Age of separated employee at birthday before death	Multiplier
49	.4485
50	.4812
51	.5164
52	.5545
53	.5955
54	.6400
55	.6881
56	.7404
57	.7972
58	.8590
59	.9264

With at least 30 years of creditable service—

Age of separated employee at birthday before death	Multiplier by separated employee's year of birth	
	After 1966	From 1950 through 1966
46	.4561	.4910
47	.4889	.5264
48	.5244	.5646
49	.5624	.6055
50	.6035	.6497
51	.6476	.6973
52	.6954	.7487
53	.7469	.8042
54	.8027	.8643
55	.8631	.9294
56	.9287	1.0000

[FR Doc. 2015–15992 Filed 6–29–15; 8:45 am]

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DEPARTMENT OF ENERGY

10 CFR Parts 429 and 431

[Docket No. EERE–2012–BT–TP–0032]

RIN 1904–AD19

Energy Conservation Program: Test Procedures for Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Final rule.

SUMMARY: On March 13, 2014, the U.S. Department of Energy (DOE) issued a notice of proposed rulemaking (NOPR) to amend the test procedures for packaged terminal air conditioners (PTACs) and packaged terminal heat pumps (PTHPs). That NOPR serves as the basis for this final rule regarding the test method for PTACs and PTHPs. The amendments adopted here do not affect measured energy use. These changes incorporate by reference certain sections of the latest versions of industry test procedures AHRI Standard 310/380–2014, ANSI/ASHRAE Standard 16–1983 (RA 2014), ANSI/ASHRAE Standard 37–2009, and ANSI/ASHRAE Standard 58–1986 (RA 2014), and specify additional testing provisions that must be followed including an optional break-in period, require that cooling capacity tests be conducted using electricity measuring instruments accurate to +/− 0.5% of reading, explicitly require that wall sleeves be sealed, allow for the pre-filling of the condensate drain pan, and require testing with 14-inch deep wall sleeves and the filter option most representative of a typical installation.

DATES: The effective date of this rule is July 30, 2015. The final rule changes will be mandatory for representations starting June 24, 2016. The incorporation by reference of certain publications listed in this rule was approved by the Director of the Federal Register as of July 30, 2015.

ADDRESSES: The docket, which includes **Federal Register** notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at *www.regulations.gov*. All documents in the docket are listed in the *www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

A link to the docket Web page can be found at: *http://www.regulations.gov/#!docketDetail;D=EERE-2012-BT-TP-0032*. This Web page will contain a link to the docket for this notice on the regulations.gov site. The regulations.gov Web page will contain simple instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket, contact Ms. Brenda Edwards at (202) 586–2945 or by email: *Brenda.Edwards@ee.doe.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. Ronald Majette, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE–5B, 1000 Independence Avenue SW., Washington, DC 20585–0121. Telephone: (202) 586–7935. Email: *PTACs@ee.doe.gov*.

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SUPPLEMENTARY INFORMATION: This final rule incorporates by reference into Part 431 the following industry standards:

(1) AHRI Standard 310/380–2014 (''AHRI 310/380–2014''), (Supersedes ANSI/AHRI 310/380–2004), ''Standard for Packaged Terminal Air-Conditioners and Heat Pumps,'' published February 2014.

(2) ANSI/ASHRAE Standard 16–1983 (RA 2014), (''ANSI/ASHRAE 16''), ''Method of Testing for Rating Room Air Conditioners and Packaged Terminal Air Conditioners,'' ASHRAE reaffirmed July 3, 2014.

(3) ANSI/ASHRAE Standard 58–1986 (RA 2014), (''ANSI/ASHRAE 58''), ''Method of Testing for Rating Room Air-Conditioner and Packaged Terminal Air-Conditioner Heating Capacity,'' ASHRAE reaffirmed July 3, 2014.

(4) ANSI/ASHRAE Standard 37–2009, (''ANSI/ASHRAE 37'') (Supersedes ANSI/ASHRAE Standard 37–2005), ''Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment,'' ASHRAE approved June 20, 2009; ANSI approved June 25, 2009.

You can obtain copies of AHRI standards from the Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201, 703–524–8800, or *www.ahrinet.org*. You can obtain copies of ASHRAE standards from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle, NE. Atlanta, GA 30329, 404–636–8400, or *www.ashrae.org*.

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I. Authority and Background

Title III, Part C [1] of the Energy Policy and Conservation Act of 1975 (EPCA or ''the Act''), Public Law 94–163 (42 U.S.C. 6291–6309, as codified), added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment.[2] This equipment includes packaged terminal air conditioners (PTACs) and packaged terminal heat pumps (PTHPs), the subjects of this document.

Under EPCA, the energy conservation program consists essentially of four parts: (1) Testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. The testing requirements consist of test procedures that manufacturers of covered products must use as the basis for (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA, and (2) making representations about the efficiency of those products. Similarly, DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA.

A. General Test Procedure Rulemaking Process

Under 42 U.S.C. 6314, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered equipment. EPCA provides that any test procedure prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use or estimated annual operating cost of industrial equipment (or class thereof) during a representative average use cycle or period of use and shall not be unduly burdensome to conduct. (42 U.S.C. 6314(a)(2))

In addition, if DOE determines that a test procedure amendment is warranted, it must publish a proposed test procedure and offer the public an opportunity to present oral and written comments on them. (42 U.S.C. 6314(b)) Finally, in any rulemaking to amend a test procedure, DOE must determine to what extent, if any, the proposed test procedure would alter the measured energy efficiency of any covered equipment as determined under the existing test procedure. (42 U.S.C. 6314(a)(4))

B. DOE PTAC and PTHP Test Procedures

DOE's test procedures for PTACs and PTHPs are codified at Title 10 of the Code of Federal Regulations (CFR) section 431.96. The test procedures were established on December 8, 2006, in a final rule that incorporated by reference the American National Standards Institute's (ANSI) and Air-Conditioning, Heating, and Refrigeration Institute's (AHRI) Standard 310/380–2004, ''Standard for Packaged Terminal Air-Conditioners and Heat Pumps'' (''ANSI/AHRI 310/380–2004''). 71 FR 71340, 71371. ANSI/AHRI 310/380–2004 is incorporated by reference at 10 CFR 431.95(a)(3) and it references (1) the ANSI and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 16–1983 (RA 99), ''Method of Testing for Rating Room Air Conditioners and Packaged Terminal Air Conditioners'' (''ANSI/ASHRAE 16''); (2) ANSI/ASHRAE Standard 58–1986 (RA 99), ''Method of Testing for Rating Room Air-Conditioner and Packaged Terminal Air-Conditioner Heating Capacity'' (''ANSI/ASHRAE 58''); and (3) ANSI/ASHRAE Standard 37–1988, ''Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment'' (''ANSI/ASHRAE 37'').

On May 16, 2012, DOE published a final rule for commercial heating, air-conditioning, and water-heating equipment (''ASHRAE equipment''), which included amendments to the test procedures for PTACs and PTHPs. These amendments incorporated a number of sections of ANSI/AHRI 310/380–2004 by reference. 77 FR 28928, 28990.

On February 22, 2013, DOE published a notice of public meeting and availability of framework document to consider potential amendment of energy conservation standards for PTACs and PTHPs (''February 2013 Framework Document''). 78 FR 12252. In the February 2013 Framework Document, DOE sought comments on issues pertaining to the test procedures for PTACs and PTHPs, including equipment break-in, wall sleeve sealing, pre-filling the condensate drain pan, barometric pressure correction, and differences between the test methods of ANSI/ASHRAE 16 and ANSI/ASHRAE 37. In response to the February 2013 Framework Document, interested parties provided comments responding to the requests for comment regarding test procedure issues.

On February 26, 2013, members of the Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) unanimously decided to form a working group to engage in a negotiated rulemaking effort on the certification of commercial heating, ventilation, and air conditioning (HVAC) equipment (10 CFR part 431, subparts D, E and F), water heating (WH) equipment (10 CFR part 431, subpart G), and refrigeration equipment (10 CFR part 431, subpart C). A notice of intent to form the Commercial Certification Working Group (''Working Group'') was published in the **Federal Register** on March 12, 2013. DOE received 35 nominations for the Working Group. 78 FR 15653. On April 16, 2013, the Department published a notice of open meeting that announced the first meeting and listed the 22 nominees DOE selected to serve as members of the Working Group along with two members from ASRAC and one DOE representative. 78 FR 22431. Following a series of open meetings, the Working Group published a set of recommendations, and DOE issued the Certification of Commercial HVAC, WH, and Refrigeration Equipment NOPR (''Certification of Commercial Equipment NOPR'') on February 14, 2014 summarizing the Working Group's recommendations for certification requirements. 79 FR 8886. The group recommended a number of test procedure items related to PTACs and PTHPs that were not proposed in the Certification of Commercial Equipment NOPR, including 1) a proposal for a standardized wall sleeve to be used during testing, and 2) a proposal for a standardized filter for testing, both of which are discussed in this final rule.

In February 2014, AHRI published AHRI Standard 310/380–2014, ''Standard for Packaged Terminal Air-Conditioners and Heat Pumps,'' (''AHRI 310/380–2014''), which updates and supersedes the ANSI/AHRI 310/380–2004 referenced by the current test procedure.

[1] For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A–1.

[2] All references to EPCA in this document refer to the statute as amended through the American Energy Manufacturing Technical Corrections Act (AEMTCA), Pub. L. 112–210 (Dec. 18, 2012).

