lifecycle approach (CORSIA Default) or the CORSIA Methodology for Calculating Actual Life Cycle Emissions Values lifecycle approach (CORSIA Actual) to determine the emissions rate for SAF transportation fuel, the term *qualified certifier* means any individual or organization that is unrelated to the taxpayer and is not an employee of the taxpayer, and that has an active accreditation from International Sustainability and Carbon Certification, Roundtable on Sustainable Biomaterials, ClassNK, or other sustainability certification scheme approved by the ICAO.

(ii) *45ZCF–GREET model.* For taxpayers using the 45ZCF–GREET model to determine the emissions rate for SAF transportation fuel, the term *qualified certifier* means any individual or organization that is unrelated to the taxpayer and is not an employee of the taxpayer, and that has an active accreditation—

(A) From the American National Standards Institute National Accreditation Board to conduct validation and verification in accordance with the requirements of International Organization for Standardization (ISO) 14065; or

(B) As a verifier, lead verifier, or verification body under the California Air Resources Board Low Carbon Fuel Standard (CARB LCFS) program.

(iii) *Qualifications are methodology specific.* Qualified certifiers are qualified to provide certification only for the associated methodologies identified in this paragraph (b)(3). A qualified certifier must have active accreditation for the associated methodology as of the date it provides a certification to a taxpayer. A taxpayer must use the qualified certifier identified in this paragraph (b)(3) for the identified emissions rate methodology used by the taxpayer.

(c) *Requirements for the production statement.* The requirements set forth in this paragraph (c) apply to the production statement required by paragraph (b)(2)(i) of this section. *See* section 45Z(f)(1)(A)(i)(II)(aa).

(1) *Data accuracy.* The production statement must be a statement that the qualified certifier performed a certification sufficient for the IRS to determine that any lifecycle GHG emissions data inputs and the operation, during the applicable taxable year, of the qualified facility that produced the SAF transportation fuel for which the section 45Z credit is claimed are accurately reflected in—

(i) The number of gallons of SAF transportation fuel produced by the taxpayer that is entered on the Form 7218 with which the certification is included; and

(ii) Either—

(A) The data the taxpayer input into the allowed methodology under § 1.45Z–2(e)(3) used to determine the lifecycle GHG emissions rate that is entered on the Form 7218 with which the certification is included; or

(B) The data the taxpayer submitted in its provisional emissions rate (PER) petition relating to the SAF transportation fuel for which the taxpayer is claiming the section 45Z credit, including data provided to the U.S. Department of Energy (DOE) in support of the taxpayer's request for the emissions value provided in the PER petition.

(2) *Emissions value.* If the production statement includes the information specified in paragraph (c)(1)(ii)(B) of this section, then the production statement must also specify the emissions value received from the DOE that was calculated using such data, expressed in kilograms of equivalent carbon dioxide (CO_2e) per 1,000,000 British thermal units (mmBTU).

(3) *Lifecycle GHG emissions rate and production amount.* The production statement must specify the lifecycle GHG emissions rate (expressed in kilograms of CO_2e per mmBTU) and the amount of SAF transportation fuel produced by the taxpayer (expressed in gallons), that are entered on the Form 7218 with which the certification is included.

(d) *Requirements for the conflict statement*—(1) *In general.* The conflict statement required by paragraph (b)(2)(ii) of this section must state that—

(i) The qualified certifier has not received a fee based to any extent on the value of any section 45Z credit that has been or is expected to be claimed by the taxpayer and no arrangement has been made for such fee to be paid at any time in the future;

(ii) The qualified certifier has not been a party to any transaction involving the sale of SAF transportation fuel the taxpayer produced or in which the taxpayer purchased primary feedstocks for the production of such SAF transportation fuel;

(iii) The qualified certifier is unrelated to the taxpayer, within the meaning of section 52(b) and the regulations thereunder, and is not an employee of the taxpayer; and

(iv) The qualified certifier is not married to anyone who is related to, or an employee of, the taxpayer.

