DEPARTMENT OF ENERGY

10 CFR Parts 429 and 431

[EERE–2023–BT–CE–0001]

RIN 1904–AF48

Energy Conservation Program for Appliance Standards: Certification Requirements, Labeling Requirements, and Enforcement Provisions for Certain Consumer Products and Commercial Equipment

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

ACTION: Final rule.

SUMMARY: The U.S. Department of Energy (''DOE'') is publishing a final rule to establish and amend the certification provisions, labeling requirements, and enforcement provisions for specific types of consumer products and commercial and industrial equipment, as described in sections II and III of this final rule. DOE is establishing and making amendments to the certification requirements, labeling requirements, and enforcement provisions for these products and equipment to ensure reporting that is consistent with currently applicable energy conservation standards and test procedures and to ensure DOE has the information necessary to determine the appropriate classification of products for the application of standards.

DATES: The effective date of this rule is December 23, 2024. This rule establishes new and amended certification and labeling requirements. For products or equipment for which this rule establishes the initial certification regulations for certifying compliance with new or amended standards, manufacturers must submit the initial certification report for basic models distributed in commerce beginning May 7, 2025. For basic models with existing certification regulations, the amendments to the reporting requirements for certifying compliance with existing standards will be mandatory beginning with the annual certification report submitted on or after May 7, 2025.

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, not all documents listed in the index may be publicly available, such as those containing information that is exempt from public disclosure.

A link to the docket web page can be found at *www.regulations.gov/docket/EERE-2023-BT-CE-0001.* The docket web page contains instructions on how to access all documents, including public comments, in the docket.

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SUPPLEMENTARY INFORMATION:

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I. Authority and Background

A. Authority

The Energy Policy and Conservation Act, Public Law 94–163, as amended (''EPCA''),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317, as codified) Title III, Part B of EPCA [2] established the Energy Conservation Program for Consumer Products Other Than Automobiles, which sets forth a variety of provisions designed to improve energy efficiency, while Title III, Part C of EPCA,[3] added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. These products and equipment include central air conditioners and heat pumps (''CAC/HPs''), dishwashers (''DWs''), residential clothes washers (''RCWs''), pool heaters, dehumidifiers, external power supplies (''EPSs''), battery chargers, computer room air conditioners (''CRACs''), direct-expansion dedicated outdoor air systems (''DX–DOASes''), air-cooled, three-phase, small commercial package air conditioners and heat pumps with a cooling capacity of less than 65,000 Btu/h (''three-phase, less than 65,000 Btu/h ACUACs and ACUHPs'') and air-cooled, three-phase variable refrigerant flow air conditioners and heat pumps with a cooling capacity of less than 65,000 Btu/h (''three-phase, less than 65,000 Btu/h VRF''), commercial water heating equipment (''CWHs''), automatic commercial ice makers (''ACIMs''), walk-in coolers and walk-in freezers (''walk-ins''), commercial and industrial pumps, portable air conditioners (''portable ACs''), compressors, dedicated-purpose pool pump motors (''DPPPMs''), air cleaners, single package vertical units (''SPVUs''), ceiling fan light kits (''CFLKs''), and general service lamps (''GSLs''), all of which are subjects of this document. (42 U.S.C. 6292(a)(3), (6–7), (11), and (20); 42 U.S.C. 6295(i)(6), (u), (cc), and (ff); 42 U.S.C. 6311(1)(A–D), (F–G), (K), and (2)(B)(i)).

The energy conservation program under EPCA consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291; 42 U.S.C. 6311), test procedures (42 U.S.C. 6293; 42 U.S.C. 6314), labeling provisions (42 U.S.C. 6294; 42 U.S.C. 6315), energy conservation standards (42 U.S.C. 6295; 42 U.S.C. 6313), and the authority to require information and reports from manufacturers (42 U.S.C. 6316; 42 U.S.C. 6296).

The Federal testing requirements consist of test procedures that manufacturers of covered products and equipment must use as the basis for: (1) certifying to DOE that their products or equipment comply with the applicable energy conservation standards adopted under EPCA (42 U.S.C. 6295(s); 42 U.S.C. 6316(a); 42 U.S.C. 6316(b); 42 U.S.C. 6296), and (2) making other representations about the efficiency of those products or equipment (42 U.S.C. 6293(c); 42 U.S.C. 6314(d)). Similarly, DOE must use these test procedures to determine whether the products or equipment comply with any relevant standards promulgated under EPCA. (42 U.S.C. 6295(s); 42 U.S.C. 6316(a); 42 U.S.C. 6316(b); 42 U.S.C. 6296).

EPCA authorizes DOE to enforce compliance with the energy and water conservation standards established for covered products and equipment. (42 U.S.C. 6299–6305; 42 U.S.C. 6316(a)–(b)) DOE has promulgated certification and/or enforcement regulations that include reporting requirements for covered products and equipment including CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, SPVUs, CFLKs, and GSLs. DOE is establishing certification and reporting requirements for DX–DOASes, DPPPMs, and air cleaners. *See* 10 CFR part 429. Additionally, DOE is amending labeling requirements for walk-ins. *See* 10 CFR 431.305. The reporting requirements ensure that DOE has the information it needs to assess whether regulated products and equipment sold in the United States comply with the statutory and regulatory requirements applicable to each covered product and equipment type.

B. Background

DOE's certification regulations are a mechanism that DOE uses to help ensure compliance with its regulations by collecting information about the energy and water use characteristics of covered products and covered equipment distributed in commerce in the United States. Manufacturers of most covered products and covered equipment must submit a certification report for the duration of distribution, specifically (1) before a basic model is distributed in commerce, (2) annually thereafter, and (3) if the basic model is redesigned in a manner that increases the consumption or decreases the efficiency of the basic model such that the certified rating is no longer supported by test data. 10 CFR 429.12. Additionally, manufacturers must report when production of a basic model has ceased and is no longer offered for sale as part of the next annual certification report following such cessation. 10 CFR 429.12(f). DOE requires the manufacturer of any covered product or covered equipment to establish, maintain, and retain the records of certification reports, of the underlying test data for all certification testing, and of any other testing conducted to satisfy the requirements of 10 CFR parts 429, 430, and/or 10 CFR part 431 until 2 years after notifying DOE that a model has been discontinued. 10 CFR 429.71. Certification reports provide DOE and consumers with comprehensive, up-to-date efficiency information and support effective enforcement.

To ensure that all covered products and covered equipment distributed in the United States comply with DOE's energy and water conservation standards and reporting requirements, DOE has promulgated certification, compliance, and enforcement regulations in 10 CFR parts 429 and 431. On March 7, 2011, DOE published in the **Federal Register** a final rule regarding certification, compliance, and enforcement for consumer products and commercial and industrial equipment, which revised, consolidated, and streamlined DOE's existing certification, compliance, and enforcement regulations for certain consumer products and commercial and industrial equipment covered under EPCA. *See* 76 FR 12422. Since that time, DOE has completed multiple rulemakings regarding certification, compliance, and enforcement for specific covered products or equipment. *See* 79 FR 25486 (the May 5, 2014 Final Rule specific to certification of commercial and industrial heating, ventilation, and air conditioning (''HVAC''), refrigeration, and water heating equipment) and 87 FR 43952 (the July 22, 2022 Final Rule amending certification provisions for CFLKs, general service incandescent lamps, incandescent reflector lamps,

[1] All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020), which reflect the last statutory amendments that impact Parts A and A–1 of EPCA.

[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

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

ceiling fans, consumer furnaces and boilers, consumer water heaters, DWs, commercial clothes washers, battery charges, and DPPPMs).

Additionally, if the Secretary has prescribed test procedures under section 6314 for any class of covered equipment, the Secretary shall prescribe a labeling rule applicable to such class of covered equipment. *See* 42 U.S.C. 6315(a). EPCA, however, also sets out certain criteria that must be met prior to prescribing a given labeling rule. Specifically, to establish these requirements, DOE must determine that: (1) labeling in accordance with section 6315 is technologically and economically feasible with respect to any particular equipment class; (2) significant energy savings will likely result from such labeling; and (3) labeling in accordance with section 6315 is likely to assist consumers in making purchasing decisions. (42 U.S.C. 6315(h))

If these criteria are met, EPCA specifies certain aspects of equipment labeling that DOE must consider in any rulemaking establishing labeling requirements for covered equipment. At a minimum, such labels must include the energy efficiency of the affected equipment, as tested under the prescribed DOE test procedure, and may also require disclosure of the estimated operating costs and energy use. (42 U.S.C. 6315(b)) The labeling provisions shall include requirements the Secretary determines are likely to assist purchasers in making purchasing decisions, such as: requirements and directions for the display of the label; requirements for including on any label, or separately attaching to, or shipping with, the covered equipment, such as additional information related to energy efficiency, energy use, and other measures of energy consumption, including instructions for maintenance and repair of the covered equipment, as the Secretary determines is necessary to provide adequate information to purchasers; and requirements that printed matter displayed or distributed with the equipment at the point of sale also include the information required to be placed on the label. (42 U.S.C. 6315(c)).

DOE published a notice of proposed rulemaking (''NOPR'') in the **Federal Register** on September 29, 2023, that proposed to amend the certification, reporting, and labeling requirements for the products and equipment that are the subjects of this final rule. 88 FR 67458 (''September 2023 CCE NOPR''). DOE held a public meeting related to this NOPR on October 26, 2023 (hereafter, the ''NOPR public meeting'').

DOE received comments in response to the September 2023 CCE NOPR from the interested parties listed in Table I.1.

TABLE I.1—LIST OF COMMENTERS WITH WRITTEN SUBMISSIONS IN RESPONSE TO THE SEPTEMBER 2023 CCE NOPR

Commenter(s)	Reference in this final rule	Comment No. in the docket	Commenter type
Air-Conditioning, Heating, & Refrigeration Institute	AHRI	18	Trade Association.
American Lighting Association	ALA	7	Trade Association.
Appliance Standards Awareness Program, Consumer Federation of America (''CFA''), National Consumer Law Center (''NCLC''), National Resource Defense Council (''NRDC''), and Northwest Energy Efficiency Alliance (''NEEA'').	ASAP *et al*	14	Efficiency Advocacy Organizations.
Association of Home Appliance Manufacturers	AHAM	[4] 9, 16, 19	Trade Association.
AHAM, ASAP, American Council for an Energy-Efficiency Economy, Alliance for Water Efficiency, CFA, Consumer Reports, Earthjustice, NCLC, NRDC, NEEA, and Pacific Gas and Electric Company (''PG&E'').	Joint Stakeholders	17	Trade Association and Efficiency Advocacy Organizations.
Bradford White Corporation	BWC	13	Manufacturer.
Carrier Global Corporation	Carrier	12	Manufacturer.
Grundfos Americas Corporation	Grundfos	10	Manufacturer.
Hydraulic Institute	Hydraulic Institute	20	Trade Association.
MJ L	MJ L	11	Individual.
PG&E, Southern California Edison, and San Diego Gas & Electric Company; collectively, the California Investor-Owned Utilities.	CA IOUs	8	Utilities.
Rheem Manufacturing Company	Rheem	15	Manufacturer.

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.[5] To the extent that interested parties have provided written comments that are substantively consistent with any oral comments provided during the NOPR public meeting, DOE cites the written comments throughout this final rule. Any oral comments provided during the webinar that are not substantively addressed by written comments are summarized and cited separately throughout this final rule.

II. Synopsis of the Final Rule

Since the previous final rule amending certification requirements for covered products (87 FR 43952 (July 22, 2022)), DOE has proposed or finalized test procedures and/or energy conservation standards for multiple products and equipment. In this rulemaking, DOE is revising its certification, labeling, and enforcement regulations for certain covered products and equipment to align with these proposed and finalized amendments.

In this final rule, DOE updates the certification reporting and labeling requirements as follows:

(1) *CAC/HP.* Update the CAC/HP certification reporting requirements at 10 CFR 429.16 to reflect the current version of the test procedure at appendix M1 to subpart B of 10 CFR part 430 (''appendix M1'') including test condition information. Correct discrepancies in CAC/HP sampling plan

[4] AHAM comment nos. 9 and 19 are identical. Therefore, DOE only cites no. 19 in the discussion section of this final rule.

[5] The parenthetical reference provides a reference for information located in the docket of DOE's rulemaking to amend certification, reporting, and labeling requirements for the subject products and equipment. (Docket No. EERE–2023–BT–CE–0001), which is maintained at *www.regulations.gov*). The references are arranged as follows: (commenter name, comment docket ID number, page of that document).

to require using Student's t-Distribution Values from appendix A to subpart B of part 429.

(2) *DW.* Align the DW certification reporting requirements with appendix C1 to subpart B of 10 CFR part 430 (''appendix C1''), and with appendix C2 to subpart B of 10 CFR part 430 (''appendix C2''). Manufacturers were required to use the revised appendix C1 test procedure beginning July 17, 2023, and use of appendix C2 is required when certifying compliance with amended energy conservation standards based on appendix C2. Add reporting requirements specific to the energy and water use for DWs with water re-use systems and built-in reservoirs.