On March 13, 2014, DOE published a NOPR (''March 2014 NOPR'') proposing amendments to the DOE PTAC and PTHP test procedures (10 CFR 431, Subpart F), specifically to specify an optional break-in period, explicitly require that wall sleeves be sealed, allow for the pre-filling of the condensate drain pan, require that the cooling capacity for PTACs and PTHPs be determined by testing pursuant to ANSI/ASHRAE 16, and require testing with 14-inch deep wall sleeves and the filter option most representative of a typical installation. 79 FR 14186. DOE held a public meeting on April 28, 2014, to hear oral comments on and solicit information relevant to the March 2014 NOPR.

On July 3, 2014, ASHRAE reaffirmed ANSI/ASHRAE 16 and ANSI/ASHRAE 58 and republished the standards to correct errata that existed in previous versions. These errata corrections do not change the procedures. The reaffirmed 2014 versions of ANSI/ASHRAE 16 and ANSI/ASHRAE 58 are not referenced by the updated AHRI Standard 310/380–2014 test procedure published in February 2014.

With respect to this rulemaking, DOE determined that none of the adopted amendments change the measured energy use of PTACs and PTHPs when compared to the current test procedures. (42 U.S.C. 6314(a)(4); 10 CFR 431.96)

This final rule fulfills DOE's obligation to periodically review its test procedures for all covered equipment, including PTACs and PTHPs, at least once every 7 years and either amend the applicable test procedures or publish a determination in the **Federal Register** not to amend them. (42 U.S.C. 6314(a)(1))

II. Summary of the Final Rule

In this final rule, DOE amends the test procedures for PTACs and PTHPs in 10 CFR 431, Subpart F, to reference certain sections of the industry test procedures AHRI 310/380–2014, ANSI/ASHRAE Standard 16–1983 (RA 2014), ANSI/ASHRAE 37–2009, and ANSI/ASHRAE 58–1986 (RA 2014), and to specify an optional break-in period, explicitly require that wall sleeves be sealed, allow for the pre-filling of the condensate drain pan, require that measurements of cooling capacity be conducted using electrical instruments accurate to +/−0.5% of reading, and require testing with 14-inch deep wall sleeves and the filter option most representative of a typical installation.

The amendments explicitly allow PTAC and PTHP manufacturers the option of using a break-in period (up to 20 hours) before conducting the test procedures. In this regard, DOE adds AHRI 310/380–2014 to the list of commercial air-conditioner standards at 10 CFR 431.96(c), which currently provides an optional break-in period of up to 20 hours for other commercial air-conditioner equipment types. Any PTAC or PTHP manufacturer that elects to use a break-in period must certify the duration of the break-in period it used for each basic model in the certification report for such basic models. DOE will use the same break-in period for any DOE-initiated testing as the manufacturer used in its certified ratings. In the case an alternate efficiency determination method (AEDM) is used to develop the certified ratings, DOE will use the maximum 20-hour break-in period, which will provide the unit sufficient time to stabilize and achieve optimal performance.

The amended test method requires that, as part of the set-up for testing, testers seal gaps between wall sleeves and the test facility dividing wall. This requires the PTAC or PTHP wall sleeve to be sealed per manufacturer specifications as provided in the installation manual or, if none, by using a standard sealing method.

The amended test method allows pre-filling of the condensate drain pan with water before running the DOE test procedures. This amendment allows the unit to reach steady state more quickly, which may decrease the burden and cost of testing.

In the March 2014 NOPR, DOE proposed to modify the test procedures to require ANSI/ASHRAE 16 as the test method for measuring the cooling capacity of PTACs and PTHPs. 79 FR at 14190–91 (March 13, 2014). The proposal would have disallowed testing to determine cooling capacity by psychrometric testing in accordance with ANSI/ASHRAE 37, which is currently allowed by the DOE test procedures. Interested parties commented that the differences in test results between ANSI/ASHRAE 16 and ANSI/ASHRAE 37 are small, and provided data to support their claims. Interested parties also commented that the requirement of a calorimetric test using ANSI/ASHRAE 16 places additional burdens on manufacturers in the form of significant capital expenditures to construct test facilities compliant with ANSI/ASHRAE 16. Based on these comments, DOE determined that disallowing psychrometric testing (such as that conducted using ANSI/ASHRAE 37) would place additional burden on manufacturers. As a result, in this final rule, DOE does not require the use of ANSI/ASHRAE 16 as the sole test method acceptable for measuring the cooling capacity of PTACs and PTHPs.

The amended test method requires that measurements of cooling capacity be conducted using electricity measuring instruments accurate to +/− 0.5% of reading. DOE believes this tighter requirement for electricity measurement accuracy will help to ensure consistency between tests conducted using ANSI/ASHRAE 16 and ANSI/ASHRAE 37, which have differing requirements for electrical instrumentation accuracy. Section 5.4.2 of ANSI/ASHRAE 16 requires that instruments for measuring electrical inputs be accurate to +/− 0.5% of the quantity measured, while section 5.4.2 of ANSI/ASHRAE 37 requires accuracy to +/− 2.0% of the quantity measured, which represents allowing up to 1.5% greater uncertainty in measurements of input power and efficiency. The amendment requiring +/− 0.5% accuracy is consistent with the March 2014 NOPR proposal to require use of ANSI/ASHRAE 16 as the sole test method acceptable for measuring the cooling capacity of equipment.

The amended test method requires testing using a 14-inch deep wall sleeve and the air filter that is shipped with the tested unit. If no filter is supplied with the unit, the amended test procedures require testing using an off-the-shelf filter rated at Minimum Efficiency Reporting Value (MERV)-1. These amendments remove testing variability resulting from the use of non-standard accessories.

DOE prefers to reference the most recent industry standards, where possible. Therefore, this final rule updates the DOE test procedures for PTACs and PTHPs to reference AHRI 310/380–2014 instead of the superseded ANSI/AHRI 310/380–2004. DOE also incorporates by reference the recently updated ANSI/ASHRAE 16–1983 (RA 2014) and ANSI/ASHRAE 58–1986 (RA 2014), as well as the 2009 version of ANSI/ASHRAE 37. The amended test procedure directly incorporates by reference these three ASHRAE standards, allowing use of ANSI/ASHRAE 16–2014 or ANSI–ASHRAE 37–2009 for determination of cooling mode ratings and ANSI/ASHRAE 58–2014 for determination of heating mode ratings.

DOE determined that these changes to the PTAC and PTHP test procedures do not result in any additional burden to manufacturers or result in any changes to the current measured energy efficiency of covered equipment. Rather, the changes provide additional

clarification regarding how to conduct the DOE test procedures.

III. Discussion

A. Break-In Duration

Break-in, also called run-in, refers to the operation of equipment prior to testing to cause preliminary wear in the compressor, which may improve measured performance. DOE understands that many labs commonly incorporate a break-in period before the start of efficiency tests for air conditioning equipment. DOE's May 16, 2012 final rule for ASHRAE equipment added a specification in the test procedures for several types of commercial air conditioning and heating equipment that allows an optional break-in period of up to 20 hours and requires that manufacturers record the duration of the break-in period. The May 16, 2012 final rule included amendments to the test procedures for PTACs and PTHPs. However, DOE did not apply this optional break-in period provision to PTACs or PTHPs in the May 16, 2012 final rule. 77 FR 28928, 28991.

In the March 2014 NOPR, DOE proposed to allow an optional break-in period of up to 20 hours applicable to testing of PTACs and PTHPs. DOE also proposed to add a certification reporting requirement to indicate the duration of the break-in period for tests used to support certification. DOE requested comments on these proposals and, if commenters supported longer break-in periods, data demonstrating that longer break-in periods make a significant impact on efficiency measurements for this equipment. 79 FR at 14188–89 (March 13, 2014).

In response, AHRI commented that a break-in period is necessary, but recommended that the break-in period be a minimum of 24 hours and a maximum of 72 hours to provide for more consistent and accurate efficiency measurements. (AHRI, No. 8 at p. 1) [3] The California Investor Owned Utilities [4] (CA IOUs) supported DOE's proposal to amend the DOE test procedures to include an optional break-in period. (CA IOUs, No. 9 at p. 3) The CA IOUs indicated that they would support AHRI in using a longer break in period if it would provide a better indication of equipment's steady state performance. (CA IOUs, Public Meeting Transcript, No. 5 at p. 17) [5] Goodman Manufacturing Company (Goodman) requested that DOE allow a break-in time of up to 72 hours (instead of up to 20 hours, as DOE proposed) and cited two research papers describing the break-in behavior of scroll compressors in support of its request.[6] [7] DOE examined these papers and observed that the conclusions presented in the papers comparing the changes in unit efficiency (as measured by the energy efficiency ratio, or EER) to break-in time are based on analytical models of compressor wear rather than actual test data. DOE notes that the conference paper authored by H.E. Khalifa [7] provides a caveat alongside its data, stating that it is not advisable to apply the data to compare different families of compressors (*e.g.,* scroll compressors versus rotary compressors) or different designs of equipment.[8] As Goodman noted in its comment presenting these studies, the data in this conference paper pertain to scroll compressors, which are not used in PTAC and PTHP applications. As such, DOE does not view the papers as evidence that break-in periods exceeding 20 hours provide additional efficiency improvements for PTAC or PTHP equipment. DOE has not found evidence that break-in periods exceeding 20 hours increase the tested efficiency measurements for a PTAC or PTHP. A maximum break-in period of 20 hours will align the break-in provision for PTAC and PTHP equipment with other commercial air conditioners and heat pumps. DOE does not believe that the request for a 72-hour break-in period has been adequately justified with data showing the effect of a longer break-in period on PTAC and PTHP equipment.