(2) *Additional attestations required in certain circumstances.* If the qualified certifier is acting in his or her capacity as a partner in a partnership, an employee of any person, whether an individual, corporation, or partnership, or an independent contractor engaged by a person other than the taxpayer, the attestations under paragraphs (d)(1)(i) through (iv) of this section must also be made with respect to the partnership or the person that employs or engages the qualified certifier.

(e) *Requirements for the qualified certifier statement.* The qualified certifier statement required by paragraph (b)(2)(iii) of this section must include the items set forth in this paragraph (e):

(1) *Certifier identifying information.* The qualified certifier's name, address, and certifier identification number (for example, the CARB LCFS Verifier Executive Order Number);

(2) *Qualification description.* The qualified certifier's qualifications to conduct the certification, including a description of the certification the qualified certifier received from the accrediting body;

(3) *Partnership or employer identifying information.* If the qualified certifier is acting in his or her capacity as a partner in a partnership, an employee of any person, whether an individual, corporation, or partnership, or an independent contractor engaged by a person other than the taxpayer, the name, address, and certifier identification number of the partnership or the person that employs or engages the qualified certifier;

(4) *Signature.* The signature of the qualified certifier and the date of signature; and

(5) *Certification purpose.* A statement that the certification was conducted for Federal tax purposes.

(f) *Requirements for the qualified facility statement.* The qualified facility statement required by paragraph (b)(2)(iv) of this section must include

the information set forth in this paragraph (f) for the qualified facility at which the SAF transportation fuel production undergoing certification occurred:

(1) *Facility location.* The location of the qualified facility;

(2) *Facility description.* A description of the qualified facility, including its method of producing SAF transportation fuel;

(3) *Primary feedstock.* The type(s) of primary feedstock(s) used by the qualified facility to produce the SAF transportation fuel during the taxable year of production;

(4) *Amount of primary feedstock.* The amount(s) of primary feedstock(s) used by the qualified facility to produce the SAF transportation fuel during the taxable year of production;

(5) *Primary feedstock source location.* The location(s) from which the qualified facility sourced the primary feedstock(s) used to produce the SAF transportation fuel during the taxable year of production;

(6) *Metering devices.* A list of the metering devices used to record any data used by the qualified certifier to support the production statement under paragraph (c) of this section, along with a statement that to the best of the certifier's knowledge, the device(s) underwent industry-appropriate quality assurance and quality control, and the accuracy and calibration of the device has been tested in the year prior to the time of observation by the qualified certifier; and

(7) *Emissions rate accuracy.* Confirmation that the emissions rate of the SAF transportation fuel produced during the taxable year of production is accurate to the higher of +/−5% or 2 kilograms of CO_2e per mmBTU.

(g) *Timely certification required.* A certification described in paragraph (b)(1) of this section that includes all information required under paragraph (b)(2) of this section is valid with respect to a particular claim only if it is signed and dated by the qualified certifier no later than the due date, including extensions, of the Federal income tax return or Federal information return for the taxable year during which the SAF transportation fuel undergoing certification is sold in a qualified sale. In the case of a section 45Z credit first claimed for the taxable year on an amended return or administrative adjustment request (AAR), a certification described in paragraph (b)(1) of this section that includes all information required under paragraph (b)(2) of this section is valid with respect to the claim only if it is signed and dated by the qualified certifier no later than the date on which the amended return or AAR is filed.

(h) *Model certification.*

Certification of Lifecycle Greenhouse Gas Emissions Rates for Sustainable Aviation Fuel Production

*Certification Identification Number:*_____

(To support taxpayer's claim related to sustainable aviation fuel (SAF) under section 45Z of the Internal Revenue Code.)

The undersigned qualified certifier (''Certifier'') hereby certifies the following:

This certificate applies to SAF produced by _____ (''SAF Producer'').

_____(name, address, and EIN of SAF producer)

Registration number of the SAF producer: _____

Number of gallons of SAF produced to which this certification relates:

_____

Lifecycle greenhouse gas emissions rate expressed in kilograms of CO_2e per mmBTU: _____

_____: Initial here to affirmatively confirm that the emissions rate is accurate to the higher of +/−5% or 2 kilograms of CO_2e per mmBTU.