(3) *RCWs.* Remove outdated certification reporting requirements for RCWs pertaining to appendix J1 to subpart B of 10 CFR part 430 (''appendix J1''), which has been removed. Update the existing certification reporting requirements pertaining to appendix J2 to subpart B of 10 CFR part 430 (''appendix J2'') for consistency with test procedure terminology. Add a reporting requirement for test cloth lot used by a manufacturer for testing/certifying to align with RCW enforcement provisions outlined in 10 CFR 429.134(c). Add new certification reporting requirements specific to appendix J to subpart B of 10 CFR part 430 (''appendix J''), use of which will be required to demonstrate compliance with amended energy conservation standards based on appendix J.

(4) *Pool heaters.* Align pool heater certification reporting requirements with the amended energy conservation standards established in a final rule published on May 30, 2023 (88 FR 34624) to require reporting of thermal efficiency for electric pool heaters and establish new reporting requirements specific to electric pool heaters.

(5) *Dehumidifiers.* Remove outdated certification reporting requirements for dehumidifiers pertaining to appendix X to subpart B of 10 CFR part 430 (''appendix X''), use of which is no longer required.

(6) *EPSs.* Align EPS certification reporting requirements with the amended test procedure at appendix Z to subpart B of 10 CFR part 430 (''appendix Z''), use of which is required beginning February 15, 2023. Add reporting requirements to specify the effective wire gauge and length of the output cord shipped with the EPS (or the manufacturer's recommended output cord specifications). Update the existing EPS certification reporting requirements to align with the energy conservation standards established in the February 10, 2014 final rule (79 FR 7845), and require output voltage, which is needed to verify the applicable product class. Revise sales reporting requirements for EPSs exempt from energy conservation standards to include the years for which the sales number represents.

(7) *Battery chargers.* Align battery charger certification reporting requirements with appendix Y1 to subpart B of 10 CFR part 430 (''appendix Y1''), use of which would be required for any future amended energy conservation standards for battery chargers.

(8) *CRACs.* Align CRAC certification reporting requirements with amended energy conservation standards established in a final rule published in the **Federal Register** on June 2, 2023 (88 FR 36392) and require submission of a supplemental testing instructions file in PDF format. Establish alternative efficiency determination method (''AEDM'') tolerances for CRAC verification tests for net sensible coefficient of performance (''NSenCOP'').

(9) *DX–DOASes.* Establish DX–DOAS certification reporting requirements for certifying compliance with the energy conservation standards established in the November 1, 2022 final rule (87 FR 65651), compliance with which is required beginning May 1, 2024. Require submission of a supplemental testing instructions file in PDF format.

(10) *Commercial AC/HPs.* Establish certification reporting requirements for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF aligned with the energy conservation standards established in the final rule published on June 2, 2023 (88 FR 36392), compliance with which would be required beginning January 1, 2025. Correct discrepancies in sampling plan for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF to specify that the Student's t-Distribution Values from appendix A to subpart B of part 429 should be used.

(11) *CWHs.* Align CWH certification reporting requirements with amended energy conservation standards proposed in the May 19, 2022 NOPR (87 FR 30610). Add reporting requirements specific to commercial electric instantaneous water heaters. Additionally, add rated input reporting requirement for commercial electric storage water heaters.

(12) *ACIMs.* Align existing ACIM certification reporting requirements with revised ''energy use'' and ''condenser water use'' definitions and terminology adopted in the amended test procedure at 10 CFR 431.134, use of which is required beginning October 27, 2023. Correct ACIM sampling requirements to remove discrepancy and require using the Student's t-Distribution Values for a 95-percent one-tailed confidence interval.

(13) *Walk-Ins.* For walk-in refrigeration systems, add requirement to report whether each refrigeration system meets the definition of a carbon dioxide (''CO_2'') unit cooler, detachable single-packaged dedicated system, or an attached split system, consistent with amendments to 10 CFR 431.302. Add requirements for submission of supplementary testing information if necessary to run a valid test and provide an option to report any compressor break-in duration used to obtain certified rating. Additionally, expand the certification reporting requirements for walk-in cooler and freezer doors with anti-sweat heat (''ASH''). Revise labeling requirements for walk-in panels at 10 CFR 431.305.

(14) *Commercial and Industrial Pumps.* Provide minor corrections to the terminology of variables in the certification requirements.

(15) *Portable ACs.* Clarify existing certification reporting requirements for portable ACs and align them with instructions specified in the test procedure at appendix CC to subpart B of 10 CFR part 430 (''appendix CC'') and 10 CFR 429.62(a)(5).

(16) *Compressors.* Establish an annual filing date of September 1 for compressors at 10 CFR 429.12(d).

(17) *DPPPMs.* Add certification reporting requirements for DPPPMs when certifying compliance with the energy conservation standards adopted in the September 28, 2023 final rule (88 FR 66966), and establish an annual filing date of September 1 at 10 CFR 429.12(d).

(18) *Air cleaners.* Add certification reporting requirements for air cleaners when certifying compliance with the energy conservation standards adopted in the April 11, 2023 direct final rule, compliance with which was required beginning December 31, 2023, establish an annual filing date of December 1 at 10 CFR 429.12(d), and provide minor correction to sampling provisions at 10 CFR 429.68(a)(2)(ii).

(19) *SPVAC/HPs.* Align SPVAC/HPs certification reporting requirements with amended energy conservation standards proposed in the December 8, 2022 ECS NOPR (87 FR 75388) and add content requirements for supplemental testing instructions file in PDF format.

(20) *CFLKs.* Clarify existing CFLK reporting requirements at 10 CFR 429.33(b)(2)(ii)(A) and (b)(3)(ii)(B).

(21) *GSLs.* Specify certifying compliance to the GSL backstop requirement of 45 lumens per watt (lm/W) at 10 CFR 430.32(dd).

The adopted amendments are summarized in Table II.1 and compared to the certification, reporting, and labeling requirements prior to the amendment, as well as the reason for the adopted change. Table II.1 also provides the required compliance date for the certification requirements established in this final rule.

TABLE II.1—SUMMARY OF CHANGES TO CERTIFICATION REPORTING REQUIREMENTS RELATIVE TO CURRENT CERTIFICATION REPORTING REQUIREMENTS

Current DOE certification reporting requirements	Amended certification reporting requirements	Attribution	Compliance required
For CAC/HPs, no reporting requirement to indicate whether variable speed coil-only rating is based on non-communicating or communicating control system.	Add reporting requirement to § 429.16(e)(2)(vi) to specify whether variable speed coil-only rating is based on non-communicating or communicating control system.	Required to determine applicable test conditions specified in appendix M1 test procedure.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For CAC/HPs, no reporting requirement to indicate whether system varies blower speeds with outdoor air conditions.	Add reporting requirement to § 429.16(e)(4)(iv) to specify whether system varies blower speeds with outdoor air conditions.	Required to determine applicable test conditions specified in appendix M1 test procedure.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For CAC/HPs, current sampling requirements state to use Student's t-Distribution Values from ''Appendix D,'' whereas appendix A to subpart B of part 429 contains the applicable Student's t-Distribution Values.	Correct § 429.16(b)(3)(i)(B), (ii)(B), and (iii)(A)(2) to specify that the Student's t-Distribution Values in appendix A to subpart B of part 429 should be used.	Removes discrepancy from sampling provisions, improves clarity.	N/A.
For DWs, reporting requirements in § 429.19(b)(2) and (3) and list of materials incorporated by reference in § 429.4 specify ANSI/AHAM DW–1–2010.	Remove referenced standard in § 429.19(b)(2) and from the list of materials incorporated by reference in § 429.4.	Ensures consistency between reporting requirements and DW test procedures.	N/A.
For DWs, reporting requirements do not include cycle selected for energy test.	Add reporting requirements for cycle selected for energy test at heavy, medium, and light soil loads, whether the cycles are soil-sensing, and the options selected for the energy test at these soil loads (when testing in accordance with appendix C2) to § 429.19(b)(3)(iv).	Required to ensure that information reported to DOE is consistent with the tested cycle requirements specified in appendix C2.	On or before April 23, 2027, the compliance date of amended energy conservation standards based on appendix C2.
For DWs, reporting requirements do not include cleaning index.	Add reporting requirement for average cleaning index of sensor heavy response, sensor medium response, and sensor light response test cycles (when testing in accordance with appendix C2) to § 429.19(b)(3)(v).	Required to ensure that the reported test cycle is a valid test cycle that meets the specified cleaning index threshold.	On or before April 23, 2027, the compliance date of amended energy conservation standards based on appendix C2.
For DWs, reporting requirements do not reflect water re-use system DWs.	Add reporting requirements specific to water re-use system DWs to § 429.19(b)(3)(vii), including energy use and water use associated with drain out and clean out events.	Required to account for extra energy use and water use associated with water re-use systems.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For DWs, reporting requirements do not reflect information needed for DWs with built-in reservoirs.	Add reporting requirements specific to DWs with built-in reservoirs to § 429.19(b)(3)(viii), including reservoir capacity, prewash and main wash fill water volume, and total water consumption.	Required to account for water consumption of DWs with built-in reservoirs, and therefore determine compliance with the current energy conservation standards.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For DWs, no rounding requirements are specified in § 429.19.	Add rounding requirements to § 429.19(c).	Improves representativeness, repeatability, and reproducibility.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For RCWs, reporting requirements include outdated requirements associated with appendix J1.	Remove obsolete appendix J1 RCW reporting requirements from § 429.20(b)(2)(i).	Appendix J1 has been removed from 10 CFR part 430.	N/A.

TABLE II.1—SUMMARY OF CHANGES TO CERTIFICATION REPORTING REQUIREMENTS RELATIVE TO CURRENT CERTIFICATION REPORTING REQUIREMENTS—Continued

Current DOE certification reporting requirements	Amended certification reporting requirements	Attribution	Compliance required
For RCWs, ''capacity'' is required to be reported.	Update existing requirement to specify ''clothes container capacity'' rather than ''capacity'' at § 429.20(b)(2)(ii).	Consistency in terminology between existing test procedure and reporting requirements.	N/A.
For RCWs, reporting requirements do not include test cloth lot used by manufacturer for testing and certifying.	Add reporting requirement to § 429.20(b)(3) for test cloth lot number used during testing to determine other reported values.	Required to ensure that correct remaining moisture content calculation is used for enforcement testing per RCW enforcement provisions specified in § 429.134(c).	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For RCWs, no reporting requirements for RCWs tested in accordance with appendix J test procedure.	Add reporting requirements for energy efficiency ratio, water efficiency ratio, type of control system, remaining moisture content, clothes container capacity, and type of loading when certifying in accordance with appendix J to § 429.20(b)(2)(i).	Required to ensure compliance with amendments to energy conservation standards.	On or before March 1 2028, the compliance date of amended energy conservation standards based on appendix J.
For pool heaters, reporting requirement only includes thermal efficiency for gas-fired pool heaters.	Add reporting requirement for integrated thermal efficiency for both gas-fired and electric pool heaters to § 429.24(b)(2)(i).	Required to determine compliance with the amended energy conservation standards.	On or before May 30, 2028, the compliance date of amended energy conservation standards.
For electric pool heaters, no reporting requirement for active electrical power.	Add reporting requirement for active electrical power for electric pool heaters to § 429.24(b)(2)(ii).	Required to determine compliance with the amended energy conservation standards.	On or before May 30, 2028, the compliance date of amended energy conservation standards.
For dehumidifiers, reporting requirements include outdated requirements associated with appendix X.	Remove obsolete appendix X dehumidifier reporting requirements from § 429.36(b)(2)(i).	Appendix X test procedure is no longer permitted for use to demonstrate compliance with energy conservation standards.	N/A.
For EPSs, no reporting requirement for output cord specifications.	Add reporting requirement for output cord effective wire gauge and length (or for EPSs shipped without an output cord, effective wire gauge and length for the manufacturer's recommended output cord) to § 429.37(b)(i)–(iv).	Required to conduct amended appendix Z test procedure.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For EPSs, no reporting requirements for output voltage.	Add reporting requirements for output voltage to § 429.37(i) through (iv).	Required to determine compliance with currently applicable energy conservation standards.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For EPSs exempt from the energy conservation standards, only the number of units of exempt external power supplies sold during the most recent 12-calendar-month period ending on July 31, importer or manufacturer name and address, and brand name must be reported.	Add requirement that the year for which the sales number being reported represents to § 429.37(b)(3) and (c).	Improved clarity, consistency with other similar reporting requirements.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For battery chargers, reporting requirements only reflect metrics associated with battery chargers tested in accordance with appendix Y.	Add reporting requirements to § 429.39(b)(5) and (6) for battery chargers tested in accordance with newly adopted appendix Y1, multi-metric approach.	Required to determine compliance with any future amended energy conservation standards for battery chargers.	On or before the compliance date of any future amended energy conservation standards based on appendix Y1.
For CRACs, reporting requirements do not include provisions for certifying compliance with net sensible coefficient of performance standards.	Add reporting requirements specific to net sensible coefficient of performance to § 429.43(b)(2)(ix)(B).	Required to determine compliance with the amended energy conservation standards.	May 7, 2025.
For CRACs, reporting requirements do not include provisions for submitting a supplemental testing instructions file in PDF form.	Add supplemental testing instructions file requirements in PDF form for certification reports to § 429.43(b)(4)(viii).	Required to ensure that testing conditions are met in the case of enforcement testing.	May 7, 2025.