Therefore, in this final rule, DOE adds PTACs and PTHPs to the list of commercial air-conditioning and heating equipment for which a break-in period of up to 20 hours prior to testing is allowed.

DOE did not receive any comments on its related proposal to add a certification reporting requirement to indicate the duration of the break-in period. Thus, DOE requires manufacturers to provide the duration of the break-in period used during testing to support the development of the certified ratings in the certification report. As such, DOE modifies the certification requirements for PTACs and PTHPs that were proposed on February 14, 2014 (79 FR 8886, 8900) to require the manufacturer to include the break-in period in the certification report. DOE notes that manufacturers must maintain records underlying their certified rating, which must reflect this optional break-in period duration pursuant to 10 CFR 429.71.

B. Wall Sleeve Sealing

PTACs and PTHPs are tested in a testing facility incorporating a room simulating indoor conditions and a room simulating outdoor ambient conditions. The rooms are separated by a dividing wall with an opening through which a wall sleeve is mounted to hold the test sample. In most cases, the wall sleeve and test sample are placed in the opening, and any remaining gaps between the dividing wall and the wall sleeve around the unit are filled with insulating material. Under the current test procedures, the gaps between the wall sleeve and the dividing wall may also be sealed with duct tape. Regarding sealing for air leakage, ANSI/ASHRAE 16 states, ''Interior surfaces of the calorimeter compartments shall be of nonporous material with all joints sealed against air and moisture leakage.'' (Section 4.2.8). This statement does not explicitly require that gaps between the wall and the test sample's wall sleeve be sealed.

ANSI/ASHRAE 16 also states, ''The air conditioner shall be installed in a manner similar to its normal installation'' (Section 4.2.2). In normal practice, PTACs and PTHPs are installed within wall sleeves that are permanently installed and sealed to the external wall of a building. However, the set-up of the DOE test procedures does not allow for the permanent installation of wall sleeves in the partition cavity. Thus, during testing, the wall sleeve is not necessarily air-sealed to the wall as it would be in a

[3] A notation in the form ''AHRI, No. 8 at p. 1'' identifies a written comment that DOE received and has included in the docket of DOE's ''Energy Conservation Test Procedures for Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps'' (Docket No. EERE–2012–BT–TP–0032), which is maintained at *www.regulations.gov.* This particular notation refers to a comment: (1) Submitted by AHRI; (2) filed as document number 8 of the docket, and (3) appearing on page 1 of that document.

[4] The CA IOUs are comprised of Pacific Gas and Electric Company, Southern California Gas Company, Southern California Edison, and San Diego Gas and Electric Company.

[5] A notation in the form ''CA IOUs, Public Meeting Transcript, No. 5 at p. 17'' identifies a comment that DOE received during a public meeting and has included in the docket of DOE's ''Energy Conservation Test Procedures for Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps'' (Docket No. EERE–2012–BT–TP–0032). This particular notation refers to a comment: (1) Submitted by the CA IOUs; (2) transcribed from the public meeting in document number 5 of the docket, and (3) appearing on page 17 of that document.

[6] Sundaresan, S. G., ''Evaluation of Lubricants for R410A/R407C Applications in Scroll Compressor'' (1998). *International Compressor Engineering Conference.* Paper 1210. Available at: *http://docs.lib.purdue.edu/icec/1210.*

[7] Khalifa, H. E., ''Break-in Behavior of Scroll Compressors'' (1996). *International Compressor Engineering Conference.* Paper 1145. Available at: *http://docs.lib.purdue.edu/icec/1145.*

[8] *Ibid.* p. 444.

normal installation in the field. Air leakage between the outdoor and indoor rooms through gaps between the wall sleeve and the dividing wall can reduce the measured capacity and efficiency, contributing to test results unrepresentative of field operation.

In the March 2014 NOPR, DOE proposed to require that test facilities, when installing PTACs and PTHPs in the test chamber, seal all potential leakage gaps between the wall sleeve and the dividing wall. DOE sought comments on the sealing of PTAC and PTHP wall sleeves to the test facility dividing wall, including whether the type or method of sealing (*e.g.,* duct tape) should be specified, and whether a test could be developed that, with reasonably low test burden, could be performed to verify an adequate seal. 79 FR at 14189 (March 13, 2014)

In response, Goodman agreed with the proposed clarification that any gaps or area between wall sleeves and walls should be sealed, and stated that the method of sealing should not be specified. (Goodman, No. 7 at p. 2) AHRI recommended that the wall sleeve be sealed to the test facility dividing wall in accordance with the manufacturer's installation instructions and, if not possible to seal in accordance with the provided instructions, the test procedures should specify that adhesive tape, such as duct tape or brown packaging tape, be used to seal the entire perimeter of the wall sleeve to the test facility diving wall. (AHRI, No. 8 at p. 2) The CA IOUs commented that sealing the test chamber is good practice, but that it is not important to prescribe how sealing is accomplished. (CA IOUs, No. 5 at p. 21) DOE notes that field instructions for sealing the sleeve to the building are inconsistent with equipment testing, because field installation involves permanently sealing the sleeve to the building penetration, whereas the tested unit and its sleeve are intended to be removed after testing. Furthermore, DOE did not propose a particular sealing method such as adhesive tape, since methods other than use of adhesive tape may be just as effective for providing a temporary seal.

In this final rule, DOE requires that any area(s) between the wall sleeve and the insulated partition between the indoor and outdoor rooms must be sealed to eliminate all air leakage through this area, but DOE does not specify the method used to achieve the seal.

C. Pre-Filling Condensate Drain Pan

Most PTACs and PTHPs transfer the condensate that forms on the evaporator to a condensate pan in the unit's outdoor-side where a water slinger integrated with the outdoor fan distributes the water over the air-inlet side of the condenser. This process results in evaporative cooling that enhances the cooling of the outdoor coil in air-conditioning mode. At the beginning of a test, there may be no water in the condensate pan. As the test progresses and the unit approaches an equilibrium state of operation, the condensate level in the drip pan will rise and stabilize at a constant level. It can take several hours to reach this steady state.

To accelerate the testing process, test facilities typically add water to the condensate pan at the beginning of the test rather than wait for the unit to generate sufficient condensate to stabilize. The current test procedures do not indicate whether this practice is allowed during efficiency testing.

In the March 2014 NOPR, DOE proposed to add a provision in its test procedures at 10 CFR 431.96 to allow manufacturers the option of pre-filling the condensate drain pan before starting the efficiency test. The proposed provision did not specify requirements regarding the water purity or the water temperature that is to be used. DOE sought comments on pre-filling the condensate drain pan, including whether the type and/or temperature of the water used should be specified in the test procedures and/or recorded in the test data underlying the results. 79 FR at 14189–14190 (March 13, 2014).

In response, the CA IOUs and Goodman supported DOE's proposal to adopt test procedure amendments that allow pre-filling of the condensate pan. (CA IOUs, No. 9 at p. 3; Goodman, No. 7 at p. 2)

AHRI recommended that DOE specify in the test procedures that the condensate pan be filled with distilled water between 70 °F and 85 °F and that the condensate pan water temperature at steady state operation be documented in the test reports underlying the certification. However, AHRI also stated in their comment that the mineral content of the water is not a concern because the short test period would not allow for scaling to build up. (AHRI, No. 8 at p. 2) AHRI did not provide data showing that the temperature of the water used to prefill the pan will impact the test results. Also, if, as AHRI acknowledges, the mineral content of the water used to initially fill the pan is not a concern, it is unclear why using distilled water as opposed to tap water would make any difference to the measurement.

Private citizen Mike Haag commented that assisting the unit with achieving steady state might mask issues with the cooling of the system. (Mike Haag, No. 2 at p. 1) DOE notes that the DOE test procedures measure cooling efficiency at steady state conditions, and test reports do not record the amount of time taken to achieve steady state. Thus, pre-filling the condensate pan with water to accelerate the achievement of steady state conditions would not mask any issues that would otherwise be identified by the test procedures.

In this final rule, DOE adds the proposed provision in its test procedures at 10 CFR 431.96 to allow manufacturers the option of pre-filling the condensate drain pan before starting the efficiency test. This provision does not include requirements regarding the purity or temperature of the water used to fill the pan.

D. ANSI/ASHRAE 16 vs. ANSI/ASHRAE 37

In February 2014, AHRI published AHRI 310/380–2014 superseding ANSI/AHRI 310/380–2004, which is referenced by the current DOE test procedure. ANSI/AHRI 310/380–2004 and AHRI 310/380–2014 both indicate that either ANSI/ASHRAE 16 or ANSI/ASHRAE 37 may be used to determine cooling capacity.

ANSI/ASHRAE 16 specifies a calorimetric test method involving measurement of the electric resistance heater power input needed to exactly balance a test sample's cooling capacity. ANSI/ASHRAE 37 specifies a psychrometric test method which calculates capacity based on the air flow rate and the air inlet and outlet conditions on the indoor side of the test sample. The two test methods have differences that could influence test results, particularly for units for which outgoing evaporator air can recirculate back to the evaporator air inlet. When using ANSI/ASHRAE 37, the air leaving the evaporator section is collected in a duct that transfers the air to instrumentation for measuring its temperature, moisture content, and flow rate (see, *e.g.,* Figure 1 of ANSI/ASHRAE 37). Such collection of the air can prevent recirculation to the air inlet, thus potentially eliminating an equipment inefficiency and resulting in a measurement indicating higher efficiency.