Taxable year SAF undergoing certification was produced:

_____

Location of qualified facility at which the SAF production undergoing certification occurred (''Facility''):

_____

Facility description including its method of producing SAF:

_____

_____

Type(s) of primary feedstock(s) used by the Facility to produce SAF during the taxable year of production:

_____

_____

Location(s) from which the Facility sourced the primary feedstock(s) used during the taxable year of production:

_____

_____: Initial here to affirmatively state that the Certifier has verified that any metering device(s) used to support this certification has been properly calibrated pursuant to industry-appropriate quality assurance and quality control standards, and the accuracy and calibration of the device has been tested within the year prior to the time of observation by the Certifier. List the metering device(s) and calibration date(s):

_____

_____

The Certifier performed a certification sufficient for the IRS to determine that any lifecycle greenhouse gas emissions data inputs and the operation, during the applicable taxable year, of the Facility that produced the SAF for which the credit is claimed are accurately reflected in—

The number of gallons of SAF produced by the taxpayer that is entered on the Form 7218 with which this certification is included; and

Either (check the line that applies):

_____: The data the taxpayer input into the allowed methodology used to determine the lifecycle greenhouse gas emissions rate that is entered on the Form 7218 with which this certification is included; or

_____: The data the taxpayer submitted in its provisional emissions rate (''PER'') petition relating to the SAF for which the taxpayer is claiming the credit, including data provided to the U.S. Department of Energy (''DOE'') in support of the taxpayer's request for the emissions value provided in the PER petition.

Emissions value received from the DOE that was calculated using such data, expressed in kilograms of CO_2e per mmBTU: _____

The Certifier, and, if applicable, the partnership or the person that employs or engages the Certifier is/has not:

1. Received a fee based to any extent on the value of any section 45Z credit that has been or is expected to be claimed by the taxpayer and no arrangement has been made for such fee to be paid at any time in the future;

2. Been a party to any transaction involving the sale of SAF the taxpayer produced or in which the taxpayer purchased primary feedstocks for the production of such SAF;

3. Related, within the meaning of section 52(b) of the Code and the regulations thereunder, to the taxpayer, or an employee of, the taxpayer; or

4. Married to anyone who is related to, or an employee of, the taxpayer.

Certifier's identifying information:

Certifier's name: _____

Address: _____

Certifier ID number: _____

Description of Certifier's qualifications to conduct the certification, including a description of the certification Certifier received from the relevant accrediting body.

_____

_____

If applicable, identifying information for the partnership or the person that employs or engages Certifier:

Name of partnership or employer:

_____

Address: _____

Certifier ID number: _____

This certification was conducted for Federal tax purposes.

Certifier has attached:

—Any documentation necessary to substantiate the certification process given the standards and best practices prescribed by the Certifier's accrediting body as they apply to the circumstances of the taxpayer and the qualified facility; and

—Any other information or documentation required by applicable IRS tax forms or form instructions.

Under penalty of perjury, Certifier declares that Certifier has examined this certification, including any accompanying documentation, and, to the best of Certifier's knowledge and belief, it is true, correct, and complete.

_____

Signature and date signed

_____

Printed or typed name of person signing

_____

Title of person signing

_____

Certifier identification number of the person signing

(i) *Applicability date.* This section applies to qualified sales occurring in taxable years ending on or after [date of publication of final regulations in the **Federal Register**].

§ 1.45Z–6 Procedures for filing a claim for the clean fuel production credit.

(a) *Time and manner of filing a claim.* To claim the section 45Z credit, a taxpayer must include a completed Form 7218 with the taxpayer's timely filed (including extensions) Federal income tax return or Federal information return for the taxable year for which the taxpayer is claiming the section 45Z credit. A separate Form 7218 is required for each qualified facility at which transportation fuel for which the taxpayer is claiming the section 45Z credit is produced. A taxpayer must complete Form 7218 in accordance with the instructions to that form and provide all information required by the form and instructions. A taxpayer must include with its Form 7218 any applicable certification required by § 1.45Z–5.