TABLE II.1—SUMMARY OF CHANGES TO CERTIFICATION REPORTING REQUIREMENTS RELATIVE TO CURRENT CERTIFICATION REPORTING REQUIREMENTS—Continued

Current DOE certification reporting requirements	Amended certification reporting requirements	Attribution	Compliance required
For CRACs, reporting requirements do not include indoor and outdoor unit individual model numbers.	Add reporting requirements for indoor and outdoor unit individual model numbers to § 429.43(b)(6)(i).	Required to determine specific individual models distributed in commerce under each basic model.	May 7, 2025.
For CRACs, current AEDM tolerances do not specify tolerances for NSenCOP verification tests.	Add tolerance of 5 percent to table 2 to § 429.70(c)(5)(vi)(B) for CRAC verification tests for NSenCOP.	Required for consistency with allowable AEDMs for other product types and metrics.	May 7, 2025.
For DX–DOASes, reporting requirements do not include provisions for certifying compliance with integrated seasonal moisture removal efficiency 2 and integrated seasonal coefficient of performance 2 standards.	Add reporting requirements for integrated seasonal moisture removal efficiency 2 and integrated seasonal coefficient of performance 2, as well as rated moisture removal capacity, rated supply airflow rate, and configuration of the basic model to § 429.43(b)(2)(xi)(A) through (C).	Required to determine compliance with the energy conservation standards.	May 7, 2025.
For DX–DOASes, reporting requirements do not include reporting requirements for systems with ventilation energy recovery systems (''VERS'').	Add reporting requirements for systems with VERS to § 429.43(b)(3)(iii).	Required to fully ensure that enforcement provisions specified at § 429.134(s) for DX–DOASes are met in the case of enforcement testing.	May 7, 2025.
For DX–DOASes, reporting requirements do not include provisions for submitting a supplemental testing instructions file in PDF form.	Add supplemental testing instructions file requirements in PDF form for certification reports to § 429.43(b)(4)(x).	Required to ensure that testing conditions are met in the case of enforcement testing.	May 7, 2025.
For DX–DOASes, reporting requirements do not include indoor and outdoor unit individual model numbers.	Add reporting requirements for indoor and outdoor unit individual model numbers to § 429.43(b)(6)(ii).	Required to determine specific individual models distributed in commerce under each basic model.	May 7, 2025.
For three-phase less than 65,000 Btu/h ACUACs and ACUHPs and three-phase less than 65,000 Btu/h VRF, no reporting requirements for seasonal energy efficiency ratio 2 and heating seasonal performance factor 2.	Add reporting requirements for seasonal energy efficiency ratio 2 and heating seasonal performance factor 2 to § 429.67(f)(2).	Required to determine compliance with energy conservation standards.	May 7, 2025.
For three-phase less than 65,000 Btu/h ACUACs and ACUHPs and three-phase less than 65,000 Btu/h VRF, reporting requirements do not include indoor and outdoor unit individual model numbers.	Add reporting requirements for indoor and outdoor unit individual model numbers to § 429.67(f)(4)).	Required to determine specific individual models distributed in commerce under each basic model.	May 7, 2025.
For three-phase less than 65,000 Btu/h ACUACs and ACUHPs and three-phase less than 65,000 Btu/h VRF, reporting requirements do not include provisions for submitting a supplemental testing instructions file in PDF form for outdoor units with no match.	Add supplemental testing instructions file requirements in PDF form for certification reports for outdoor units with no match to § 429.67(f)(3).	Required to ensure that testing conditions are met in the case of enforcement testing.	May 7, 2025.
For three-phase less than 65,000 Btu/h ACUACs three-phase less than 65,000 Btu/h VRF, current sampling requirements state to use the Student's t-Distribution Values from ''appendix D'', whereas appendix A to subpart B of part 429 contains the applicable Student's t-Distribution Values.	Correct § 429.67(c)(2)(ii)(A)(2) to specify that the Student's t-Distribution Values in appendix A to subpart B of part 429 should be used.	Removes discrepancy from sampling provisions, improves clarity.	N/A.

TABLE II.1—SUMMARY OF CHANGES TO CERTIFICATION REPORTING REQUIREMENTS RELATIVE TO CURRENT CERTIFICATION REPORTING REQUIREMENTS—Continued

Current DOE certification reporting requirements	Amended certification reporting requirements	Attribution	Compliance required
For CWHs, no reporting requirements for electric instantaneous water heaters.	Add reporting requirements for electric instantaneous water heaters to § 429.44(c)(2)(vi)–(vii).	Required to determine compliance with energy conservation standards.	May 7, 2025.
For CWHs, no rated input reporting requirement for electric storage water heaters.	Add rated input reporting requirement for electric storage water heaters to § 429.44(c)(2)(i).	Required to determine that models exceed the definitional requirement for electric storage water heaters.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For ACIMs, reporting requirements include ''maximum energy use'' and ''maximum condenser water use''.	Update reporting requirement terminology to specify ''energy use'' and ''condenser water use'' in § 429.45(b)(2).	Improved clarity and consistency with definitions.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For ACIMs, no rounding requirements for represented values specified in 10 CFR 429.45.	Add rounding requirements in § 429.45(b)(3) that specify represented values determined in 10 CFR 429.45 must be rounded consistent with the test procedure rounding instructions upon the compliance date of any amended standards.	Improves representativeness, repeatability, and reproducibility.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For ACIMs, sampling provisions require use of the Student's t-Distribution Values for a 95-percent two-tailed confidence interval from appendix A to subpart B of part 429, whereas appendix A to subpart B of part 429 contains one-tailed Student's t-Distribution Values.	Revise sampling provisions in 10 CFR 429.45(a)(2) to correct this discrepancy and clarify that the Student's t-Distribution Values for a 95-percent one-tailed confidence interval from appendix A to subpart B of part 429.	Removes discrepancy from sampling provisions, improves clarity.	N/A.
For walk-in refrigeration systems, no reporting requirement for whether the basic model meets the definition of a CO_2 unit cooler.	Add reporting requirement for whether the basic model meets the definition of a CO_2 unit cooler to § 429.53(b)(2)(iii)(G).	Required to ensure test conditions specified in the test procedure are met.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For walk-in refrigeration systems, the configuration reporting requirement does not include ''detachable single-packaged dedicated system'' or ''attached split system''.	Modify current configuration reporting requirement in § 429.53(b)(2)(iii)(C) to include ''detachable single-packaged dedicated system'' and ''attached split system''.	Required to ensure test conditions specified in the test procedure are met.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For walk-in dedicated condensing systems, no reporting requirement for head pressure controls.	Add reporting requirement in § 429.53(b)(3)(ii) for whether the basic model has head pressure controls.	Required to ensure test conditions specified in the test procedure are met.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
No supplemental testing instructions for walk-in refrigeration systems.	Add requirement in § 429.53(b)(4) for submission of supplement test information in PDF format, if necessary to run a valid test, at the time of certification.	Required to ensure test conditions specified in the test procedure are met.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For walk-in refrigeration systems, no reporting requirement for compressor break-in duration used to obtain certified rating.	Add optional reporting requirement to § 429.53(b)(3)(ii) for compressor break-in duration used to obtain certified rating, if applicable.	Improves representativeness, repeatability, and reproducibility.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For walk-in doors with anti-sweat heater (ASH) controls, no reporting requirements for conditions at which the controls activate the ASH wire.	Add reporting requirements to § 429.53(b)(2)(i)(H) for conditions (*i.e.,* temperature, humidity, etc.) at which the controls activate the ASH wire.	Required to ensure applicable enforcement provisions are met in the case of enforcement testing.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For walk-in doors, no reporting requirement for thermal conduction load through the door.	Add reporting requirement for thermal conduction load through the door to § 429.53(b)(3)(i)(B).	Required to calculate daily energy consumption.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For walk-in panels, date of manufacturer is not required on a panel's nameplate or label.	Require panel manufacture date be added to the nameplate or label in § 431.305(a).	Aids enforcement evaluation, as necessary.	When certifying compliance in accordance with the next annual certification report filing date on/after May 7, 2025.
For commercial and industrial pumps, P_i^{in} is listed as P^{in}_i.	Amend all instances of P^{in}_i with P_i^{in}.	Standardize variables with those used in the test procedure.	N/A.

TABLE II.1—SUMMARY OF CHANGES TO CERTIFICATION REPORTING REQUIREMENTS RELATIVE TO CURRENT CERTIFICATION REPORTING REQUIREMENTS—Continued

Current DOE certification reporting requirements	Amended certification reporting requirements	Attribution	Compliance required
For portable ACs, reporting requirement for duct configuration lists ''ability to operate in both configurations'' as an option.	Remove ''ability to operate in both configurations'' as an option in § 429.62(b)(2) and add reporting requirement for whether model is distributed in commerce with multiple duct configuration options.	Improved clarity, consistency with instructions in appendix CC and 10 CFR 429.62(a)(5).	May 7, 2025.
For portable ACs, no reporting requirement for full-load seasonally adjusted cooling capacity for variable-speed models.	Add reporting requirements for whether the basic model is variable-speed, and if yes; the full-load seasonally adjusted cooling capacity to § 429.62(b)(3).	Required to determine compliance with the energy conservation standards.	May 7, 2025.
For compressors, reporting requirements are included in 10 CFR 429.63, but no annual filing date is specified in 10 CFR 429.12.	Establish an annual filing date of September 1 at 10 CFR 429.12(d), by which manufacturers would be required to submit required reporting information to DOE.	Required to ensure certification information is current on an annual basis, consistent with the requirements for other covered products and equipment.	September 1, 2025 (first occurrence of September 1st after compliance date of energy conservation standards in January 2025).
For DPPPMs, no reporting requirements outlined in 10 CFR 429.65.	Add reporting requirements for DPPPMs to § 429.65(e).	Required to verify compliance with new energy conservation standards.	On or before September 29, 2025 (for DPPPMs <0.5 THP, ≥1.15 THP, and ≤5 THP), the compliance date of new energy conservation standards. On or before September 28, 2027 (for DPPPMs ≥0.5 THP and <1.15 THP), the compliance date of new energy conservation standards.
For DPPPMs, no rounding requirements outlined in 10 CFR 429.65.	Add rounding requirements for DPPPMs to § 429.65(f).	Improves representativeness, repeatability, and reproducibility.	On or before September 29, 2025 (for DPPPMs <0.5 THP, ≥1.15 THP, and ≤5 THP), the compliance date of new energy conservation standards. On or before September 28, 2027 (for DPPPMs ≥0.5 THP and <1.15 THP), the compliance date of new energy conservation standards.
For DPPPMs, no annual filing date specified in 10 CFR 429.12.	Establish an annual filing date of September 1 at 10 CFR 429.12(d), by which manufacturers would be required to submit required reporting information to DOE.	Required to ensure certification information is current on an annual basis, consistent with the requirements for other covered products and equipment.	September 1, 2026, (first occurrence of September 1st after compliance date of energy conservation standards in September 2025).
For air cleaners, no reporting requirements outlined in 10 CFR 429.68.	Add reporting requirements for air cleaners to § 429.68(b).	Required to verify compliance with recently adopted energy conservation standards.	May 7, 2025.
For air cleaners, no annual filing date specified in 10 CFR 429.12.	Establish an annual filing date of December 1 at 10 CFR 429.12(d), by which manufacturers would be required to submit required reporting information to DOE.	Required to ensure certification information is current on an annual basis, consistent with the requirements for other covered products and equipment.	December 1, 2026, (first occurrence of December 1st after required reporting on May 7, 2025.
For air cleaners, 10 CFR 429.68(a)(2)(ii) includes a typographical error and states ''equal to the high''.	Correct 10 CFR 429.68(a)(2)(ii) to specify ''equal to the lower''.	Corrects typographical error, improves clarity.	N/A.
For SPVUs, reporting requirements do not include provisions for certifying compliance with integrated energy efficiency ratio standards.	Add reporting requirements for certifying compliance with integrated energy efficiency ratio standards to 10 CFR 429.43(b)(2)(v)(B) and (vi)(B).	Required to determine compliance with the energy conservation standards.	On or before the compliance date of any amended SPVU energy conservation standards.

TABLE II.1—SUMMARY OF CHANGES TO CERTIFICATION REPORTING REQUIREMENTS RELATIVE TO CURRENT CERTIFICATION REPORTING REQUIREMENTS—Continued

Current DOE certification reporting requirements	Amended certification reporting requirements	Attribution	Compliance required
For SPVUs with cooling capacities less than 65,000 Btu/h, reporting requirements do not include whether the unit is weatherized or non-weatherized, and if non-weatherized, the airflow rate of outdoor ventilation air which is drawn in and conditioned.	Add reporting requirements to 10 CFR 429.43(b)(2)(v)(B) and (vi)(B) for whether the unit is weatherized or non-weatherized, and if non-weatherized, the airflow rate of outdoor ventilation air which is drawn in and conditioned as determined in accordance with 10 CFR 429.134(x)(3), while the equipment is operating with the same drive kit and motor settings used to determine the certified efficiency rating of the equipment.	Required to determine whether non-weatherized SPVUs with cooling capacities less than 65,000 Btu/h have met the definitional requirements for airflow rate of outdoor ventilation air which is drawn in and conditioned.	On or before the compliance date of any amended SPVU energy conservation standards.
For SPVUs, existing supplemental testing instruction requirements do not reflect updated integrated energy efficiency ratio test procedure.	Add supplemental testing instruction file content requirements for when certifying compliance with an integrated energy efficiency ratio standard to 10 CFR 429.43(b)(4)(vi)(B) and (vii)(B).	Required to ensure test conditions specified in the test procedure are met.	On or before the compliance date of any amended SPVU energy conservation standards.
For CFLKs, reporting requirements inadvertently omit CFLKs distributed with consumer-replaceable SSL.	Amend reporting requirements in 10 CFR 429.33(b)(2)(ii)(A) and (b)(3)(ii)(B) to include CFLKs distributed with consumer-replaceable SSL.	Required to determine compliance with the energy conservation standards.	N/A.
For GSLs, certifying compliance to the 45 lm/W backstop requirement is not required per DOE guidance.	Specify certifying compliance to the GSL backstop requirement.	Required to show compliance with the energy conservation standards.	May 7, 2025.