Another difference between ANSI/ASHRAE 16 and ANSI/ASHRAE 37 is that the two methods have different requirements for electrical instrumentation accuracy. Section 5.4.2 of ANSI/ASHRAE 16 requires that instruments for measuring electrical

inputs be accurate to +/− 0.5% of the quantity measured. Section 5.4.2 of ANSI/ASHRAE 37 requires that instruments for measuring electrical inputs be accurate to +/ − 2.0% of the quantity measured. The consistency of PTAC and PTHP testing may be improved by requiring all efficiency tests to be conducted using only one of the two ASHRAE standards. On the other hand, such an approach may increase test burden, particularly for those manufacturers that currently use one particular test method.

In the March 2014 NOPR, DOE described experimental testing conducted using three PTAC units. DOE tested all three units at a third-party testing lab under both ANSI/ASHRAE 16 and ANSI/ASHRAE 37. The test results showed that differences in the calculated EER between ANSI/ASHRAE 16 and ANSI/ASHRAE 37 ranged from 0.4 to 1.0 Btu/h-W, depending on the unit. These values represent differences in the calculated EER between ANSI/ASHRAE 16 and ANSI/ASHRAE 37 ranging from 4.1 percent to 9.7 percent of the lower EER value calculated by the two test methods. DOE stated in the March 2014 NOPR that these results did not support a conclusion that the two methods of test generate consistent results. 79 FR at 14190 (March 13, 2014). Based in part on these results, DOE proposed in the March 2014 NOPR to require that only ANSI/ASHRAE 16 be used when conducting a cooling mode test for PTACs and PTHPs. DOE sought comment on its proposal to designate ANSI/ASHRAE 16 as the sole test method for determining cooling capacity. Specifically, DOE was interested in the potential test burden on manufacturers. DOE also sought information on whether there are PTAC or PTHP manufacturers that conduct a significant number of tests using ANSI/ASHRAE 37. 79 FR at 14190–91 (March 13, 2014).

In response, neither AHRI nor Goodman supported the removal of ANSI/ASHRAE 37 from the DOE test procedures. Both AHRI and Goodman disagreed with DOE's assessment of the differences between test results achieved using ANSI/ASHRAE 16 and ANSI/ASHRAE 37. (AHRI, No. 8 at p. 3; Goodman, Public Meeting Transcript, No. 5 at p. 27) AHRI stated that it has observed good correlation in testing between calorimetric and psychrometric rooms for the purposes of rating PTAC and PTHP equipment. (AHRI, No. 8 at p. 3) Goodman stated that it has not observed large differences in test results between ANSI/ASHRAE 16 and ANSI/ASHRAE 37. (Goodman, Public Meeting Transcript, No. 5 at p. 27) Goodman presented data from trial tests comparing (1) three units tested in Goodman's calorimetric chamber and then tested in Goodman's psychrometric chamber, and (2) five units tested in a third party calorimetric test chamber and then tested in Goodman's psychrometric test facility. For these eight units, the maximum variation in measured EER between the calorimetric test and the psychrometric test was 2.5%. (Goodman, No. 7 at p. 3–6). These data provided by Goodman suggest that the potential discrepancies between calorimetric and psychrometric tests are much smaller than suggested by the NOPR-stage DOE testing described above. DOE agrees that Goodman's test results provide an indication that calorimetric and psychrometric tests can provide consistent results. DOE notes that Goodman used a larger sample size of eight units in its experimentation compared to the sample size of three units that DOE used in its NOPR-stage experiments described above.

Both AHRI and Goodman commented that the requirement of a calorimetric test places additional burdens on manufacturers. AHRI commented that it is an additional burden to build a calorimeter room and to re-test units that were previously tested psychrometrically. (AHRI, Public Meeting Transcript, No. 5 at p. 34) Goodman believes the elimination of psychrometric testing would place an additional burden on manufacturers in the form of significant capital expenditure requirements, as well as a significant testing burden increase. Goodman commented that new test facilities often cost up to $750,000 and have construction lead times of a year or more, and that calorimetric tests may take 2.5 times as long as psychrometric tests. (Goodman, No. 7 at p. 6)

DOE acknowledges that it underestimated the burden that would be imposed on manufacturers by eliminating psychrometric testing from the PTAC and PTHP test procedures. In response to the comments above, DOE accepts that it would be burdensome to manufacturers if DOE required use of ANSI/ASHRAE 16 for all PTAC and PTHP testing. Further, the additional data provided by Goodman show that discrepancies between the calorimetric and psychrometric test methods are less pronounced than DOE's NOPR-stage test data suggested. Hence, this final rule does not eliminate the optional use of ANSI/ASHRAE 37 to determine cooling capacity.

As noted above, ANSI/ASHRAE 16 and ANSI/ASHRAE 37 have different requirements for electrical instrumentation accuracy. A single requirement for electricity measurement accuracy is necessary to maintain consistency between tests conducted using ANSI/ASHRAE 16 and ANSI/ASHRAE 37. In the March 2014 NOPR, DOE proposed to require ANSI/ASHRAE 16 as the sole test method acceptable for measuring the cooling capacity of equipment. If this proposal were adopted, it would have imposed a requirement that electricity measurement instrumentation used in cooling capacity tests be accurate to +/ − 0.5% of reading, since +/− 0.5% of reading is the requirement specified in ANSI/ASHRAE 16. As described above, stakeholders opposed the proposed requirement of ANSI/ASHRAE 16 as the sole test method for cooling capacity tests based on the burden of constructing calorimetric test chambers. None of the stakeholder comments raised concerns regarding the more stringent electrical measurement accuracy requirements of ANSI/ASHRAE 16. In this final rule, DOE does not eliminate testing using ANSI/ASHRAE 37, but DOE retains the more stringent electrical measurement accuracy requirement. Specifically, the final rule adds this requirement in the DOE regulatory language, indicating that tests be conducted using electricity measuring instruments accurate to +/− 0.5% of reading in spite of the incorporation by reference of other portions of ANSI/ASHRAE 37. DOE does not expect this requirement to pose additional test burden since electrical meters that achieve this level of accuracy are readily available and are already in use at many test facilities. This requirement does not represent a change that would alter the measurements as compared with the current DOE test procedure; rather, it ensures the accuracy of measurements.

E. AHRI Standard 310/380–2014 and Reaffirmed ASHRAE Standards

In the NOPR, DOE proposed to adopt only those parts of ANSI/AHRI 310/380–2004 relevant for the DOE test procedure, specifically sections 3, 4.1, 4.2, 4.3, and 4.4. Additionally, DOE proposed to directly incorporate by reference those industry test methods that were previously incorporated via ANSI/AHRI 310/380–2004, such as ANSI/ASHRAE 16–1999 and ASHRAE 58–1999.

In response to the NOPR, Goodman commented that DOE should consider updated versions of ANSI/ASHRAE 16 and ANSI/ASHRAE 37. Goodman conceded that it was unlikely ANSI/ASHRAE 37 would be updated in time to be incorporated in this Final Rule, but encouraged DOE to accommodate

ANSI/ASHRAE 16 which Goodman expected would be finalized in 2014. (Goodman, No. 7 at p. 7) DOE agrees that, when possible, it should include the most up to date version of industry test methods.

In July 2014, ASHRAE reaffirmed both ANSI/ASHRAE 16, a test method for measuring cooling performance of PTACs and PTHPs, and ANSI/ASHRAE 58, a test method for measuring heating performance of PTHPs. While Goodman commented that it expected some changes in ANSI/ASHRAE 16 (Goodman, No. 7 at p. 7), DOE reviewed the reaffirmed standard and did not discern substantive differences between the 2009 and 2014 versions. The test methods described in the 2014 reaffirmations of both ANSI/ASHRAE 16 and ANSI/ASHRAE 58 are identical to their 1999 and 2009 versions—the later reaffirmed versions correct errata that existed in previous versions of ANSI/ASHRAE 16 and ANSI/ASHRAE 58. These corrections do not change the test procedures.

Further, in February 2014 AHRI published AHRI 310/380–2014, which supersedes ANSI/AHRI 310/380–2004. In an effort stay current with industry testing methodologies, DOE is updating its referenced industry standard. In alignment with the NOPR, DOE is only adopting the sections of AHRI 310/380–2014 relevant for the DOE test procedure. For cooling performance, this includes sections 3, 4.1, 4.2, 4.3, and 4.4. For measurement of heating performance, DOE is adopting section 3, 4.1, 4.2, 4.3, and 4.4 except for subsection 4.2.1.2(b), which allows ANSI/ASHRAE 37 as an optional method for verifying the standard heating rating of equipment. The March 2014 NOPR did not propose the use of ANSI/ASHRAE 37 as a method for verifying the standard heating rating of equipment and thus, DOE is excluding this provision in this final rule. Where this final rule refers to the sections of AHRI 310/380–2014 to be used for measurement of heating performance, it omits section 4.2.1.2(b) so as not to allow the use of ANSI/ASHRAE 37 for verifying the standard heating rating of equipment.