(b) *Proper claimant*—(1) *In general.* Except as provided in paragraph (b)(2) of this section, only a taxpayer that is registered by the IRS as a producer of transportation fuel at the time of production may claim the section 45Z credit. *See* section 45Z(f)(1)(A)(i)(I) of the Code. *See* § 1.4101–1 for rules related to registration, including the activity letters, under which producers of transportation fuel must be registered to claim the section 45Z credit.

(2) *Special rules*—(i) *Producer is a disregarded entity.* If a taxpayer owns an entity that is disregarded as an entity separate from its owner within the meaning of § 301.7701–2(c)(2)(i) of this chapter (disregarded entity) that produces transportation fuel, and such disregarded entity is registered as a producer of transportation fuel at the time of production, the taxpayer that owns the disregarded entity is treated as the registered producer for purposes of claiming the section 45Z credit. The registration number (within the meaning of section 45Z(f)(1)(A)(i)(I) and § 1.4101–1) of that disregarded entity is attributed to the taxpayer. A taxpayer claiming a section 45Z credit with respect to transportation fuel produced by a disregarded entity that it owns must satisfy the recordkeeping requirements in § 1.45Z–4(g)(1).

(ii) *Producer is a qualified subchapter S subsidiary.* If a taxpayer owns an entity that is a qualified subchapter S subsidiary within the meaning of section 1361(b)(3)(B) of the Code (QSub) that produces transportation fuel, and such QSub is registered as a producer of transportation fuel at the time of production, the taxpayer that owns the QSub is treated as the registered producer for purposes of claiming the section 45Z credit. The registration number (within the meaning of section 45Z(f)(1)(A)(i)(I) and § 1.4101–1) of that QSub is attributed to the taxpayer. A taxpayer claiming a section 45Z credit with respect to transportation fuel produced by a QSub that it owns must satisfy the recordkeeping requirements in § 1.45Z–4(g)(1).

(iii) *Producer is a member of a consolidated group.* If a member of a consolidated group (as defined in § 1.1502–1(b) and (h), respectively) that produces transportation fuel is registered as a producer of transportation fuel at the time of production, the agent for such consolidated group is treated as the registered producer for purposes of claiming the section 45Z credit on the group's return. The registration number (within the meaning of section 45Z(f)(1)(A)(i)(I) and § 1.4101–1) of the member is attributed to the agent when claiming the section 45Z credit. The member producing the transportation fuel must satisfy all applicable requirements of section 45Z and the section 45Z regulations. For rules applicable to the agent for a consolidated group (generally the common parent), *see* § 1.1502–77.

(c) *Applicability date.* This section applies to qualified sales occurring in taxable years ending on or after [date of publication of final regulations in the **Federal Register**].

§ 1.1361–4 [Amended]

■ **Par. 4.** Section 1.1361–4 is amended by removing the comma after the language ''and (a)(9) of this section'' in paragraph (a)(1) and adding ''and in § 1.4101–1(a)(3)(iii),'' in its place.

■ **Par. 5.** Section 1.4101–1 is added to read as follows:

§ 1.4101–1 Registration.

(a) *In general*—(1) *Overview.* This section provides rules relating to registration for purposes of the section 45Z credit. *See* sections 4101(a)(1) and 45Z(f)(1)(A)(i)(I).

(2) *Letter of Registration required.* A person is registered under section 4101 of the Code for purposes of the section 45Z credit only if the IRS has issued a Letter of Registration to the person under activity letter CN (in the case of a producer of transportation fuel which is not sustainable aviation fuel (non-SAF transportation fuel)), or activity letter CA (in the case of a producer of SAF transportation fuel), or such other activity letter(s) as the IRS may designate, and the registration has not been revoked or suspended. A person with a Letter of Registration from the IRS under any other activity letter is not registered under section 4101 for purposes of the section 45Z credit.

(3) *Separate entity treatment*—(i) *In general.* Each business unit that has, or is required to have, a separate employer identification number (EIN) is treated as a separate person for purposes of registration under this section. Thus, two business units (for example, a parent corporation and a subsidiary corporation), each of which has a different EIN, are two persons.