The finalized regulatory amendments summarized in this section, and that are described in greater detail in section III, pertain to certification reporting and labeling requirements only. DOE is not amending the test procedures or energy conservation standards for CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, CFLKs, and GSLs.

The effective date for the amended certification requirements adopted in this final rule is 75 days after publication of this document in the **Federal Register**. Certification reports for CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, CFLKs, and GSLs submitted beginning 210 days after publication of this final rule, in accordance with an annual certification report filing date on or after 210 days after publication of this final rule, or on or after the compliance date of any amended energy conservation standards, as outlined in each of the product-specific sections of section III of this notice, must comply with the applicable certification requirements as amended by this final rule. For certification reports submitted after the effective date of this final rule, but prior to the compliance date, a manufacturer may optionally submit a certification report as required by the amendments in this final rule (*i.e.,* early compliance is permitted). The requirements pertaining to the compliance date and the provision for early compliance apply to all certification reports submitted as required by 10 CFR 429.12 (*i.e.,* annual certifications and certification of new and discontinued basic models).

III. Discussion

Certification of compliance to DOE is a mechanism that helps manufacturers understand their regulatory obligations for distributing basic models of covered products and equipment that are subject to energy conservation standards. Certification also helps consumers obtain information about products' energy performance. Certification reports include characteristics of covered products or equipment used to determine which standard applies to a given basic model, and they also help DOE identify models and/or regulated entities that may not comply with the applicable regulations.

As discussed in section I.B of this document, DOE proposed amendments to the certification and reporting requirements for certain products and equipment in the September 2023 CCE NOPR. 88 FR 67458. DOE received a number of comments in response to the September 2023 CCE NOPR, including general comments and comments on product/equipment categories that were not included in the September 2023 CCE NOPR. These comments are summarized and discussed in the following sections.

For the covered products and equipment addressed in this final rule, DOE has identified areas in which the certification reporting requirements in 10 CFR part 429 are not consistent with the information required to verify compliance with current energy conservation standards. DOE is amending the certification and reporting provisions for these products and equipment to ensure reporting that is consistent with currently applicable

energy conservation standards and to ensure that DOE has the information necessary to determine the appropriate classification of products for the application and enforcement of standards. In addition to the specific amendments discussed in the following sections, DOE is also adopting minor amendments to ensure consistency among terms used throughout DOE's certification and reporting provisions. Additionally, DOE is adopting labeling requirements for walk-ins.

A. General Comments

ASAP *et al.* commented in support of the September 2023 CCE NOPR. ASAP *et al.* stated that the proposed reporting requirements would ensure that DOE has relevant information to determine whether certified models comply with the corresponding energy conservation standard. ASAP *et al.* commented that clarity in reporting requirements for certification would help to ensure that data reported to the Compliance and Certification Management System (''CCMS'') is complete and submitted in a uniform manner. (ASAP *et al.,* No. 14 at pp. 1–2)

AHAM commented it supports many of the changes DOE is suggesting for its certification, labeling, and enforcement provisions that are aimed at ensuring consistency between testing to support certification and testing DOE does to support its enforcement efforts as well as the proposals to ensure consistency in reported data between similar products. (AHAM, No. 16 at p. 1)

AHRI commented that it was largely supportive of the changes proposed in the September 2023 CCE NOPR, but also had several recommendations for improvement and clarification regarding proposed certification requirements. (AHRI, No. 18 at p. 2)

Rheem commented that as an active member of AHRI, it shares several of the concerns noted in AHRI's comments. (Rheem, No. 15 at p. 1)

Carrier generally supported the September 2023 CCE NOPR regarding certification and labeling requirements and enforcement provisions for certain consumer products and commercial equipment, with certain modifications. Carrier also stated that having these requirements provides predictability for manufacturers and valuable information for consumers. (Carrier, No. 12 at p. 1)

AHRI commented requesting DOE to update AHRI's address at 10 CFR 429.4(c) to 2311 Wilson Blvd., Suite 400, Arlington, VA 22201 and added that the phone number and web address remain the same as currently listed in the CFR. (AHRI, No. 18 at p. 13)

DOE is aware of the error and will update AHRI's contact information in a separate rulemaking that amends the materials incorporated by reference at 10 CFR 429.4(c).

1. Rulemaking Process

AHRI commented that review of the September 2023 CCE NOPR raised some questions regarding the process DOE relied upon for establishing certification requirements. Specifically, AHRI provided some suggestions to bring reliability and timeliness to the certification, compliance, and enforcement process and urged that DOE consider issuing a proposal to seek stakeholder feedback on the establishment of a CCE process rule. (AHRI, No. 18 at p. 2) AHRI commented that a general review of the certification and enforcement process would help establish certainty and predictability for all stakeholders. AHRI requested that DOE initiate a rulemaking to develop procedures, interpretations, and policies for consideration of new or revised certification and enforcement rulemakings for consumer products and certain commercial/industrial equipment. AHRI commented that a ''process rule'' for certification and compliance is as important and necessary to manufacturers and certification bodies as the development of test procedures and energy conservation standards. (AHRI, No. 18 at p. 4)

AHRI commented that stakeholders need certification and enforcement changes proposed more closely to the publication of the final rule and with appropriate time to implement template changes for compliance. AHRI commented that the September 2023 CCE NOPR included several products where the trigger for the compliance and enforcement changes was over 19 months ago. (AHRI, No. 18 at p. 4)

AHRI noted that manufacturers are required to comply with an amended test procedure within 180 days of DOE publishing a final rule in the **Federal Register**. AHRI commented that for such rulemakings, DOE should publish a proposed certification and enforcement rulemaking within 30 days of the test procedure final rule with a final certification and enforcement rulemaking published within 90 days of the test procedure final rule. This timeline, AHRI noted, would allow 30 days for stakeholder feedback to the proposed certification and enforcement rule; 30 days for DOE to incorporate changes and pre-publish a final rule; and 90 days for stakeholders to implement and comply with the changes. (AHRI, No. 18 at p. 5)

Carrier commented that many of the reporting changes in the September 2023 CCE NOPR are the result of test procedure or energy conservation standards rulemakings completed in 2022 with compliance dates that are approaching. Carrier requested that in future rulemakings, DOE publish the associated certification rulemaking NOPR as close as possible to the test procedure and energy conservation standards final rules, ideally within 30 days of final rule issuance to allow time for third-party certification bodies (such as AHRI) and manufacturers to make necessary changes to their systems before compliance is required. Carrier said this would cut down on undue expenses, potential error, and unnecessary rework. (Carrier, No. 12 at p. 2)

DOE recognizes the concerns regarding the timing of certification amendments with respect to test procedure and energy conservation standard amendments. DOE notes that conducting individual certification rulemakings for each product would result in many more rulemaking notices, which would create substantially more administrative burden for commenters with interests in multiple covered products and equipment. In this case, DOE would have needed to publish over 40 separate rulemaking documents if it were to conduct a separate certification rulemaking for each of the product and equipment categories considered in this document. Nonetheless, DOE will continue to evaluate its process for conducting certification rulemakings, while meeting its statutory and regulatory requirements.

AHRI commented that consideration must be given to how and when templates are updated because the timing of template changes impacts not only manufacturers, but also AHRI's certification program. (AHRI, No. 18 at p. 3) AHRI stated that while DOE typically provides 3-to-5 years of lead time before compliance is required, sometimes compliance can be required in as little as 18 months. The commenter stressed that adequate lead time is necessary for the transition to new test procedures and new standards. AHRI commented that it is also necessary to have certification and enforcement rules and templates issued and finalized expeditiously and on a reasonable and predictable schedule, in order for manufacturers to be able to collect necessary data. Consequently, AHRI recommended that DOE issue full draft templates, rather than just column headers and product group codes. Additionally, AHRI stated that clear identification of new or modified

information would also be helpful to assist stakeholders when reviewing templates or even column headers, noting that stakeholders should not be required to presume what the compliance requirements are. (AHRI, No. 18 at p. 4)

In response, DOE issues template column headers and product group codes to assist submitters in preparing for the upcoming template revisions. Because certification reporting requirements may change between the NOPR and final rule, DOE issues templates only at the completion of the final rule to avoid confusion and mitigate burden. Issuing full draft templates that cannot be submitted for compliance purposes may cause confusion amongst certifiers. Further, certifiers would need to review the final version of the template, as there may be modifications not incorporated in the draft template, which increases the potential for invalid certification reports and require certifiers to re-submit using the correct templates, thereby increasing burden on certifiers.

2. Compliance Timeline

Rheem commented requesting DOE to clarify the required filing date for each of the products/equipment covered by this rulemaking, such as by including a table in the final rule that clearly states the required filing date for each product class. (Rheem, No. 15 at pp. 1–2)

AHRI commented that in future rules, special consideration should be given to situations where publication of the proposed and final certification and enforcement rulemaking is close to the first time or annual certification requirement for the products or equipment. AHRI stated concern that template releases for equipment with first time compliance deadlines or annual reporting requirements in the spring of 2024 may be in jeopardy resulting from the timing of the September 2023 CCE NOPR, and ultimately the final rule publication. (AHRI, No. 18 at p. 6)

AHRI recommended that DOE finalize this rulemaking and publish templates no later than January 2, 2024, which would allow stakeholders to have final templates 120 days prior to the spring 2024 first-time compliance and annual reporting deadlines. (AHRI, Public Meeting Transcript, No. 6 at pp. 5–6; AHRI, No. 18 at p. 6)

AHRI commented that annual reporting should not be required within 120 days of publication of a new certification and enforcement rulemaking where templates are revised or impacted. If the certification and enforcement rulemaking cannot be finalized more than 120 days in advance of the annual reporting deadline, AHRI commented that the deadline for that year should shift to 120 days after publication of the final certification and enforcement rule in the **Federal Register**. AHRI commented that requiring annual reporting for any templates revised in closer proximity to the annual reporting deadline is burdensome to the regulated community. (AHRI, No. 18 at p 7)

In response, DOE has noted the applicable compliance dates for each of the product or equipment categories that are the subject of this rulemaking in the following sections and in Table II.1 to section II, Synopsis of the Final Rule, of this document. For products such as air cleaners, CRACs, DX–DOAS, three-phase less than 65,000 Btu/h ACUACs and ACUHPs and three-phase less than 65,000 Btu/h VRF, electric instantaneous water CWHs, and portable ACs where compliance with new or amended standards is required prior to the required use date of the reporting requirement established in this rule and a template is not currently available to certify compliance, then compliance with the amended certification requirements would not be required until 210 days after publication of this rule. DOE notes that compliance with the amended standards themselves would still be required on and after their applicable compliance date(s). For products and equipment with existing standards and existing reporting requirements, if the annual reporting deadline is prior to the compliance date of this rule (*i.e.,* sooner than 210 days after publication), the annual reporting requirement can be met using the current template. Using the revised templates would not be required until the next annual reporting deadline after the compliance date of this rule. For products and equipment where compliance with new or amended standards is required more than 210 days after publication of this rule, then certification is required by the compliance date of such standard. Through such approach, DOE seeks to minimize associated regulatory burden on manufacturers.

DOE notes that the Department strives to finalize certification templates as expeditiously as possible, in order to provide certifiers sufficient time to prepare for the compliance dates of any upcoming amended energy conservation standards. In this case, although the final templates have not yet been posted for use, DOE has provided certification template draft column headers and product group codes in the docket for this rulemaking to assist certifiers in preparation for the upcoming compliance dates prior to the publication of this final rule.

3. Collection of Information

AHAM commented that DOE stated in several places of the September 2023 CCE NOPR an intention to collect data which AHAM deems unnecessary to demonstrate compliance with energy conservation standards. AHAM stated DOE should ensure that its information collections are restricted to data necessary for this purpose, and if DOE wishes to collect data for future energy conservation standards rulemaking efforts or for its own information, DOE should collect that data through its energy conservation standard rulemaking process and not through the certification, compliance, and enforcement process. (AHAM, No. 16 at p. 1;AHAM, No. 19 at p. 2)) AHAM commented that many of the proposals in the September 2023 CCE NOPR go beyond the types of information currently collected under 10 CFR 429.14 to 10 CFR 429.63, which are more directly related to demonstrating compliance with standards. (AHAM, No. 16 at p. 2)

AHRI commented that DOE must limit the energy efficiency or energy use information required in certification reports to that which is truly necessary to determine compliance with the test procedure, labeling, and energy efficiency standards. AHRI commented that anything beyond that would fall outside of the information DOE is authorized to collect, and results in an undue burden on manufacturers because it creates a real cost to vet and verify information unrelated to the covered product's compliance with energy conservation standards, which on its face fails the requirement of 42 U.S.C. 6296(d) that DOE collect only necessary data in a manner designed to minimize unnecessary burdens on manufacturers. (AHRI, No. 18 at p. 3)

In response, section 326(d) of EPCA states that the Secretary may require manufacturers to submit information or reports to DOE with respect to energy efficiency or energy use as the Secretary determines may be necessary to establish and revise test procedures, labeling rules, and energy conservation standards for such products and to ensure compliance with requirements of this part. (42 U.S.C. 6296(d)(1)) This express statutory language provides DOE with the authority to require manufacturers to submit information pertaining to the energy efficiency or energy use where it is necessary when establishing or revising its standards or test procedures, as well as to ensure

compliance. As such, DOE disagrees with AHRI's assessment that DOE must limit its collection requirements to information needed to determine compliance.