Finally, AHRI 310/380–2014 references the 2009 versions of ANSI/ASHRAE 16, ANSI/ASHRAE 58, and ANSI/ASHRAE 37. As previously stated, DOE is directly incorporating by reference those industry test methods that were previously referenced in ANSI/AHRI 310/380—ANSI/ASHRAE 16, ANSI/ASHRAE 58, and ANSI/ASHRAE 37 . Therefore, in this final rule, DOE is incorporating by reference ANSI/ASHRAE 37–2009, which is referenced in AHRI 310/380–2014 for measuring cooling performance. Although DOE's previous test method, ANSI/AHRI 310/380–2004, incorporated ANSI/ASHRAE 37–1988, DOE's review of the two editions of ANSI/ASHRAE 37 confirmed that, for the purposes of measuring cooling performance for PTACs and PTHPs, the test methods are essentially identical. Also, rather than incorporating by reference the 1999 reaffirmations of ANSI/ASHRAE 16 and ANSI/ASHRAE 58, this final rule amends the test procedure to incorporate by reference ANSI/ASHRAE 16–1983 (RA 2014) and ANSI/ASHRAE 58–1986 (RA 2014)—as mentioned above, these more recent versions of ANSI/ASHRAE 16 and ANSI/ASHRAE 58 prescribe test procedures identical to the older 2009 and 1999 versions.

F. Wall Sleeve Size and Filter Requirements for Testing

Wall Sleeve Size

The DOE test procedures provide limited guidance on the type of wall sleeve that should be used during testing. The wall sleeve is technically part of the PTAC or PTHP (see, *e.g.,* the definition of PTAC in 10 CFR 431.92), and it provides an outer case for the main refrigeration and air-moving components. In the field, the wall sleeves are often installed in the building, and the cooling/heating assembly slides into and out of this case. For standard size PTACs and PTHPs, the wall sleeve measures 42 inches wide and 16 inches high; however, wall sleeves come in a range of depths.

Some manufacturers offer extended wall sleeves up to 31 inches deep that can be used with any of their standard size PTACs or PTHPs. DOE believes that the use of varying test sleeve depths can affect measured test results, due to the effect the sleeve depth has on airflow and fan performance. DOE's test procedures, in section 4.3 of ANSI/AHRI 310/380–2004, provide some limited guidance about the wall sleeve that should be used during testing; section 4.3 of ANSI/AHRI 310/380–2004 states that ''standard equipment shall be in place during all tests, unless otherwise specified in the manufacturer's instructions to the user.'' Section 4.3 of the updated AHRI 310/380–2014 provides the same limited guidance. However, there currently is no guidance for units for which installation instructions allow sleeves of different depths.

DOE's survey of wall sleeve sizes on the market showed that the most common wall sleeve depth is 14 inches. While DOE has no data indicating the impact of testing with a maximum-depth sleeve as opposed to a standard-depth sleeve, DOE expects that there may be an incremental reduction in efficiency associated with use of a sleeve as deep as 31 inches. The Working Group discussed the issue of varying wall sleeve sizes and voted to adopt the position that units should be tested using a standard 14 inch sleeve. (ASRAC to Negotiate Certification Requirements for Commercial HVAC, WH, and Refrigeration Equipment, Docket No. EERE–2013–BT–NOC–0023, No. 53 at pg. 17)

In the March 2014 NOPR, DOE proposed to add a provision to 10 CFR 431.96 to require testing using a wall sleeve with a depth of 14 inches (or the wall sleeve option that is closest to 14 inches in depth that is available for the basic model being tested). 79 FR at 14191 (March 13, 2014). This final rule adopts the Working Group recommendation. DOE sought comment on whether there are any PTACs or PTHPs that cannot be tested using a 14 inch deep wall sleeve. Id. AHRI and Goodman supported the proposal to require testing using 14-inch deep wall sleeves. (AHRI, No. 8 at p. 2; Goodman, No. 7 at p. 3) DOE did not receive any comments describing units that cannot be tested with 14-inch deep wall sleeves.

In this final rule, DOE adopts its proposal to add a provision to 10 CFR 431.96 to require testing using a wall sleeve with a depth of 14 inches (or the wall sleeve option that is closest to 14 inches in depth that is available for the basic model being tested).

Filter Requirements

The DOE test procedures provide limited guidance on the type of air filter that should be used during testing. PTACs or PTHPs generally ship with an air filter to remove particulates from the indoor airstream. There is currently no description in the DOE test procedures of the type of filter to be used during testing. While some PTACs and PTHPs only have one filter option, some PTACs and PTHPs are shipped with either a standard filter or a high efficiency filter. A high efficiency filter will impose more air flow restriction, which can incrementally decrease air flow and thus the capacity and/or efficiency of the unit.

DOE considered whether to specify filters with a particular MERV rating for use with the test, such as MERV–2 or MERV–3 levels of filtration. However, DOE noted that the filter efficiencies offered in PTACs and PTHPs generally are not specified using a standard

metric. Furthermore, some PTACs are sold with higher-efficiency ''standard-option'' filters than others. Moreover, verification that the filter used in the test complies with any such requirement would not be possible without implementation of standardized requirements for labeling of filters and reporting of filter efficiencies and/or adopting a filter efficiency test as part of the test procedures, all of which would impose additional burden. The Working Group was also aware of this issue, and also discussed the issue of varying air filter efficiency. The Working Group voted to adopt the position that units should be tested ''as shipped'' with respect to selecting a filter option (Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) to Negotiate Certification Requirements for Commercial HVAC, WH, and Refrigeration Equipment, Docket No. EERE–2013–BT–NOC–0023, No. 53 at p. 16).

In the March 2014 NOPR, DOE proposed to add a provision to 10 CFR 431.96 to require testing using the standard or default filter option that is packaged and shipped with the PTAC or PTHP unit being tested. 79 FR at 14191 (March 13, 2014). This proposal was consistent with the Working Group's recommendations. For those models that are not shipped with a filter, DOE proposed to require the use of an off-the-shelf MERV–3 filter for testing. DOE sought comment on whether a MERV–3 filter is appropriate for testing PTACs and PTHPs that do not ship with filters. 79 FR at 14191 (March 13, 2014).

In response, Goodman recommended that DOE specify a MERV rating lower than MERV–3 because MERV–3 filters may significantly reduce airflow. (Goodman, No. 7 at p. 3) AHRI commented that MERV–1 filters, which are electrostatic, self-charging woven panel filters, may be more representative of filters found in PTACs or PTHPs. (AHRI, No. 8 at p. 2) DOE accepts this feedback and will reduce the MERV rating for filters to be used when testing units shipped without a filter.

In this final rule, DOE adds a provision to 10 CFR 431.96 to require testing using the standard or default filter option that is shipped with most units of a given basic model. For those models that are not shipped with a filter, DOE requires the use of an off-the-shelf MERV–1 filter for testing.

G. Barometric Pressure Correction

The DOE test procedures, in Section 6.1.3 of referenced ANSI/ASHRAE 16, allows for adjustment of the capacity measurement based on the tested barometric pressure: ''The capacity may be increased 0.8% for each in. Hg below 29.92 in. Hg.'' Theoretically, air is less dense when barometric pressure is lower, such as at higher altitudes. As a result, air mass flow generated by fans and blowers may be less at higher altitudes, which may affect the measured cooling performance. However, there are other competing effects that may negate this decrease and DOE has not seen data that definitively demonstrate the impact of barometric pressure on measurements of the cooling performance of PTACs or PTHPs.

In the March 2014 NOPR, DOE did not propose to amend or remove the barometric pressure provision. DOE sought comments or data on the barometric pressure correction specifically used for PTACs and PTHPs. 79 FR at 14191 (March 13, 2014). Goodman and AHRI responded in support of DOE's position to retain the barometric pressure correction. (Goodman, No.7 at p. 3; AHRI, No. 8 at p. 2) DOE received no comments providing data that either supported or refuted the validity of the barometric pressure correction.

In this final rule, DOE does not amend or remove the provision allowing for adjustment of the capacity measurement based on the tested barometric pressure.

H. Part-Load Efficiency Metric and Varying Ambient Conditions

The current DOE test procedures for PTACs and PTHPs measure cooling efficiency and heating efficiency in terms of EER and coefficient of performance (COP), respectively. Both of these metrics measure the efficiency of the unit running steadily at maximum cooling or heating output settings.

In the March 2014 NOPR, DOE did not propose to adopt either a part-load or seasonal efficiency metric for the cooling mode that considers part-load performance, or a seasonal efficiency metric for the heating mode that considers electric resistance heating for PTACs or PTHPs. DOE sought comments regarding this proposal, including any information regarding seasonal load patterns for PTACs and PTHPs in both cooling and heating modes. 79 FR at 14192 (March 13, 2014).

In response, Goodman and AHRI supported DOE's proposal to not develop seasonal efficiency metrics. (Goodman, No. 7 at p. 6; AHRI, No. 8 at p. 3) AHRI commented that a part-load performance metric would not be representative of PTAC and PTHP equipment operating cycles. (AHRI, Public Meeting Transcript, No. 5 at p. 46) The CA IOUs commented that they would like the test procedures to characterize performance at full-load and part-load. (CA IOUs, Public Meeting Transcript, No. 5 at p. 7) The CA IOUs commented that they are content with using a single metric for the purposes of rating equipment, but that they would like additional test conditions to be measured and reported according to a standard test procedure. The CA IOUs commented that this additional information would help them to distinguish new equipment models with good low-temperature performance that are becoming available. (CA IOUs, Public Meeting Transcript, No. 5 at p. 43)

DOE believes that the existing EER and COP metrics, both for full-load operation, provide an adequate indication of PTAC and PTHP efficiency. DOE does not currently have information indicating the magnitude of energy that might be saved if part-load or full-season metrics were developed. ASAP and ACEEE encouraged DOE to begin a collaboration with AHRI to develop a test method to measure the part-load performance of PTACs and PTHPs. (ASAP & ACEEE, No. 6 at p. 1) DOE may consider support and/or development of such test methods in the future.