(ii) *Disregarded entity.* Section 301.7701–2(c)(2)(i) of this chapter (relating to certain wholly owned entities) does not apply for purposes of registration under this section. An entity that is disregarded as an entity separate from its owner for any purpose under § 301.7701–2 of this chapter and that has, or is required to have, an EIN is treated as a corporation (consistent with § 301.7701–2(c)(2)(v)(B) of this chapter) for purposes of registration under this section. Therefore, if such an entity produces transportation fuel, it must be registered as a producer of transportation fuel at the time of production for its owner to be eligible to claim the section 45Z credit for such fuel.

(iii) *Qualified subchapter S subsidiary.* A qualified subchapter S subsidiary as defined in section 1361(b)(3)(B) of the Code (QSub) is treated as separate from the S corporation that owns it for purposes of registration under this section.

Therefore, a QSub that has an EIN and that produces transportation fuel must be registered as a producer of transportation fuel at the time of production in order for its S corporation owner to be eligible to claim the section 45Z credit for such fuel.

(4) *Reregistration*—(i) *Reregistration in the event of change of ownership.* As provided in section 4101(a)(5), a person is required to reregister under this section if after a transaction (or series of related transactions) more than 50 percent of ownership interests in, or assets of, such person are held by persons other than persons (or persons related thereto) who held more than 50 percent of such interests or assets before the transaction (or series of related transactions). Reregistration does not apply to a company whose stock is regularly traded on an established securities market.

(ii) *Reregistration in the event of change of EIN.* If a registrant changes its EIN, such registrant must reregister under this section using its new EIN.

(iii) *Safe harbor.* A person that is required to reregister as a producer of transportation fuel due to a change in ownership or EIN is eligible to claim a section 45Z credit (provided that all requirements of section 45Z are met) as of the date the IRS received the application for reregistration, even if, at the time of fuel production, the IRS has not yet approved the reregistration. Provided the registration tests for the reregistration are met, the original registration remains in effect until the IRS revokes that registration and issues a new one.

(b) *Definitions*—(1) *Applicant.* An *applicant* is a person that has applied for registration as described in paragraph (d) of this section.

(2) *Letter of Registration.* A *Letter of Registration* is a letter issued by the IRS to approve a registration required under section 4101. A Letter of Registration includes the registrant's registration number and the effective date of the registration.

(3) *Penalized for a wrongful act.* A person has been *penalized for a wrongful act* if the person has—

(i) Been assessed any penalty under chapter 68 of the Code (or similar provision of the law of any State) for fraudulently failing to file any return or pay any tax, and the penalty has not been wholly abated, refunded, or credited;

(ii) Been assessed any penalty under chapter 68 of the Code, and such penalty has not been wholly abated, refunded, or credited, and the IRS determines that the conduct resulting in the penalty is part of a consistent pattern of failing to deposit, pay, or pay over a substantial amount of tax;

(iii) Been convicted of a crime under chapter 75 of the Code (or similar provision of the law of any State), or of conspiracy to commit such a crime, and the conviction has not been wholly reversed by a court of competent jurisdiction;

(iv) Been convicted, under the laws of the United States or any State, of a felony for which an element of the offense is theft, fraud, or the making of false statements, and the conviction has not been wholly reversed by a court of competent jurisdiction;

(v) Been assessed any tax under section 4103 of the Code and the tax has not been wholly abated, refunded, or credited; or

(vi) Had its registration under section 4101, section 4222, section 4662, or section 4682 of the Code revoked.

(4) *Related person.* For purposes of registration under section 4101 and this section, a *related person* is a person that—

(i) Directly or indirectly exercises control over an activity of the applicant;

(ii) Owns, directly or indirectly, five percent or more of the applicant;

(iii) Is under a duty to assure the payment of a tax for which the applicant is responsible;

(iv) Is a member, with the applicant, of a group of organizations (as defined in § 1.52–1(b)) that would be treated as a group of trades or businesses under common control for purposes of § 1.52–1; or

(v) Distributed or transferred assets to the applicant in a transaction in which the applicant's basis in the assets is determined by reference to the basis of the assets in the hands of the distributor or transferor.

(5) *Registrant.* A *registrant* is a person that the IRS has, in accordance with paragraph (f)(3) of this section, registered under section 4101 and whose registration has not been revoked or suspended.