DOE acknowledges that EPCA states that the Secretary shall exercise authority under this section in a manner designed to minimize unnecessary burdens on manufacturers. (42 U.S.C. 6296(d)(2)) However, where DOE proposed reporting requirements that were not directly related to compliance with energy conservation standards, the Department clarifies that the proposed requirements were included to ensure appropriate application of the test procedure for enforcement testing conducted by DOE. Additionally, the measurement of these values and recording of product or equipment characteristics is required when testing is conducted according to the DOE test procedures. Therefore, manufacturers should already have this information readily available, and, thus, the burden on manufacturers would be minimal.

In the September 2023 CCE NOPR, as well as in the product-specific sections that follow in this document, DOE has provided its reasons in the September 2023 CCE NOPR for its proposed collection of data and information. DOE discusses the specific comments and provisions that have been flagged and asserted by certain commenters to be unnecessary in the relevant sections that follow. DOE also explains why the Department has found the data collection to be necessary, to be required to ensure products and equipment are compliant, and/or to support DOE's enforcement efforts.

4. Certification Reporting Cost and Burden

Carrier commented that the estimates of the cost and burden of changes to annual reporting requirements were not adequately considered in the September 2023 CCE NOPR. Carrier commented that certification requirements are often established close to the test procedure or energy conservation standards compliance date, which increases the cost and burden to manufacturers and third-party certification bodies who must implement changes in a short amount of time. (Carrier, No. 12 at pp. 1–2)

BWC commented that adding reporting requirements increases regulatory burden, which includes examination of the proposal; analysis of its findings; assessment of manufacturer capabilities to achieve established objectives in the proposal; internal deliberations about how/if this can realistically be accomplished; and finally, crafting and delivering meaningful feedback to DOE. BWC commented that all these tasks must occur prior to the physical work that takes place to adjust processes, such as may be required to comply with the September 2023 CCE NOPR. BWC stated that there are several major proposed and final rulemakings from 2023 alone that impact the products that BWC manufactures, including the September 2023 CCE NOPR; July 2023 Consumer Water Heater ECS NOPR (88 FR 49058); June 2023 Consumer Water Heater TP Final Rule (88 FR 40406); March 2023 Consumer Boiler TP Final Rule (88 FR 15510); and the August 2023 Consumer Boiler ECS NOPR (88 FR 55128). BWC commented that this list did not include actions undertaken by States and local jurisdictions as well as ENERGY STAR. BWC commented urging DOE to take into account the sheer volume of regulatory activity that faces manufacturers. BWC commented that the accumulation of regulatory burden increases costs in human and technological resources. BWC stated that as proposed rules are published and promulgated as final rules, BWC resources must be allocated and deployed to achieve compliance within the timelines prescribed in those final rules. (BWC, No. 13 at pp. 2–3)

The certification reporting requirements adopted in this final rule ensure consistency with DOE energy conservations standards and test procedure rulemakings for the subject products or equipment. These reporting requirements generally pertain to requirements that are readily available in test reports that manufacturers are required to use when testing to the DOE test procedure. Further, Carrier and BWC did not provide any data indicating increased costs to manufacturers related to reporting. DOE recognizes that certification reporting requirements may result in costs and manufacturer burden in addition to those required to comply with new or amended energy conservation standards or to conduct testing. To the extent that the adopted certification reporting requirements would impose additional cost and burden to manufacturers and importers, DOE has discussed these costs in the product specific sections. DOE also recognizes the effort needed for stakeholders to review and provide feedback to the many proposals in the September 2023 CCE NOPR. However, as discussed in section III.A.1 of this document, DOE notes that conducting individual certification rulemakings for each product would result in many more rulemaking notices, which would create substantially more administrative burden for commenters with interests in multiple covered products and equipment. In this case, DOE would have needed to publish over 40 separate notices if it were to conduct a separate certification rulemaking for each of the product and equipment categories considered in this document.

AHRI commented that DOE's regulations require certification reports to be filed for every basic model prior to distribution in commerce, after initial certification, and after discontinuation, which is a process that creates onerous obstacles for third-party certification bodies that represent 90 percent of the regulated market. AHRI commented it has long advocated for the elimination of the annual certification requirements for covered products via notice and comment rulemaking. AHRI commented that this process is unnecessary and imparts burden without benefit. (AHRI, No. 18 at p. 6)

In response, DOE has determined that its annual certification requirements provide DOE and consumers with comprehensive, up-to-date efficiency information and also support effective enforcement. If DOE were to eliminate its annual certification requirements, DOE would have no way of ensuring that all of the information available to consumers in DOE's Compliance Certification Database (''CCD'')[6] is up-to-date and certified in accordance with the most recent DOE test procedure. Occasionally, changes to DOE test procedures do not require revised certification reporting templates, and the existence of annual certification requirements ensures that the information available to consumers is consistently updated without requiring revised certification templates. Additionally, the elimination of annual certification requirements would increase the likelihood that discontinued models would not be removed from the CCD. Accordingly, DOE is not amending the long-standing annual certification requirement as part of this final rule.

AHRI noted that triennial compliance with the Paperwork Reduction Act (''PRA'') to templates using OMB Control Number 1910–1400 expires on September 30, 2024. AHRI commented that submission of new forms for OMB approval have only changed the version number, OMB control number, and OMB form expiration date, but this change made to every template

[6] Certified equipment in the CCD is listed by product class and can be accessed at *www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A**.

simultaneously causes substantial burden for certification bodies. (AHRI, No. 18 at p. 6) AHRI commented suggesting that templates updated in this rulemaking be submitted to OMB to reduce future template changes that would just update the version number. AHRI commented DOE is obligated to consider this and any other recommendations that reduce the burden of compliance. (AHRI, No. 18 at pp. 6–7)

DOE notes that it revises the template version numbers as part of the triennial compliance with PRA to ensure that submitters are using the most up-to-date templates based on the current OMB control numbers. DOE will evaluate to what extent updates to forms can be limited to reduce burden on certification bodies.

MJ L commented that requiring more reporting and labeling of consumer products and commercial equipment is onerous and costly for the makers. MJ L commented that products would need to be redesigned to comply to the more stringent new standards, which would make such products more costly and less useful. (MJ L, No. 11 at p. 1)

DOE notes that this rulemaking is not adopting any amended standards; it is only adopting certification reporting requirements for products and equipment consistent with recently amended or newly established test procedures or energy conservation standards.

5. Calculations for Enforcement Testing

Rheem commented requesting DOE to clarify whether the energy efficiency standard (''EES'') is rounded when the applicable certification requirements require rounding while performing enforcement calculations in 10 CFR 429, subpart C, appendix A. Rheem provided an example, stating that: an EES of 0.934 may be required as a result of an EES equation, but certification to the nearest 0.01 percent is required; therefore, a model designed to an EES of exactly 0.934 will need to certify to 0.93, which is below the level produced by the EES equation. As the compliant model must certify below the EES, it follows that the EES is actually rounded. (Rheem, No. 15 at p. 8)

DOE determines the applicable energy efficiency standard or energy conservation standard used in enforcement calculations based on the product or equipment requirements. When applicable, DOE follows the same rounding requirements for the relevant metric as specified in the applicable test procedure requirements at 10 CFR 430.23 or the relevant product or equipment specific test procedure appendix, the rounding requirements at 10 CFR 430.32, or the rounding requirements in the product or equipment specific certification reporting requirements. In the case of Rheem's example, DOE notes that an EES of 0.934 would also be rounded to 0.93, and therefore, the rounding would not affect any compliance determination. DOE may additionally consider further clarifications to the enforcement calculations in 10 CFR 429, subpart C, appendix A to address this in a future rulemaking.

6. Comments on Products/Equipment Not Included in the September 2023 CCE NOPR

Although not within the scope of the September 2023 CCE NOPR, AHAM submitted comments regarding reporting requirements for conventional cooking tops. Specifically, AHAM requested that DOE indicate in 10 CFR 430.134 that it will use the same measurement equipment for testing gas cooking tops as were used for certification. (AHAM, No. 16 at p. 10) AHAM noted that the conventional cooking tops test procedure at 10 CFR 430, subpart B, appendix I1 (''appendix I1'') specifies that measurement of the gas cooking top burner heat input rate starts 5 minutes after ignition but does not specify an endpoint for this measurement. (AHAM, No. 16 at p. 9) AHAM stated that the type of measurement equipment—wet meter, dry meter, or mass flow meter—will affect the time at which the lab stops the measurement for the burner heat input rate which in turn can affect the final measured value. (AHAM, No. 16 at pp. 9–10) AHAM commented that, without clarity in the enforcement procedures, to ensure compliance upon verification by a third-party lab or assessment and enforcement testing by DOE, manufacturers may be compelled to conduct repeated testing using multiple types of measurement equipment, adding unnecessary burden to an already burdensome test. AHAM recommended that DOE include in an enforcement provision that it would use the same measurement equipment for enforcement testing as was used for certification and acknowledged that such an enforcement provision would likely require including an additional reporting requirement about the type of measurement equipment used for certification: wet meter, dry meter, and mass flow meter, which AHAM would support. (AHAM, No. 16 at pp. 10–11)

AHAM further commented that, together with other stakeholders, it filed a petition [7] requesting that DOE permit an alternative calculation for the simmer portion of the conventional cooking top test procedure. AHAM also noted that it submitted joint comments on this rulemaking docket urging DOE to use the full test for enforcement purposes. (AHAM, No. 16 at p. 11; *see also* Joint Stakeholders, No. 17 at p. 2–3)

The Joint Stakeholders recommended that DOE adopt the calculation method AHAM proposed in its petition filed earlier this year for the simmer portion of the conventional cooking top test procedure as an alternative to the full simmer test. The Joint Stakeholders urged DOE to adopt that alternative calculation method together with an enforcement provision in 10 CFR 429.134 indicating DOE would rely on the full simmer test in appendix I1. The Joint Stakeholders commented their intent is that DOE would adopt a new sub-section in 10 CFR 429.134 outlining the same process it uses for enforcement related to refrigerator/freezer models with two compartments, each having its own user-operable temperature control. The Joint Stakeholders commented that for cooking products, they recommend DOE use the simmer portion of the test in the current appendix I1 before making a determination of noncompliance with respect to a basic conventional cooking top model. (Joint Stakeholders, No. 17 at p. 2)

As AHAM noted, cooking products did not fall within the scope of products covered in the September 2023 CCE NOPR. (AHAM, No. 16 at p. 8) As such, DOE has neither proposed certification or enforcement provisions for conventional cooking products in the September 2023 CCE NOPR, nor has it considered adopting reporting requirements for conventional cooking products as part of this rulemaking. DOE has also not finalized any determination regarding AHAM's petition for use of the calculation approach. DOE may consider proposals to adopt certification and reporting requirements for conventional cooking products under a separate rulemaking.

Additionally, AHAM recommended that DOE should establish requirements for clothes dryers similar to the RCW amendments proposed in the September 2023 CCE NOPR, along with test procedure requirements related to the test cloth, which AHAM stated it would suggest to DOE in the near future. (AHAM, No. 16 at p. 4)

Similarly, DOE did not propose certification or enforcement provisions

[7] The docket for this petition is available at *www.regulations.gov/docket/EERE-2023-BT-TP-0006/document.*

for clothes dryers in the September 2023 CCE NOPR. DOE has also not considered any amendments to its reporting requirements or test procedures for residential clothes dryers as part of this rulemaking. DOE may consider proposals to amend the certification and reporting requirements for residential clothes dryers in a separate rulemaking. DOE may also consider proposals to amend the test procedure requirements related to the test cloth in a separate rulemaking.

For consumer water heaters, Rheem requested that DOE amend the provisions at 10 CFR 429.70(g)(3)(ii) to require that electric instantaneous water heaters make representations of an untested basic model's first hour rating (''FHR'') or maximum GPM rating (''Max GPM'') through testing of the untested basic model that meets the sampling provisions at 10 CFR 429.11. Rheem noted that while the FHR of an electric storage water heater may vary little in response to the input rate, due to the large effect of the already hot water within the storage tank, the Max GPM will vary greatly with input rate. Rheem commented that a higher Max GPM is more desirable to a consumer, creating an incentive to use the alternative certification provisions to make unrepresentative Max GPM claims. (Rheem, No. 15 at pp. 7–8)

Again, DOE did not propose certification or enforcement provisions for consumer water heaters in the September 2023 CCE NOPR. DOE has also not considered any amendments to its reporting requirements for consumer water heaters as part of this rulemaking. DOE may consider proposals to amend the certification and reporting requirements for consumer water heaters in a separate rulemaking.