In this final rule, DOE has not adopted seasonal efficiency metrics for cooling or heating performance for PTACs or PTHPs.

I. Cooling Capacity Verification

The Federal energy conservation standard levels for PTAC and PTHP equipment are calculated based on the certified cooling capacity of the equipment. (10 CFR 431.97(c)) The DOE test procedures for PTACs and PTHPs specifies the methods that may be used to determine the cooling capacity and energy efficiency of PTACs and PTHPs. (10 CFR 431.96(b)) Testing conducted for assessment and enforcement measures the cooling capacity of test units pursuant to the test requirements of 10 CFR part 431, and uses the measured cooling capacity as the basis for calculation of EER for the test units. The minimum allowed EER (and the minimum allowed COP for PTHP units) of a test unit is calculated using the certified cooling capacity of the test unit as the basis for calculation. For various reasons, the measured cooling capacity of equipment may deviate from the certified cooling capacity of the equipment. Small deviations of the measured cooling capacity from the certified cooling capacity are expected due to variability in manufacturing conditions. However, large deviations

from the certified cooling capacity indicate that the certified cooling capacity and, by extension, the minimum allowed efficiency that is calculated based on the certified cooling capacity, do not accurately represent the unit being tested. In cases where the measured cooling capacity of a test unit deviates outside of an acceptable tolerance, it is appropriate to recalculate the minimum efficiency for the test unit based on the measured cooling capacity of the test unit (or the average of the measured cooling capacities of the samples tested, if more than one is tested).

In the March 2014 NOPR, DOE proposed regulatory text amendments describing how DOE will select the cooling capacity values that are used to calculate the minimum allowable EER for a basic model. The proposed amendments to 10 CFR 429.134 would establish a provision requiring use of the certified cooling capacity as the basis for calculation of minimum allowed EER if the average measured cooling capacity is within five percent of the certified cooling capacity. The proposed amendments would require use of the average measured cooling capacity as the basis for calculation of minimum allowed EER if the average measured cooling capacity is not within five percent of the certified cooling capacity. 79 FR at 14197 (March 13, 2014).

In response to the proposed amendments, AHRI questioned whether the five percent allowance between tested and rated values is a two-sided tolerance. (AHRI, Public Meeting Transcript, No. 5 at p. 54) Goodman agreed in concept with the proposed requirement that measured cooling capacity be within five percent of the certified cooling capacity, but Goodman suggested that the requirement be one-sided, such that the certified cooling capacity would be used to determine the minimum efficiency unless the measured cooling capacity is less than 95% of the certified cooling capacity, in which event the measured cooling capacity would be used to determine the minimum efficiency level. (Goodman, No. 7 at p. 6)

DOE clarifies that the proposed five percent allowance between tested and rated values is a two-sided tolerance. This means that units with average measured cooling capacity below 95% or above 105% of the certified cooling capacity would require use of the average measured cooling capacity as the basis for calculation of minimum allowed EER.

DOE notes that if the proposed provision used a one-sided tolerance as Goodman suggested, then units with a measured cooling capacity above their certified cooling capacity would be held to an efficiency standard determined by their certified cooling capacity. With a one-sided tolerance, units having a measured cooling capacity that is above 105% of their certified cooling capacity would be held to a calculated minimum EER that is more stringent than the minimum EER calculated using a two-sided tolerance as DOE proposed. DOE does not seek to impose more stringent standards on units that exceed their certified cooling capacity.

In this final rule, DOE adopts its proposal to add a provision to 10 CFR 429.134 that requires assessment and enforcement testing to measure the total cooling capacity of the basic model pursuant to the test requirements of 10 CFR part 431 for each unit tested. The provision requires that results of the measurement(s) be averaged and compared to the value of cooling capacity certified by the manufacturer. The adopted provision considers the certified cooling capacity to be valid only if the measurement is within five percent of the certified cooling capacity. If the certified cooling capacity is valid, that cooling capacity will be used as the basis for calculation of minimum allowed EER for the basic model. If the certified cooling capacity is not valid, the average measured cooling capacity will be used as the basis for calculation of minimum allowed EER for the basic model.

J. Additional Comments

DOE received additional comments that are not classified in the discussion sections above. Responses to these additional comments are provided below.

The CA IOUs recommended that DOE require the reporting of power factor [9] for all operating modes (*i.e.,* active, standby, and off) at every temperature point for which EER and COP are rated. (CA IOUs, No. 9 at p. 2–3) The DOE test procedures do not address the measurement of performance during standby mode and off mode. The DOE test procedures also do not describe the measurement of the power factor of PTAC and PTHP equipment. Therefore, DOE is not adopting this reporting requirement.

[9] The power factor of an alternating current (AC) electrical power system is defined as the ratio of the real power flowing to the load, to the apparent power in the circuit. A load with a low power factor draws more electrical current than a load with a high power factor for the same amount of useful power transferred. The higher currents associated with low power factor loads increase the amount of energy lost in the electricity distribution system.

The CA IOUs commented that they would like DOE to explore adding test procedure specifications for units containing gas-fired components, since ANSI/AHRI 310/380–2004 excludes such units. (CA IOUs, No. 9 at p. 1–2) DOE notes that EPCA defines a ''packaged terminal air conditioner'' as ''a wall sleeve and a separate unencased combination of heating and cooling assemblies specified by the builder and intended for mounting through the wall. It includes a prime source of refrigeration, separable outdoor louvers, forced ventilation, and heating availability by builder's choice of hot water, steam, or electricity.'' (42 U.S.C. 6311(10)(A)) EPCA defines a ''packaged terminal heat pump'' as ''a packaged terminal air conditioner that utilizes reverse cycle refrigeration as its prime heat source and should have supplementary heat source available to builders with the choice of hot water, steam, or electric resistant heat.'' (42 U.S.C. 6311(10)(B)) These definitions include units with heating provided by hot water, steam, or electric resistant heat, but they do not include units containing gas-fired components. As such, DOE does not have the authority to regulate units with gas-fired components.

K. Compliance Date of the Test Procedure Amendments

In amending a test procedure, EPCA directs DOE to determine to what extent, if any, the test procedure would alter the measured energy efficiency or measured energy use of a covered product. (42 U.S.C. 6314(a)(4)) The test procedure amendments for PTACs and PTHPs incorporated by this final rule do not contain changes that will materially alter the measured energy efficiency of equipment. DOE did not receive any comments suggesting that the test procedure amendments will alter the measured energy efficiency of equipment. Rather, most of the proposed changes represent clarifications that will improve the uniform application of the test procedures for this equipment. Any change in the rated efficiency associated with these clarifications, if any, is expected to be *de minimis.*

DOE's test procedure amendments incorporated by this final rule are effective 30 days after publication of the final rule in the **Federal Register**. Consistent with 42 U.S.C. 6314(d), any representations of energy consumption of PTACs and PTHPs must be based on any final amended test procedures 360 days after the publication of the test procedures final rule.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

The Office of Management and Budget (OMB) has determined that test procedure rulemakings do not constitute ''significant regulatory actions'' under section 3(f) of Executive Order 12866, Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993). Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA) in the OMB.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment and a final regulatory flexibility analysis (FRFA) for any rule that an agency adopts as a final rule, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative effects. As required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking,'' 67 FR 53461 (Aug. 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's Web site: *http://energy.gov/gc/office-general-counsel.*

DOE reviewed this final rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. This rule prescribes test procedures that will be used to test compliance with energy conservation standards for the products that are the subject of this rulemaking. DOE has concluded that the rule will not have a significant impact on a substantial number of small entities.

The Small Business Administration (SBA) considers an entity to be a small business if, together with its affiliates, it employs less than a threshold number of workers specified in 13 CFR part 121, which relies on size standards and codes established by the North American Industry Classification System (NAICS). The threshold number for NAICS classification for 333415, which applies to air conditioning and warm air heating equipment and commercial and industrial refrigeration equipment, is 750. Searches of the SBA Web site [10] to identify manufacturers within these NAICS codes that manufacture PTACs and/or PTHPs did not identify any small entities that could be affected by the test procedure modifications adopted in the final rule.

For the reasons explained below, DOE has concluded that the test procedure amendments contained in this final will not have a significant economic impact on any manufacturer, including small manufacturers. The rule amends DOE's test procedures to specify an optional break-in period, explicitly require that wall sleeves be sealed to prevent air leakage, allow for the pre-filling of the condensate drain pan, and require testing with 14-inch deep wall sleeves and the filter option most representative of a typical installation. These tests can be conducted in the same facilities used for the current energy testing of these products and do not require testing in addition to what is currently required. The break-in period is optional and may result in improved energy efficiency of the unit; the break-in typically is conducted outside of the balanced-ambient calorimeter facility. DOE expects that manufacturers will require minimal time to set the PTACs and PTHPs up for break-in, which requires that the units simply be plugged in and powered on. Further, manufacturers will only incur the additional time for the break-in step if it is beneficial to testing. In this case, the cost will be minimal due to the nature of the break-in procedure and the fact that it is not typically conducted within the test chamber.