(c) *Requirement to register*—(1) *In general.* Every person producing a transportation fuel is required to register with the IRS in accordance with this section. *See* section 4101(a)(1).

(2) *Consequences of failing to register.* For the criminal penalty imposed for failure to register, *see* section 7232 of the Code. For the civil penalties imposed for failure to register or reregister, *see* sections 6719 and 7272 of the Code.

(d) *Application instructions.* Application for registration under section 4101 must be made on Form 637, *Application for Registration (For Certain Excise Tax Activities),* or such other form as the IRS may designate, in accordance with the instructions to such form. *See* § 601.602 of this chapter. An applicant for registration as a producer of non-SAF transportation fuel must apply for registration under activity letter CN, or such other activity letter as the IRS may designate. An applicant for registration as a producer of SAF transportation fuel must apply for registration under activity letter CA, or such other activity letter as the IRS may designate.

(e) *Registration tests*—(1) *In general.* The IRS will register an applicant only if the IRS determines that the applicant meets the following three tests (collectively, the registration tests):

(i) The activity test;

(ii) The acceptable risk test; and

(iii) The satisfactory tax history test.

(2) *Activity test.* An applicant meets the activity test only if the IRS determines that the applicant—

(i) Is, in the course of its trade or business, regularly engaged in the activity for which it is requesting registration; or

(ii) Is likely to be (because of such factors as the applicant's business experience, financial standing, or trade connections), in the course of its trade or business, regularly engaged in the activity for which it is requesting registration within 6 months after becoming registered under section 4101.

(3) *Acceptable risk test*—(i) *In general.* An applicant meets the acceptable risk test if neither the applicant nor a related person (as defined in paragraph (b)(4) of this section) has been penalized for a wrongful act. If an applicant or a related person has been penalized for a wrongful act, the IRS may nonetheless determine that an applicant meets the acceptable risk test based on consideration of the factors enumerated in paragraph (e)(3)(ii) of this section.

(ii) *Factors to consider.* In making the determination described in paragraph (e)(3)(i) of this section, the IRS may consider factors such as the following:

(A) The time elapsed since the applicant or related person was penalized for a wrongful act.

(B) The present relationship between the applicant and any related person that was penalized for any wrongful act.

(C) The degree of rehabilitation of the person penalized for any wrongful act.

(4) *Satisfactory tax history test*—(i) *In general.* An applicant meets the satisfactory tax history test only if the IRS determines that the applicant has a satisfactory tax history as described in paragraph (e)(4)(ii) of this section.

(ii) *Satisfactory tax history.* An applicant has a satisfactory tax history only if the Commissioner determines

that the filing, deposit, and payment history for all Federal taxes of the applicant and any related person (as defined in paragraph (b)(4) of this section) supports the conclusion that the applicant will comply with its obligations under this section.

(f) *Action on the application for registration by the IRS*—(1) *Review of application.* The IRS may investigate the accuracy and completeness of any representations made by an applicant and request any additional relevant information from the applicant.

(2) *Denial.* If the IRS determines that an applicant does not meet all the registration tests described in paragraph (e) of this section, the IRS will notify the applicant, in writing, that its application for registration is denied and state the basis for the denial.

(3) *Approval.* If the IRS determines that an applicant meets all the registration tests described in paragraph (e) of this section, the IRS will register the applicant under section 4101 and issue the applicant a Letter of Registration that includes the effective date of the registration and the appropriate activity letter(s). A copy of an application for registration (Form 637) is not a Letter of Registration.

(g) *Terms and conditions of registration*—(1) *Affirmative duties.* Each applicant or registrant must—

(i) Make deposits, file returns, and pay taxes as required by the Code and the regulations;

(ii) Keep records sufficient to show production of a transportation fuel;

(iii) Notify the IRS of any change in the information the registrant submitted in connection with its application for registration or previously submitted under this paragraph (g)(1)(iii) within 10 days after the change occurs. Changes requiring IRS notification include, but are not limited to, changes in ownership, address, and business activities.

(2) *Prohibited actions.* An applicant or registrant may not—

(i) Sell, lease, or otherwise allow another person to use its registration, except as otherwise provided in § 1.45Z–6(b)(2); or

(ii) Make any false statement to the IRS in connection with a submission under section 4101.