B. Central Air Conditioners and Heat Pumps

DOE is amending the certification reporting requirements for CAC/HPs. A central air conditioner or central air conditioning heat pump means a product, other than a packaged terminal air conditioner or packaged terminal heat pump, which is powered by single phase electric current, air cooled, rated below 65,000 Btu/h, not contained within the same cabinet as a furnace, the rated capacity of which is above 225,000 Btu/h, and is a heat pump or a cooling unit only. A central air conditioner or central air conditioning heat pump may consist of: a single-package unit; an outdoor unit and one or more indoor units; an indoor unit only; or an outdoor unit with no match. In the case of an indoor unit only or an outdoor unit with no match, the unit must be tested and rated as a system (combination of both an indoor and an outdoor unit). 10 CFR 430.2.

On October 25, 2022, DOE published a final rule (''October 2022 CAC/HP Final Rule'') in which DOE amended the test procedure provisions for CAC/HPs. 87 FR 64550. Consistent with that final rule, DOE is amending the reporting requirements.

1. Reporting

Under the existing requirements in 10 CFR 429.16, manufacturers of CAC/HPs must report a variety of values and information, including seasonal energy efficiency ratio 2 (''SEER2'') in Btu/W-h, average off mode power consumption, cooling capacity in Btu/h, and heating seasonal performance factor 2 (''HSPF2'') in Btu/W-h. 10 CFR 429.16(e)(2) For a complete list of existing certification reporting requirements, *see* 10 CFR 429.16(e). These requirements provide for certifying compliance with the current standards applicable to CAC/HP equipment manufactured on or after January 1, 2023. 10 CFR 430.32(c). DOE is updating these requirements to align the reporting requirements with the appendix M1 test procedure and adopt general certification requirements for CAC/HPs. 88 FR 67458, 67464. DOE discusses these updates in the following sections.

a. Variable Speed Coil-Only Rating Based on Non-Communicating or Communicating Control

In the October 2022 CAC/HP Final Rule, DOE defined a ''communicating variable-speed coil-only central air conditioner or heat pump'' as a variable-speed compressor system having a coil-only indoor unit that is installed with a control system that (a) communicates the difference in space temperature and space setpoint temperature (not a setpoint value inferred from on/off thermostat signals) to the control that sets compressor speed; (b) provides a signal to the indoor fan to set fan speed appropriate for compressor staging and air volume rate; and (c) has installation instructions indicating that the required control system meeting both (a) and (b) must be installed. 87 FR 64550, 64560.

DOE defined a ''variable-speed non-communicating coil-only central air conditioner or heat pump'' as a variable-speed compressor system having a coil-only indoor unit that does not meet the definition of variable-speed communicating coil-only central air conditioner or heat pump. *Id.*

In the October 2022 CAC/HP Final Rule, DOE elaborated that variable-speed coil-only systems that meet the ''communicating'' definition should be tested like any other variable-speed system, except that the heating full-load air volume rate should be equal to the cooling full-load air volume rate and the intermediate and minimum cooling and heating air volume rates should all be higher than (1) the rate specified by the installation instructions included with the unit by the manufacturer, and (2) 75 percent of the full-load cooling air volume rate. *Id.*

Because this aspect of the basic model's operating characteristics determines the way it must be tested, manufacturers need to certify whether a variable speed coil-only rating is based on non-communicating or communicating control. Therefore, in the September 2023 CCE NOPR, DOE proposed to include this requirement in the certification template and requested comment on its proposal. 88 FR 67458, 67465.

AHRI and Carrier commented supporting DOE's proposal to require reporting of whether a variable speed coil-only rating is based on non-communicating or communicating control. (AHRI, No. 18 at p. 7; Carrier, No. 12 at p. 2)

ASAP *et al.* commented that in the October 2022 CAC/HP Final Rule, DOE defined variable-speed communicating coil-only central air conditioner or heat pump and variable-speed non-communicating coil-only central air conditioner or heat pump but the terms used in the September 2023 CCE NOPR—''non-communicating control'' and ''communicating control''—are not precisely defined. ASAP *et al.* recommended that DOE align the certification language and the certification template with existing language and recommended to rephrase ''whether the represented value meets the definition of variable speed non-communicating coil-only.'' (ASAP *et al.,* No. 14 at p. 4)

In response to the comment by ASAP *et al.,* DOE notes that ''non-communication control'' and ''communicating control'' are defined within the definitions of ''variable-speed communicating coil-only central air conditioner or heat pump'' and ''variable-speed non-communicating coil-only central air conditioner or heat pump,'' respectively, as finalized in the October 2022 CAC TP Final Rule, at section 1.2 of appendix M1. However, to better align with these definitions, DOE is slightly modifying the proposed reporting requirement to state, ''whether the represented value is based on a non-communicating or communicating control system.''

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting reporting requirements for reporting of whether a variable speed coil-only rating is based on a non-communicating or communicating control system with the additional clarification of adding the word ''system.''

b. Air Volume Rate Changing With Outdoor Conditions

In the October 2022 CAC/HP Final Rule, DOE explained that requirements for setting air volume rate in section 3.1.4 of appendix M1 may conflict with instructions to use air volume rates that represent a ''normal installation'' in section 3.2, particularly for modern blower-coil systems with multiple-speed or variable-speed indoor fans and control systems, which may change air volume rate in response to operating conditions such as outdoor air temperature. 87 FR 64550, 64569. To address this issue, in the October 2022 CAC/HP Final Rule, DOE explicitly stated in step 7 of sections 3.1.4.1.1.a, 3.1.4.2.a, and 3.1.4.3.a of appendix M1 that, for blower-coil systems in which the indoor blower capacity modulation correlates with outdoor dry bulb temperature or sensible-to-total cooling capacity ratio, use an air volume rate that represents a normal operation. *Id.* Also, DOE indicated that to ensure consistency of testing, it may be necessary for manufacturers to certify whether the system varies blower speeds with outdoor air conditions. *Id.* For these reasons, in the September 2023 CCE NOPR, DOE proposed that manufacturers include in their certification whether the system varies blower speeds with outdoor air conditions and requested comment on its proposal. 88 FR 67458, 67465.

Carrier stated its support for DOE's proposal to require reporting of whether a CAC/HP system varies blower speeds with outdoor air conditions. However, Carrier commented that responses should be required for blower coil systems only, and the default response should be ''No.'' (Carrier, No. 12 at p. 2)

AHRI commented in support of DOE's proposal to require reporting of whether a CAC/HP system varies blower speeds with outdoor air conditions. AHRI commented the proposed new column, ''Does the System Vary Blower Speeds with Outdoor Air Conditions?'' is appropriate. AHRI additionally recommended that a response must be required for blower coil systems only, and only if applicable, with a blank field permissible for all other systems and a default of ''No.'' (AHRI, No. 18 at p. 7)

DOE would like to clarify that DOE intended in its proposal that manufacturers would fill in the proposed new column to report whether their CAC/HP system varies blower speeds with outdoor air conditions only if they report that their unit is a blower coil system, as indicated in the draft certification template columns published along with the September 2023 CCE NOPR in the docket for this rulemaking. This approach is consistent with the recommendations from commenters.

For the reason discussed in the preceding paragraph and the September 2023 CCE NOPR, DOE is adopting reporting requirements for reporting of whether a CAC/HP blower coil system varies blower speeds with outdoor air conditions.

c. Sampling Corrections

Currently, DOE's sampling provisions for CAC/HPs state that any represented value of power consumption or other measure of consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of the mean of the sample, or the upper 90 percent confidence limit of the true mean (''UCL'') divided by 1.05. 10 CFR 429.16(b)(3)(i). Additionally, the sampling provisions state that any represented value of the energy efficiency, cooling capacity, heating capacity or other measure of energy consumption for which consumers would favor higher values shall be less than or equal to the lower of the mean of the sample, or the lower 90 percent confidence limit of the true mean (''LCL'') divided by 0.95. 10 CFR 429.16(b)(3)(ii)–(iii). The sampling provisions also state that the UCL and LCL should be calculated using the Student's t-Distribution Values for a 90 percent one-tailed confidence interval with $n-1$ degrees of freedom from appendix D to subpart B of part 429 (''appendix D''), where ''n'' is the number of samples. 10 CFR 429.16(b)(3)(i)–(iii). However, the appendix containing Student's t-Distribution Values has moved to appendix A to subpart B of part 429 (''appendix A'') and is no longer located at appendix D.[8] To correct this discrepancy, in the September 2023 CCE NOPR, DOE proposed to revise 10 CFR 429.16(b)(3)(i)–(iii) to specify that the UCL and LCL should be calculated using the Student's t-Distribution Values for a 90 percent one-tailed confidence interval outlined in appendix A. 88 FR 67458, 67465. DOE requested comment on its proposal. *Id.*

Carrier commented in support of DOE's proposal to correct the sampling provisions for CAC/HPs to reference appendix A instead of appendix D. (Carrier, No. 12 at p. 2)

AHRI also commented in support of DOE's proposal to correct the sampling provisions for CAC/HPs to reference appendix A instead of appendix D, but only under the condition this is a reference change. (AHRI, No. 18 at p. 7)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the corrections to sampling provisions as proposed in the September 2023 CCE NOPR. This change updates the reference as described, but does not change the calculations.

2. Reporting Costs and Impacts

As discussed, in the September 2023 CCE NOPR, DOE proposed aligning CAC/HP certification reporting requirements with the current test procedure for CAC/HP in appendix M1, which was most recently amended by the October 2022 CAC/HP Final Rule. 88 FR 67458, 67465. The proposed certification requirements in the September 2023 CCE NOPR specifically addressed new provisions in this amended version of the appendix M1 test procedure, use of which was required beginning on April 24, 2023. *Id.*

In the September 2023 CCE NOPR, DOE tentatively determined that the proposed amendments to the certification requirements would not impose additional costs for manufacturers because manufacturers of CAC/HPs are already submitting certification reports to DOE and should have readily available the information that DOE proposed to collect as part of that rulemaking. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what CAC/HP manufacturers are currently doing today. *Id.*

AHRI commented that if DOE adopted its recommendations regarding CAC/HPs, AHRI would not expect significant additional burden or cost for manufacturers associated with the amendments proposed for CAC/HPs. AHRI noted that implementing amendments to templates does come at a cost and burden to third-party certification bodies that AHRI willingly

[8] Appendix D now contains the sampling plan for enforcement testing of Uninterruptible Power Supplies.

bears for the benefit of manufacturers, regulators, and users. AHRI commented it would appreciate a more streamlined and predictable process. (AHRI, No. 18 at p. 7)

AHRI did not provide any data indicating increased costs to manufacturers related to reporting. The reporting requirements for CAC/HPs would be accomplished using the existing online data templates in DOE's CCMS, which DOE does not expect to be any more burdensome than reporting under the existing template. Based on the preceding discussion and the discussion in the September 2023 CCE NOPR, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for CAC/HP manufacturers as compared to what they are currently doing today.

For the reasons discussed in the prior paragraphs and in the September 2023 CCE NOPR, in this final rule DOE is adopting the reporting requirements for CAC/HPs as proposed, with the additional clarification of adding the word ''system'' to the requirement to report whether a variable speed coil-only rating is based on a non-communicating or communicating control system. Compliance with these amended reporting requirements is not required until the next annual certification report filing date on or after 210 days after publication of this final rule.

C. Dishwashers

DOE is amending the certification reporting requirements for DWs, which are cabinet-like appliances which, with the aid of water and detergent, wash, rinse, and dry (when a drying process is included) dishware, glassware, eating utensils, and most cooking utensils by chemical, mechanical and/or electrical means and discharge to the plumbing drainage system. 10 CFR 430.2. In the DWs test procedure final rule published on January 18, 2023 (''January 2023 DW Final Rule''), DOE amended the existing DWs test procedure at appendix C1 and established a new test procedure at appendix C2, which would be required at the time compliance is required with any amended energy and water conservation standards. 88 FR 3234. Consistent with that final rule, DOE is amending the reporting requirements.

1. Reporting

Under the existing requirements in 10 CFR 429.19, manufacturers must report the following public product-specific information: the estimated annual energy use in kilowatt hours (''kWh'') per year (''kWh/yr''), the water consumption in gallons per cycle, and the capacity in number of place settings as specified in ANSI/AHAM DW–1–2010.[9] 10 CFR 429.19(b)(2). Manufacturers must additionally report the following product-specific information: the presence of a soil sensor (and if present, the number of cycles required to reach calibration); water inlet temperature used for testing in degrees Fahrenheit (''° F''); cycle selected for the energy test and whether that cycle is soil-sensing; the options selected for the energy test; the presence of a built-in water softening system (and if present, the energy use in kWh and the water use in gallons required for each regeneration of the water softening system, the number of regeneration cycles per year, and data and calculations used to derive these values); and an indication of whether Cascade Complete Powder or Cascade with the Grease Fighting Power of Dawn was used as the detergent formulation. 10 CFR 429.19(b)(3). These requirements are applicable for any DW distributed in the United States on or after May 30, 2013. Additionally, when certifying dishwashers other than water re-use dishwashers, the following requirements are applicable: (A) Before July 17, 2023, Cascade Complete Powder detergent may be used as the basis for certification in conjunction with the detergent dosing methods specified in either section 2.5.2.1.1 or section 2.5.2.1.2 of appendix C1. Cascade with the Grease Fighting Power of Dawn detergent may be used as the basis for certification only in conjunction with the detergent dosing specified in section 2.5.2.1.1 of appendix C1. (B) Beginning July 17, 2023, Cascade Complete Powder detergent may be used as the basis for certification of newly certified basic models only in conjunction with the detergent dosing method specified in section 2.5.2.1.2 of appendix C1. Cascade with the Grease Fighting Power of Dawn detergent may be used as the basis for certification only in conjunction with the detergent dosing specified in section 2.5.2.1.1 of appendix C1. Manufacturers may maintain existing basic model certifications made prior to July 17, 2023, consistent with the provisions of paragraph 10 CFR 429.19(b)(3)(vi)(A) and (B).