Material costs associated with the test procedure amendments adopted in this final rule are expected to be negligible, as air sealing the wall sleeves can be accomplished with typically available lab materials. Further, DOE expects that manufacturers typically seal the wall sleeves in their current testing, because not doing so could result in measurements indicating a lower efficiency. Also, there are no additional costs associated with the requirement to use a 14-inch wall sleeve and/or the standard filter that typically comes with the unit. In addition, pre-filling of the condensate pan is expected to reduce test time by 2–4 hours, which would reduce testing costs by approximately $375–750 per test. Thus, DOE determined that the test procedure amendments adopted by this final rule will not impose a significant economic impact on manufacturers.

This notice adds one additional item to the certification report requirements for PTACs and PTHPs: The duration of the break-in period. However, providing this additional item in certification reports is not expected to impose a significant economic impact.

For these reasons, DOE concludes and certifies that this final rule will not have a significant economic impact on a substantial number of small entities, so DOE has not prepared a regulatory flexibility analysis for this rulemaking. DOE has provided its certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the SBA for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of PTACs and PTHPs must certify to DOE that their products comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their products according to the DOE test procedures for PTACs and PTHPs, including any amendments adopted for those test procedures on the date that compliance is required. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including PTACs and PTHPs. See 10 CFR part 429. The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 30 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE amends its test procedures for PTACs and PTHPs. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of

[10] A searchable database of certified small businesses is available online at: *http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm.*

1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this rule amends an existing rule without affecting the amount, quality or distribution of energy usage, and, therefore, will not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion A5 under 10 CFR part 1021, subpart D, which applies to any rulemaking that interprets or amends an existing rule without changing the environmental effect of that rule. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

Executive Order 13132, ''Federalism,'' 64 FR 43255 (Aug. 4, 1999) imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform,'' 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at *http://energy.gov/gc/office-general-counsel.* DOE examined this final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements do not apply.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This final rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, ''Governmental Actions and Interference with Constitutionally Protected Property Rights'' 53 FR 8859 (March 18, 1988), that this regulation will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,'' 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB, a Statement of Energy Effects for any significant energy action. A ''significant energy action'' is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under Executive Order 12866, or any successor order; and (2)

is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

This regulatory action to amend the test procedures for measuring the energy efficiency of PTACs and PTHPs is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; FEAA) Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition.

The modifications to the test procedures addressed by this action incorporate testing methods contained in the following commercial standards: AHRI 310/380–2014, ANSI/ASHRAE Standard 16–1983 (RA 2014), ANSI/ASHRAE Standard 37–2009, and ANSI/ASHRAE Standard 58–1986 (RA 2014). DOE has evaluated these standards and is unable to conclude whether they fully comply with the requirements of section 32(b) of the FEAA (*i.e.,* whether they were developed in a manner that fully provides for public participation, comment, and review.) DOE has consulted with both the Attorney General and the Chairman of the FTC about the impact on competition of using the methods contained in these standards and has received no comments objecting to their use.

M. Description of Materials Incorporated by Reference

In this final rule, DOE is incorporating by reference four industry standards related to the testing of packaged terminal air conditioners and heat pumps. These industry standards include AHRI Standard 310/380–2014, ''Standard for Packaged Terminal Air-Conditioners and Heat Pumps;'' ANSI/ASHRAE Standard 16–1983 (RA 2014), ''Method of Testing for Rating Room Air Conditioners and Packaged Terminal Air Conditioners;'' ANSI/ASHRAE Standard 37–2009, ''Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment;'' and ANSI/ASHRAE Standard 58–1986 (RA 2014) ''Method of Testing for Rating Room Air-Conditioner and Packaged Terminal Air-Conditioner Heating Capacity.''

AHRI Standard 310/380–2014 is an industry accepted test standard that specifies definitions and general testing requirements for packaged terminal air conditioners and heat pumps. AHRI Standard 310/380–2014 references ANSI/ASHRAE Standard 16, ANSI/ASHRAE Standard 37, and ANSI/ASHRAE Standard 58 for the detailed testing methodologies. AHRI Standard 310/380–2014 is readily available on AHRI's Web site at *http://www.ahrinet.org/App_Content/ahri/files/standards%20pdfs/ANSI%20standards%20pdfs/AHRI_310_380-2014-CSA_C744-4.PDF.*

ANSI/ASHRAE Standard 16–1983 (RA 2014) and ANSI/ASHRAE Standard 37–2009 specify methods for determining the cooling performance of packaged terminal air conditioners. ANSI/ASHRAE Standard 16–1983 (RA 2014) specifies a calorimetric test method involving measurement of the electric resistance heater power input needed to exactly balance a test sample's cooling capacity. ANSI/ASHRAE Standard 37–2009 specifies a psychrometric test method which calculates capacity based on the air flow rate and the air inlet and outlet conditions on the indoor side of the test sample. ANSI/ASHRAE Standard 16–1983 (RA 2014) is readily available at ASHRAE's Web site at: *http://www.techstreet.com/ashrae/products/1881836.* ANSI/ASHRAE Standard 37–2009 is also readily available on ASHRAE's Web site at: *http://www.techstreet.com/ashrae/products/1650947.*

ANSI/ASHRAE Standard 58–1986 (RA 2014) specifies a test method for measuring heating performance of packaged terminal heat pumps. ANSI/ASHRAE Standard 58–1986 (RA 2014) is readily available on ASHRAE's Web site at: *http://www.techstreet.com/ashrae/products/1650947.*

N. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this final rule before its effective date. The report will state that it has been determined that the rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

O. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

List of Subjects

10 CFR Part 429

Energy conservation, Imports, Measurement standards, Reporting and recordkeeping requirements.

10 CFR Part 431

Energy conservation, Imports, Incorporation by reference, Measurement standards, Reporting and recordkeeping requirements.

Issued in Washington, DC, on June 8, 2015.

Kathleen B. Hogan,

Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy.

For the reasons stated in the preamble, DOE amends parts 429 and 431 of Chapter II, Subchapter D, of Title 10 the Code of Federal Regulations as set forth below:

PART 429—CERTIFICATION, COMPLIANCE AND ENFORCEMENT FOR CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 1. The authority citation for part 429 continues to read as follows:

Authority: 42 U.S.C. 6291–6317.

■ 2. Amend § 429.43 by adding paragraph (a)(1)(iii) and revising paragraphs (b)(2)(v) and (vi) to read as follows:

§ 429.43 Commercial heating, ventilating, air conditioning (HVAC) equipment.

(a) * * *

(1) * * *

(iii) For packaged terminal air conditioners and packaged terminal heat pumps, the represented value of cooling capacity shall be the average of the capacities measured for the sample selected as described in (a)(1)(ii) of this section, rounded to the nearest 100 Btu/h.

* * * * *

(b) * * *

(2) * * *

(v) Packaged terminal air conditioners: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the rated cooling capacity in British thermal units per hour (Btu/h), the wall sleeve dimensions in inches (in), and the duration of the break-in period (hours).

(vi) Packaged terminal heat pumps: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/W-h)), the coefficient of performance (COP), the rated cooling capacity in British thermal units per hour (Btu/h), the wall sleeve dimensions in inches (in), and the duration of the break-in period (hours).

* * * * *

■ 3. Amend § 429.134 by revising paragraph (a) and adding paragraph (e) to read as follows:

§ 429.134 Product-specific enforcement provisions.

(a) *General.* The following provisions apply to assessment and enforcement testing of the relevant products and equipment.

* * * * *

(e) *Packaged terminal air conditioners and packaged terminal heat pumps*—(1) *Verification of cooling capacity.* The total cooling capacity of the basic model will be measured pursuant to the test requirements of 10 CFR part 431 for each unit tested. The results of the measurement(s) will be averaged and compared to the value of cooling capacity certified by the manufacturer. The certified cooling capacity will be considered valid only if the average measured cooling capacity is within five percent of the certified cooling capacity.

(i) If the certified cooling capacity is found to be valid, that cooling capacity will be used as the basis for calculation of minimum allowed EER (and minimum allowed COP for PTHP models) for the basic model.

(ii) If the certified cooling capacity is found to be invalid, the average measured cooling capacity will serve as the basis for calculation of minimum allowed EER (and minimum allowed COP for PTHP models) for the tested basic model.

(2) [Reserved].

PART 431—ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 4. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291–6317.

■ 5. Amend § 431.95 by revising paragraph (b)(3), redesignating paragraph (c)(1) as (c)(4), and adding paragraphs (c)(1) through (c)(3) to read as follows:

§ 431.95 Materials incorporated by reference.

* * * * *

(b) * * *

(3) AHRI Standard 310/380–2014, (''AHRI 310/380–2014''), ''Standard for Packaged Terminal Air-Conditioners and Heat Pumps,'' February 2014, IBR approved for § 431.96.

(c) * * *

(1) ANSI/ASHRAE Standard 16–1983 (RA 2014), (''ANSI/ASHRAE 16''), ''Method of Testing for Rating Room Air Conditioners and Packaged Terminal Air Conditioners,'' ASHRAE reaffirmed July 3, 2014, IBR approved for § 431.96.

(2) ANSI/ASHRAE Standard 37–2009, (''ANSI/ASHRAE 37''), ''Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment,'' ASHRAE approved June 24, 2009, IBR approved for § 431.96.