(h) *Effect of Letter of Registration.* A Letter of Registration is not a determination of liability for tax, eligibility for a tax credit or deduction, or any other tax treatment under the Code. For example, a Letter of Registration issued under activity letter CN to a person producing a fuel is not a determination that such fuel is a transportation fuel under section 45Z(d)(5)(A) or that the facility at which the person produces such fuel is a qualified facility under section 45Z(d)(4). A Letter of Registration is also not a determination letter, as defined in § 601.201(a)(3) of this chapter.

(i) *Adverse actions by the IRS against a registrant*—(1) *Mandatory revocation or suspension.* The IRS will revoke or suspend the registration of any registrant if the IRS determines that the registrant, at any time—

(i) Does not meet one or more of the registration tests in paragraph (e) of this section and has not corrected the deficiency within a reasonable period of time after notification by the IRS;

(ii) Has used its registration to evade, or attempt to evade, the payment of any tax, or to postpone or in any manner to interfere with the collection of any such tax, or to make a fraudulent claim for a credit or payment;

(iii) Has aided or abetted another person in evading, or attempting to evade, payment of any tax, or in making a fraudulent claim for a credit or payment; or

(iv) Has sold, leased, or otherwise allowed another person to use its registration, except as otherwise provided in § 1.45Z–6(b)(2).

(2) *Remedial action permitted in other cases.* If the IRS determines that a registrant has, at any time, failed to comply with the terms and conditions of registration in paragraph (g) of this section, made a false statement to the IRS in connection with its application for registration (or reregistration) or for retention of registration, or otherwise used its registration in a manner that creates a significant risk of nonpayment or late payment of tax, then the IRS may revoke or suspend the registrant's registration.

(3) *Action by the IRS to revoke or suspend a registration.* If the IRS revokes or suspends a registration, the IRS will notify the registrant in writing and state the basis for the revocation or suspension and the activity letter(s) to which the revocation or suspension relates. The effective date of the revocation or suspension may not be earlier than the date on which the IRS notifies the registrant.

(j) *Applicability date.* This section applies to persons producing transportation fuel in taxable years ending on or after [date of publication of final regulations in the **Federal Register**].

■ **Par. 6.** Section 1.6417–2 is amended by revising paragraphs (c)(4) and (f) to read as follows:

§ 1.6417–2 Rules for elective payment elections.

* * * * *

(c) * * *

(4) *Credits must be determined with respect to the applicable entity or electing taxpayer.* Any credits for which an elective payment election is made must have been determined with respect to the applicable entity or electing taxpayer. An applicable credit is determined with respect to an applicable entity or electing taxpayer if the applicable entity or electing taxpayer owns the underlying applicable credit property and conducts the activities giving rise to the credit or, if ownership is not required to give rise to the applicable credit, such as a credit under section 45Z or section 45(d)(3)(C), the applicable entity or electing taxpayer must conduct the activities giving rise to the credit. In the case of section 45X (under which ownership of applicable credit property is also not required, but for which rules related to contract manufacturing arrangements may be applicable), the applicable entity or electing taxpayer must be considered (under the section 45X regulations) the taxpayer with respect to which the section 45X credit is determined. Thus, no election may be made under this section for any credits transferred pursuant to section 6418, allowed pursuant to section 45Q(f)(3), acquired by a lessee from a lessor by means of an election to pass through the credit to a lessee under former section 48(d) (pursuant to section 50(d)(5)), owned by a third party, or otherwise not determined with respect to the applicable entity or electing taxpayer.

* * * * *

(f) *Applicability dates*—(1) *In general.* Except as otherwise provided in this paragraph (f), this section applies to taxable years ending on or after March 11, 2024. For taxable years ending before March 11, 2024, taxpayers, however, may choose to apply the rules of §§ 1.6417–1 through 1.6417–4 and 1.6417–6, provided the taxpayers apply the rules in their entirety and in a consistent manner.