DOE is updating the dishwasher certification reporting requirements and aligning the reporting requirements with the amended test procedure at appendix C1 and the new test procedure at appendix C2. Use of appendix C2 is required when determining compliance with the amended energy and water conservation standards adopted in a direct final rule published in the **Federal Register** on April 24, 2024. 89 FR 31398. Accordingly, the certification reporting requirements that are specific to appendix C2 are required to demonstrate compliance with those amended energy and water conservation standards. DOE discusses the updates in the following sections.

a. Update to the AHAM Industry Standard

The current reporting requirements at 10 CFR 429.19(b)(2) reference the industry standard, ANSI/AHAM DW–1–2010 [10] to the capacity of a dishwasher in number of place settings. In the September 2023 CCE NOPR, DOE proposed to exclude this reference in the dishwasher reporting requirements at 10 CFR 429.19 because this industry standard is now obsolete. 88 FR 67458, 67466. Additionally, the reference to the definition of place settings only includes the items in the test load that comprise a single place setting; it does not define the capacity of a dishwasher itself, which is the metric that needs to be reported for dishwashers at 10 CFR 429.19(b)(2). DOE also proposed to remove ANSI/AHAM DW–1–2010 from its list of materials incorporated by reference at 10 CFR 429.4 because this standard would no longer be referenced anywhere in 10 CFR part 429 after the proposed removal of this reference from 10 CFR 429.19. *Id.* DOE requested comment on its proposal to remove this reference in the dishwasher reporting requirements. *Id.*

ASAP *et al.* commented that it was appropriate for DOE to remove the reference to the now obsolete ANSI/AHAM DW–1–2010 standard from the reporting requirements for dishwashers. ASAP *et al.* noted that the capacity in number of place settings remains a reporting requirement, however, ''place settings'' is not defined in either 10 CFR 429.19 or appendices C1 or C2 (or references therein). ASAP *et al.* recommended that DOE should ensure that ''place settings'' is defined in the CFR. ASAP *et al.* additionally noted that ''kilowatt hours'' was not consistently hyphenated or not hyphenated in 10 CFR 429.19. (ASAP *et al.,* No. 14 at p. 4)

DOE notes that section 2.3 of appendix C1 and section 2.4 of appendix C2 specify the test load items

[9] American National Standards Institute/Association of Home Appliance Manufacturers DW–1–2010: Household Electric Dishwasher.

[10] Household Electric Dishwashers. ANSI/AHAM DW–1–2010. ANSI approved Sept. 18, 2010.

through reference to section 2.7.1 of AHAM DW–1–2020,[11] which additionally references section 3.4 of AHAM DW–2–2020 [12] that specifies the items included in a place setting. As such, given this reference to ''place settings'' in appendix C1 and appendix C2, DOE is not making any changes to the reporting requirements at 10 CFR 429.19 to include a definition for place settings.

Additionally, in response to the comment from ASAP *et al.* noting that ''kilowatt hours'' was not consistently hyphenated or not hyphenated, DOE is updating the amended requirements in 10 CFR 429.19(b)(3)(v) to remove the hyphen from ''kilowatt-hours.''

For the reasons discussed in the preceding paragraphs and September 2023 CCE NOPR, DOE is adopting the proposal to remove ANSI/AHAM DW–1–2010 from the referenced industry standard in 10 CFR 429.19(b)(2) and the list of materials incorporated by reference at 10 CFR 429.4. DOE is also making minor corrections to remove the hyphen from ''kilowatt-hours.''

b. Cycle Selected for Energy Test

In the January 2023 DW Final Rule, DOE established a new appendix C2 that specifies, in part, a minimum cleaning index threshold as a condition for a valid test cycle. 88 FR 3234. If the normal cycle at any soil level (*i.e.,* heavy, medium, or light) does not meet the specified cleaning index threshold, the unit is tested at the most energy-intensive cycle that can achieve a cleaning index threshold of 70. 88 FR 3234, 3237. To ensure that the certification template is consistent with the tested cycle requirements specified in appendix C2, DOE proposed in the September 2023 CCE NOPR to include the following additional confidential reporting requirement at 10 CFR 429.19(b)(3)(iii): the cycle selected for the energy test at the heavy, medium, and light soil loads and whether these cycles are soil-sensing. 88 FR 67458, 67466. Further, DOE proposed to include the following additional confidential reporting requirement at 10 CFR 429.19(b)(3)(iv): the options selected for the energy test at the heavy, medium, and light soil loads. *Id.* These reporting requirements would be required only at such time as use of appendix C2 is required to demonstrate compliance with any future amended energy and water conservation standards. *Id.* DOE requested comment on its proposal. *Id.*

The CA IOUs recommended that DOE make cycle setting information for dishwashers publicly available. (CA IOUs, No. 8 at p. 2) The CA IOUs stated that understanding the cycle setting would aid the public in comparing dishwashers based on the mode of operation used for the energy-efficiency results reported to DOE, allowing consumers to attain similar savings. (*Id.*) The CA IOUs stated that if DOE deems the cycle setting information to be confidential, DOE must at the very least disclose whether the test was conducted using the normal cycle or energy-intensive cycle. The CA IOUs commented that this information could be an automatic output from the cycle setting information that DOE proposes to collect confidentially. (*Id.*)

The test procedure at appendix C2 specifies a minimum cleaning index threshold of 70 as a condition of a valid test cycle. If the normal cycle does not meet this threshold value at any soil load, then appendix C2 specifies that that soil load must be tested on the most energy-intensive cycle. 10 CFR part 430, appendix C2, section 4.1(c). As such, for any dishwasher that is manufactured after April 23, 2027, the compliance date of amended standards, the rated values of energy and water consumption would be reflective of the cycle type at which the unit met the minimum cleaning index threshold. For example, if a unit does not achieve the cleaning index threshold on the normal cycle and was rated at the most energy-intensive cycle, from the consumer's perspective, such a dishwasher would consume the maximum amount of energy, reflective of its rated value, or less energy if consumers choose any other cycle. Similarly, if a dishwasher achieves the cleaning index threshold on the normal cycle, from the consumer's perspective such a dishwasher would be expected to deliver the desired cleaning performance at the cycle recommended for daily, typical, or regular use. For these reasons, DOE is not requiring public reporting of the cycle setting information for dishwashers.

The CA IOUs commented requesting DOE to require the certification reports for dishwashers to include the total water heating energy consumption publicly so consumers can make informed purchasing decisions based on their water heater type. The CA IOUs stated that different water heater recovery efficiencies are used when calculating a consumer dishwasher's estimated annual operating costs, but they are not used to calculate annual energy use, which instead relies on the assumption that the dishwasher is operating with an electric resistance water heater. The CA IOUs provided data comparing energy and water use of dishwashers with an electric resistance water heater and heat pump water heater and commented that the dishwasher test procedure in appendix C2 does not accurately estimate the water energy, total energy, and product rank order for consumers who own a heat pump water heater. The CA IOUs recommended that DOE require manufacturers to publicly report the total water heating energy consumption value, which would allow consumers and consumer product research organizations to analyze a dishwasher's potential annual energy use when paired with different water heating systems and which can be accessed from test reports without significantly increasing testing or reporting burden. The CA IOUs commented that this information would assist consumers in determining the most efficient dishwasher for their water heating system. (CA IOUs, No. 8 at pp. 2–4)

In response, DOE notes that the estimated annual energy use is calculated assuming that the dishwasher is operating with an electric resistance water heater because the current standards for dishwashers were developed using dishwasher energy consumption only with electric resistance water heaters. From the data presented by the CA IOUs, DOE notes that while the water heater efficiency impacts water heating energy consumption, and, therefore, overall machine energy consumption, it is just one of the aspects that contributes to water heating energy consumption. The water heating energy consumption for a given installation depends on the overall water consumption of the dishwasher, whether the dishwasher is connected to hot or cold water, the water heater type, and the hot water temperature setting. Of these, water consumption of dishwashers is already a reported value (in gallons per cycle). Consumers making decisions based on water heating energy consumption can do so based on these factors by choosing to calculate water heating energy consumption based on the dishwasher test procedure at appendix C1 and appendix C2 via reference to AHAM DW–1–2020.

Therefore, even if reporting water heating energy consumption would not increase testing or reporting burden, DOE does not believe reporting this metric is required because it is directly related to the already reported value of water consumption. Accordingly, DOE is not including the requirement to

[11] Uniform Test Method for Measuring the Energy Consumption of Dishwashers. AHAM DW–1–2020.

[12] Household Electric Dishwashers. AHAM DW–2–2020.

report water heating energy consumption at this time.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

c. Cleaning Index

As noted previously, the January 2023 DW Final Rule established a new appendix C2 that specifies a minimum cleaning index threshold as a condition for a valid test cycle. 88 FR 3234. Specifically, the January 2023 DW Final Rule states that each tested cycle on each individual unit is required to achieve the applicable cleaning index threshold to constitute a valid test cycle. 88 FR 3234, 3265–3266. To ensure that the reported test cycle is a valid test cycle that meets the specified applicable cleaning index threshold, DOE proposed to add a confidential reporting requirement for the cleaning index of the sensor heavy response, sensor medium response, and sensor light response test cycles in the September 2023 CCE NOPR. 88 FR 67458, 67467. DOE additionally proposed that the reported cleaning index for each basic model must be the average cleaning index of the individual test units at each soil level. *Id.* This reporting requirement would be required only at such time as use of appendix C2 is required to demonstrate compliance with any future amended energy and water conservation standards. *Id.* DOE requested comment on its proposals. *Id.*

During the NOPR public meeting, AHAM noted that the dishwasher test procedure at appendix C2 requires a cleaning index threshold of 70 at each soil load for a valid test. AHAM stated that it would like to understand DOE's reasoning to require reporting of an average cleaning score rather than a yes/no question of whether the unit met the threshold. (AHAM, Public Meeting Transcript, No. 6 at pp. 12–13) In written comments, AHAM commented that it opposes DOE's proposed requirement to report average cleaning index scores, as this information has no practical utility in the context of currently applicable dishwasher standards and test procedures and exceeds typical test procedure reporting requirements. (AHAM, No. 9 at p. 2; AHAM, No. 16 at p. 2) AHAM commented that the January 2023 DW Final Rule stated that each tested cycle on each individual unit is required to achieve the applicable cleaning index threshold to constitute a valid test cycle, while in the September 2023 CCE NOPR, DOE proposes a confidential reporting requirement for the cleaning index of the sensor heavy response, sensor medium response, and sensor light response test cycles. AHAM commented that the test procedure at appendix C2 would require a cleaning index score of over 70 for a test cycle to be valid, and questioned why DOE would need to record specific test scores from manufacturers since any score greater than or equal to 70 is acceptable to have a valid test and the actual score is inconsequential. AHAM stated that the test procedure does not require reporting of the average cleaning score, so DOE's proposed requirement has no relation to determining whether the performance threshold has been met. AHAM commented that DOE does not collect data in many valid tests and cited the example of refrigerator manufacturers not needing to report ambient temperatures and clothes dryer manufacturers not reporting the final remaining moisture content despite the test requirement that a final remaining moisture content of 2 percent or below be achieved for a valid test. AHAM commented that manufacturers need only ensure that they meet the test procedure's 2 percent requirement. AHAM commented that if DOE wants individual scores for future consideration of amended energy conservation standards for dishwashers, DOE is obligated to collect such data as would be needed for those standards within the scope of such a rulemaking, or through a request to AHAM or its members, but not in the scope of the September 2023 CCE NOPR. AHAM commented that the cleaning index scores do not have practical utility in the context of currently applicable standards and test procedures because they are unnecessary to demonstrate compliance with standards; instead, having a cleaning index score meeting the minimum threshold is required for a valid test. (AHAM, No. 16 at pp. 2–3)

As stated, appendix C2 requires a cleaning index greater than or equal to 70 to have a valid test cycle. If the normal cycle at any soil level (*i.e.,* heavy, medium, or light) does not meet the specified cleaning index threshold, the unit is tested at the most energy-intensive cycle that can achieve a cleaning index threshold of 70. DOE notes that the test procedure at appendix C2 does not require reporting of the average cleaning index because: (a) the test procedure does not specify any reporting requirements, and (b) the test procedure specifies testing instructions for a single test unit.

Further, DOE has determined that reporting of the tested cleaning index is appropriate to ensure correct application of the test procedure requirements because it would ensure that manufacturers are recording the appropriate data when testing and reporting consistent with the appendix C2 requirements (*i.e.,* a cleaning index greater than or equal to 70). DOE has determined that this reporting would better ensure the appropriate application of appendix C2 and the sampling requirements as compared to a yes/no field. Manufacturers would be required to measure and report the cleaning index as part of any appendix C2 testing.