(3) ANSI/ASHRAE Standard 58–1986 (RA 2014), (''ANSI/ASHRAE 58''), ''Method of Testing for Rating Room Air-Conditioner and Packaged Terminal Air-Conditioner Heating Capacity,'' ASHRAE reaffirmed July 3, 2014, IBR approved for § 431.96.

* * * * *

■ 6. Amend § 431.96 by revising paragraphs (b) and (c) and adding paragraph (g) to read as follows:

§ 431.96 Uniform test method for the measurement of energy efficiency of commercial air conditioners and heat pumps.

* * * * *

(b) *Testing and calculations.* (1) Determine the energy efficiency of each type of covered equipment by conducting the test procedure(s) listed in the fifth column of Table 1 of this section along with any additional testing provisions set forth in paragraphs (c) through (g) of this section, that apply to the energy efficiency descriptor for that equipment, category, and cooling capacity. The omitted sections of the test procedures listed in the fifth column of Table 1 of this section shall not be used.

(2) After June 24, 2016, any representations made with respect to the energy use or efficiency of packaged terminal air conditioners and heat pumps (PTACs and PTHPs) must be made in accordance with the results of testing pursuant to this section. Manufacturers conducting tests of PTACs and PTHPs after July 30, 2015 and prior to June 24, 2016, must conduct such test in accordance with either table 1 to this section or § 431.96 as it appeared at 10 CFR part 431, subpart F, in the 10 CFR parts 200 to 499 edition revised as of January 1, 2014. Any representations made with respect to the energy use or efficiency of such packaged terminal air conditioners and heat pumps must be in accordance with whichever version is selected.

TABLE 1 TO § 431.96—TEST PROCEDURES FOR COMMERCIAL AIR CONDITIONERS AND HEAT PUMPS

Equipment type	Category	Cooling capacity	Energy efficiency descriptor	Use tests, conditions, and procedures [1] in	Additional test procedure provisions as indicated in the listed paragraphs of this section
Small Commercial Packaged Air-Conditioning and Heating Equipment.	Air-Cooled, 3-Phase, AC and HP.	<65,000 Btu/h	SEER and HSPF	AHRI 210/240–2008 (omit section 6.5).	Paragraphs (c) and (e).
	Air-Cooled AC and HP.	≥65,000 Btu/h and <135,000 Btu/h.	EER and COP	AHRI 340/360–2007 (omit section 6.3).	Paragraphs (c) and (e).
	Water-Cooled and Evaporatively-Cooled AC.	<65,000 Btu/h	EER	AHRI 210/240–2008 (omit section 6.5).	Paragraphs (c) and (e).
		≥65,000 Btu/h and <135,000 Btu/h.	EER	AHRI 340/360–2007 (omit section 6.3).	Paragraphs (c) and (e).
	Water-Source HP	<135,000 Btu/h	EER and COP	ISO Standard 13256–1 (1998).	Paragraph (e).
Large Commercial Packaged Air-Conditioning and Heating Equipment.	Air-Cooled AC and HP.	≥135,000 Btu/h and <240,000 Btu/h.	EER and COP	AHRI 340/360–2007 (omit section 6.3).	Paragraphs (c) and (e).

TABLE 1 TO § 431.96—TEST PROCEDURES FOR COMMERCIAL AIR CONDITIONERS AND HEAT PUMPS—Continued

Equipment type	Category	Cooling capacity	Energy efficiency descriptor	Use tests, conditions, and procedures [1] in	Additional test procedure provisions as indicated in the listed paragraphs of this section
	Water-Cooled and Evaporatively-Cooled AC.	≥135,000 Btu/h and <240,000 Btu/h.	EER	AHRI 340/360–2007 (omit section 6.3).	Paragraphs (c) and (e).
Very Large Commercial Packaged Air-Conditioning and Heating Equipment.	Air-Cooled AC and HP.	≥240,000 Btu/h and <760,000 Btu/h.	EER and COP	AHRI 340/360–2007 (omit section 6.3).	Paragraphs (c) and (e).
	Water-Cooled and Evaporatively-Cooled AC.	≥240,000 Btu/h and <760,000 Btu/h.	EER	AHRI 340/360–2007 (omit section 6.3)..	Paragraphs (c) and (e).
Packaged Terminal Air Conditioners and Heat Pumps.	AC and HP	<760,000 Btu/h	EER and COP	See paragraph (g) of this section.	Paragraphs (c), (e), and (g).
Computer Room Air Conditioners.	AC	<65,000 Btu/h	SCOP	ASHRAE 127–2007 (omit section 5.11).	Paragraphs (c) and (e).
		≥65,000 Btu/h and <760,000 Btu/h.	SCOP	ASHRAE 127–2007 (omit section 5.11).	Paragraphs (c) and (e).
Variable Refrigerant Flow Multi-split Systems.	AC	<760,000 Btu/h	EER and COP	AHRI 1230–2010 (omit sections 5.1.2 and 6.6).	Paragraphs (c), (d), (e), and (f).
Variable Refrigerant Flow Multi-split Systems, Air-cooled.	HP	<760,000 Btu/h	EER and COP	AHRI 1230–2010 (omit sections 5.1.2 and 6.6).	Paragraphs (c), (d), (e), and (f).
Variable Refrigerant Flow Multi-split Systems, Water-source.	HP	<17,000 Btu/h	EER and COP	AHRI 1230–2010 (omit sections 5.1.2 and 6.6).	Paragraphs (c), (d), (e), and (f).
Variable Refrigerant Flow Multi-split Systems, Water-source.	HP	≥17,000 Btu/h and <760,000 Btu/h.	EER and COP	AHRI 1230–2010 (omit sections 5.1.2 and 6.6).	Paragraphs (c), (d), (e), and (f).
Single Package Vertical Air Conditioners and Single Package Vertical Heat Pumps.	AC and HP	<760,000 Btu/h	EER and COP	AHRI 390–2003 (omit section 6.4).	Paragraphs (c) and (e).

[1] Incorporated by reference, see § 431.95.

(c) *Optional break-in period.* Manufacturers may optionally specify a ''break-in'' period, not to exceed 20 hours, to operate the equipment under test prior to conducting the test method specified by AHRI 210/240–2008, AHRI 310/380–2014, AHRI 340/360–2007, AHRI 390–2003, AHRI 1230–2010, or ASHRAE 127–2007 (incorporated by reference, see § 431.95). A manufacturer who elects to use an optional break-in period in its certification testing should record this information (including the duration) in the test data underlying the certified ratings that is required to be maintained under 10 CFR 429.71.

* * * * *

(g) *Test Procedures for Packaged Terminal Air Conditioners and Packaged Terminal Heat Pumps*—(1) *Cooling mode testing.* The test method for testing packaged terminal air conditioners and packaged terminal heat pumps in cooling mode shall consist of application of the methods and conditions in AHRI 310/380–2014 sections 3, 4.1, 4.2, 4.3, and 4.4 (incorporated by reference; see § 431.95), and in ANSI/ASHRAE 16 (incorporated by reference; see § 431.95) or ANSI/ASHRAE 37 (incorporated by reference; see § 431.95), except that instruments used for measuring electricity input shall be accurate to within ±0.5 percent of the quantity measured. Where definitions provided in AHRI 310/380–2014, ANSI/ASHRAE 16, and/or ANSI/ASHRAE 37 conflict with the definitions provided in 10 CFR 431.92, the 10 CFR 431.92 definitions shall be used. Where AHRI 310/380–2014 makes reference to ANSI/ASHRAE 16, it is interpreted as reference to ANSI/ASHRAE 16–1983 (RA 2014).

(2) *Heating mode testing.* The test method for testing packaged terminal heat pumps in heating mode shall consist of application of the methods and conditions in AHRI 310/380–2014 sections 3, 4.1, 4.2 (except the section 4.2.1.2(b) reference to ANSI/ASHRAE 37), 4.3, and 4.4 (incorporated by reference; see § 431.95), and in ANSI/ASHRAE 58 (incorporated by reference; see § 431.95). Where definitions provided in AHRI 310/380–2014 or ANSI/ASHRAE 58 conflict with the definitions provided in 10 CFR 431.92, the 10 CFR 431.92 definitions shall be used. Where AHRI 310/380–2014 makes reference to ANSI/ASHRAE 58, it is interpreted as reference to ANSI/ASHRAE 58–1986 (RA 2014).

(3) *Wall sleeves.* For packaged terminal air conditioners and packaged terminal heat pumps, the unit must be installed in a wall sleeve with a 14 inch depth if available. If a 14 inch deep wall sleeve is not available, use the available wall sleeve option closest to 14 inches in depth. The area(s) between the wall sleeve and the insulated partition between the indoor and outdoor rooms must be sealed to eliminate all air leakage through this area.

(4) *Optional pre-filling of the condensate drain pan.* For packaged terminal air conditioners and packaged terminal heat pumps, test facilities may add water to the condensate drain pan of the equipment under test (until the water drains out due to overflow devices or until the pan is full) prior to conducting the test method specified by AHRI 310/380–2014 (incorporated by reference, see § 431.95). No specific level of water mineral content or water temperature is required for the water added to the condensate drain pan.

(5) *Filter selection.* For packaged terminal air conditioners and packaged terminal heat pumps, the indoor filter used during testing shall be the standard or default filter option shipped with the model. If a particular model is shipped without a filter, the unit must be tested with a MERV–1 filter sized appropriately for the filter slot.

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