(2) *Paragraph (c)(4).* Paragraph (c)(4) of this section applies to taxable years ending on or after [date of publication of final regulations in the **Federal Register**]. For taxable years ending before [date of publication of final regulations in the **Federal Register**], see § 1.6417–2(c)(4) as contained in 26 CFR part 1, revised April 1, 2025.

■ **Par. 7.** Section 1.6418–2 is amended by revising paragraphs (d)(1) and (g) to read as follows:

§ 1.6418–2 Rules for making transfer elections.

* * * * *

(d) *Determining the eligible credit*—(1) *In general.* An eligible taxpayer may only transfer eligible credits determined with respect to the eligible taxpayer (paragraph (a)(4) of this section disallows transfer elections in other situations). An eligible credit is determined with respect to an eligible taxpayer if the eligible taxpayer owns the underlying eligible credit property and conducts the activities giving rise to the credit or, if ownership is not required to give rise to the eligible credit, such as a credit under section 45Z or section 45(d)(3)(C), the eligible taxpayer must conduct the activities giving rise to the credit. In the case of section 45X (under which ownership of eligible credit property is also not required, but for which rules related to contract manufacturing arrangements may be applicable), the eligible taxpayer must be considered (under the section 45X regulations) the taxpayer with respect to which the section 45X credit is determined. All rules that relate to the determination of the eligible credit, such as the rules in sections 49 and 50(b) of the Code, apply to the eligible taxpayer and therefore can limit the amount of eligible credit determined with respect to an eligible credit property that can be transferred. Rules relating to the amount of an eligible credit that is allowed to be claimed by an eligible taxpayer, such as the rules in section 38(c) or section 469 of the Code, do not limit the eligible credit determined, but do apply to a transferee taxpayer as described in paragraph (f)(3) of this section.

* * * * *

(g) *Applicability dates*—(1) *In general.* Except as otherwise provided in this paragraph (g), this section applies to taxable years ending on or after April 30, 2024. For taxable years ending before April 30, 2024, taxpayers, however, may choose to apply the rules of this section and §§ 1.6418–1, 1.6418–3, and 1.6418–5, provided the taxpayers apply the rules in their entirety and in a consistent manner.

(2) *Paragraph (d)(1).* Paragraph (d)(1) of this section applies to taxable years ending on or after [date of publication of final regulations in the **Federal Register**]. For taxable years ending before [date of publication of final regulations in the **Federal Register**], see § 1.6418–2(d)(1) as contained in 26 CFR part 1, revised April 1, 2025.

PART 48—MANUFACTURERS AND RETAILERS EXCISE TAXES

■ **Par. 8.** The authority citation for part 48 continues to read in part as follows:

Authority: 26 U.S.C. 7805 * * *

* * * * *

Section 48.4101–1 also issued under 26 U.S.C. 4101(a)(1).

* * * * *

■ **Par. 9.** Section 48.4101–1 is amended by adding paragraphs (a)(7) and (8), and (l)(6), to read as follows:

§ 48.4101–1 Taxable fuel; registration.

* * * * *

(a) * * *

(7) A letter of registration is not a determination of liability for tax, eligibility for a tax credit or deduction, or any other tax treatment under the Code. For example, a registration letter issued under activity letter SA to a person producing or importing a fuel that may be eligible for a credit under section 6426(k) of the Code is not a determination that such fuel qualifies for the section 6426(k) credit. A letter of registration is also not a determination letter, as defined in § 601.201(a)(3) of this chapter. The terms *letter of registration* and *registration letter* as used in this section have the same meaning as the term *Letter of Registration* as defined in § 1.4101–1(b)(2) of this chapter.

(8) A person is required to reregister under this section if after a transaction (or series of related transactions) more than 50 percent of ownership interests in, or assets of, such person are held by persons other than persons (or persons related thereto) who held more than 50 percent of such interests or assets before the transaction (or series of related transactions). Reregistration does not apply to any company whose stock is regularly traded on an established securities market. If a registrant changes its employer identification number (EIN), such registrant must reregister under this section using its new EIN.

* * * * *

(l) * * *

(6) Paragraphs (a)(7) and (8) of this section apply to taxable years ending on or after [date of publication of final regulations in the **Federal Register**].

Frank J. Bisignano,

Chief Executive Officer.

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