In regard to AHAM's comment that DOE must collect this information in a test procedure or standards rulemaking process, DOE explained in section III.A.3 of this document that it has the authority to require manufacturers to submit information that would be necessary to establish test procedures or standards. As stated, reporting of the cleaning index threshold would ensure that the test procedure at appendix C2 is conducted correctly for the purposes of certifying performance, particularly as it pertains to ensuring that the tested and reported cycle meets the cleaning index threshold specified in appendix C2. DOE does not expect this reporting requirement to be unduly burdensome because the cleaning index will be calculated and recorded for each tested cycle as part of conducting the test under appendix C2.

For the reasons discussed in the preceding paragraphs and the September 2023 NOPR, DOE is adopting the confidential reporting requirement for the cleaning index of the sensor heavy response, sensor medium response, and sensor light response test cycles when testing according to appendix C2 as proposed in the September 2023 CCE NOPR. Additionally, as proposed in the September 2023 NOPR, DOE is specifying that the reported cleaning index for each basic model much be the average cleaning index of the individual test units at each soil level.

d. Water Re-Use System Dishwashers

On November 1, 2013, DOE published a Decision and Order granting Whirlpool a test procedure waiver (''Whirlpool waiver'') for testing specified basic models equipped with a ''water use system,'' in which water from the final rinse cycle is stored for use in the subsequent cycle, with periodic draining (''drain out'') and cleaning (''clean out'') events. 78 FR

65629, 65629–65630. (Case No. DW–11).[13]

In the January 2023 DW Final Rule, DOE amended appendix C1 to include the requirements from the Whirlpool waiver for testing water re-use system DWs via reference to the industry standard, AHAM DW–1–2020, with some modifications to the equations in sections 5.6.1.3, 5.6.1.4, 5.6.2.3, and 5.6.2.4 of AHAM DW–1–2020. DOE also adopted these requirements in the new appendix C2. 88 FR 3234, 3249.

Accordingly, in the September 2023 CCE NOPR, DOE proposed to amend the reporting requirements at 10 CFR 429.19(b)(3) to include reporting of energy and water use associated with drain out and clean out events, consistent with the information required to be reported by Whirlpool as part of the waiver. 88 FR 67458, 67467. These reported values would be used in equations to account for the extra water and energy associated with water re-use systems. Specifically, DOE proposed that the additional machine electrical energy consumption required for a drain out event and clean out event—expressed in kWh—and the additional water consumption required for drain out and clean out events during a drain out cycle—expressed in gallons per cycle (''gal/cycle'')—be reported confidentially. *Id.* DOE requested comment on these proposals. *Id.*

The CA IOUs commented that DOE should make publicly available the energy and water use from drain-out and clean-out events. The CA IOUs stated that understanding the energy and water consumption from drain out and clean out events would help stakeholders identify efficiency improvements and allow consumers to understand types of dishwasher use that would change their product's expected water and energy consumption. (CA IOUs, No. 8 at p. 2)

In response, DOE notes that it is not requiring that the energy and water use from drain-out and clean-out events be reported publicly because these metrics would not add any value to a consumer's decision-making, as the reported energy and a water use of water re-use system dishwasher would already include the energy and water use associated with a drain out or clean out event and, thus, not change a dishwasher's expected water and energy consumption compared to the rated values.

AHAM opposed DOE's proposal to amend the reporting requirements at 10 CFR 429.19(b)(3) to include reporting of energy and water use associated with drain out and clean out events. (AHAM, No. 9 at p. 2; AHAM, No. 16 at p. 3) AHAM commented that it opposed this proposal because these values are not necessary to demonstrate compliance with standards. AHAM commented that the energy and water use of a product is captured in the final test result, and this proposed additional requirement places an unnecessary reporting burden on manufacturers without a corresponding benefit. AHAM commented that the reporting of energy and water use associated with drain out and clean out events does not have practical utility and the burden is not justified by the usefulness of the data as is required by PRA. (AHAM, No. 16 at pp. 3–4)

DOE previously determined that the energy and water use associated with drain out or clean out events are needed to provide a representative measure of the energy and water use of dishwashers with water re-use systems (see Whirlpool waiver).[14] DOE notes that the impact of a water re-use system during normal use is captured in the DOE test procedure (both appendix C1 and appendix C2), but drain out and clean out events require separate consideration as they are not necessarily captured during the sequence of test cycles conducted as part of the DOE test procedure. DOE proposed this requirement because these values are necessary to determine the final machine energy consumption and water consumption if DOE were to conduct an enforcement test. As such, DOE's proposal to confidentially report the energy and water use associated with a drain out or clean out event for water re-use dishwashers is similar to the reporting requirements for any other information that DOE would require to conduct a test (*e.g.,* the energy and water use associated with each regeneration of the water softening system for dishwashers with built-in water softening systems).

For the reasons discussed, DOE is adopting the additional reporting requirements for water re-use system dishwashers as proposed in the September 2023 CCE NOPR.

e. Dishwashers With Built-In Reservoirs

DOE published a Decision and Order on December 9, 2020 granting CNA International Inc. (''CNA'') a test procedure waiver (''CNA waiver'') for a basic model of a compact DW that does not connect to a water supply line and instead has a built-in reservoir that must be manually filled with water. 85 FR 79171, 79171 and 79173 (Case No. 2020–008).[15]

In the January 2023 DW Final Rule, DOE amended appendix C1 to include the requirements from the CNA waiver, which was specific to a compact DW basic model, to be applicable to a DW of any capacity with a manually filled built-in water reservoir. DOE also adopted these requirements in the new appendix C2. 88 FR 3234, 3241.

Accordingly, in the September 2023 CCE NOPR, DOE proposed to amend the reporting requirements at 10 CFR 429.19(b)(3) to include reporting of the reservoir capacity in gallons, prewash and main wash fill water volume in gallons (if testing is performed using appendix C1), and the total water consumption in gallons per cycle for DWs with built-in reservoirs. 88 FR 67458, 67467. DOE's proposal to report the prewash and main wash fill water volumes is only applicable to appendix C1 because these water volumes are used to determine detergent dosage in appendix C1, while the detergent dosage in appendix C2 is dependent on the number of place settings. DOE requested comment on its proposed reporting requirements for DWs with built-in reservoirs. *Id.*

AHAM commented objecting to DOE's proposed requirement for dishwashers with built-in reservoirs to include reporting of the reservoir capacity and prewash/main wash fill water volume because these data points are not needed to demonstrate compliance with standards. (AHAM, No. 9 at p. 2; AHAM, No. 16 at p. 4) AHAM commented that DOE has not described how the information would have practical utility or how the reporting burden would be justified as required by PRA. AHAM commented that DOE can request records in the event of an enforcement action. (AHAM, No. 16 at p. 4)

DOE proposed the requirement for dishwashers with built-in reservoirs to report the reservoir capacity and prewash and main wash fill water volumes because these values are required to determine the dishwasher's water consumption and detergent dosage, respectively, if DOE were to conduct an enforcement test. As such, DOE's proposal to confidentially report the water consumption and prewash and main wash fill water volumes is similar to the reporting requirements for

[13] All materials regarding the Whirlpool waiver are available in docket EERE–2013–BT–WAV–0042 at *www.regulations.gov.*

[14] All materials regarding the Whirlpool waiver are available in docket EERE–2013–BT–WAV–0042 at *www.regulations.gov.*

[15] All materials regarding the CNA waiver are available in docket EERE–2020–BT–WAV–0024 at *www.regulations.gov.*

any other information that DOE would require to conduct a test (*e.g.,* the energy and water use associated with each regeneration of the water softening system for dishwashers with built-in water softening systems). Additionally, DOE does not expect this reporting requirement to be unduly burdensome because manufacturers of dishwashers with built-in reservoirs would already be determining these values to conduct the test procedure. Therefore, DOE is maintaining its proposal from the September 2023 CCE NOPR.

For the reasons discussed, DOE is adopting the amendments as proposed in the September 2023 CCE NOPR.

f. Rounding Requirements

In the September 2023 CCE NOPR, DOE proposed to specify at new section 10 CFR 429.19(c) that the represented value of estimated annual energy use must be rounded to the nearest kWh/yr and the represented value of water consumption must be rounded to one decimal place (*i.e.,* the nearest 0.1 gallon per cycle). 88 FR 67458, 67467. DOE noted that these rounding requirements were consistent with the existing rounding requirements for DWs specified at 10 CFR 430.23(c)(2) and 10 CFR 430.23(c)(3), respectively and requested comment on the proposed rounding requirements. *Id.*

DOE did not receive any comments on the proposed rounding requirements for DWs. For the reasons discussed, DOE is adopting the requirements as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align the DW certification reporting requirements with the amended test procedure at appendix C1, use of which was required beginning July 17, 2023, and with the newly adopted test procedure at appendix C2, use of which would be required at such time as compliance is required with any amended energy conservation standards based on appendix C2. 88 FR 67458, 67467.

For dishwashers, manufacturers currently report the following: (1) the estimated annual energy use in kWh/yr; (2) the water consumption in gallons per cycle; (3) the capacity in number of place settings as specified in ANSI/AHAM DW–1–2010; (4) the presence of a soil sensor, and if present, the number of cycles required to reach calibration; (5) the water inlet temperature used for testing in °F; (6) the cycle selected for the energy test and whether that cycle is soil-sensing; (7) the options selected for the energy test; (8) the presence of a built-in water softening system, and if present, the energy use in kWh and the water use in gallons required for each regeneration of the water softening system, the number of regeneration cycles per year, and data and calculations used to derive these values; and (9) indication of whether Cascade Complete Powder or Cascade with the Grease Fighting Power of Dawn was used as the detergent formulation. 10 CFR 429.19 (b)(2)–(3). Additionally, when certifying dishwashers, other than water re-use dishwashers, according to appendix C1, the following requirements are applicable: (A) Before July 17, 2023, Cascade Complete Powder detergent may be used as the basis for certification in conjunction with the detergent dosing methods specified in either section 2.5.2.1.1 or section 2.5.2.1.2 of appendix C1. Cascade with the Grease Fighting Power of Dawn detergent may be used as the basis for certification only in conjunction with the detergent dosing specified in section 2.5.2.1.1 of appendix C1; and (B) Beginning July 17, 2023, Cascade Complete Powder detergent may be used as the basis for certification of newly certified basic models only in conjunction with the detergent dosing method specified in section 2.5.2.1.2 of appendix C1. Cascade with the Grease Fighting Power of Dawn detergent may be used as the basis for certification only in conjunction with the detergent dosing specified in section 2.5.2.1.1 of appendix C1. Manufacturers may maintain existing basic model certifications made prior to July 17, 2023, consistent with the provisions of paragraph 10 CFR 429.19(b)(3)(vi)(A)–(B).

In the September 2023 CCE NOPR, DOE noted that under the proposed amendments, manufacturers would additionally report the following: (1) the cycles selected for the sensor heavy response, sensor medium response, and sensor light response and whether these cycles are soil-sensing if testing is performed using appendix C2; (2) the options selected for the sensor heavy response, sensor medium response, and sensor light response if testing is performed using appendix C2; (3) the average cleaning index for the sensor heavy response, sensor medium response, and sensor light response cycles if testing is performed using appendix C2; (4) whether the product is a water re-use system dishwasher and if so, the energy use in kWh and water use in gallons required for a drain out event, the energy use in kWh and water use in gallons required for a clean out event, the number of drain out events per year, the number of clean out events per year, the water fill volume to calculate detergent dosage in gallons, and data and calculations used to derive these values, as applicable; and (5) the presence of a built-in reservoir and if present, the manufacturer-stated reservoir capacity in gallons, the prewash fill water volume in gallons and the main wash fill water volume in gallons if testing is performed using appendix C1, and the reservoir water consumption in gallons per cycle. DOE additionally proposed to add rounding requirements for estimated annual energy use and water consumption and remove the ANSI/AHAM DW–1–2010 industry standard that is included as a reference from 10 CFR 429.4. 88 FR 67458, 67468.

In the September 2023 CCE NOPR, DOE tentatively determined that the proposed amendments would not impose additional costs for manufacturers because manufacturers of DWs are already submitting certification reports to DOE and should have readily available the information that DOE is proposing to collect as part of this rulemaking. Additionally, any requirements stemming from the updates to the test procedure were accounted for in the January 2023 DW Final Rule. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what DW manufacturers are currently doing today. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for DWs. In this final rule, DOE makes a final determination that the amendments to the reporting requirements for DWs would not cause any measurable change in reporting burden or hours for DW manufacturers.

For the reasons discussed in the prior paragraphs and in the September 2023 CCE NOPR, in this final rule DOE is adopting the reporting requirements for DWs as proposed. Compliance with the amended reporting requirements for appendix C1 is not required until the next annual certification report filing date on or after 210 days after publication of this final rule. Compliance with the amended reporting requirements for appendix C2 is not required until April 23, 2027, the compliance date of amended energy conservation standards based on the use of appendix C2.

D. Residential Clothes Washers

DOE is amending the reporting requirements for RCWs, which are a

consumer product designed to clean clothes, utilizing a water solution of soap and/or detergent and mechanical agitation or other movement, that must be one of the following classes: automatic clothes washers, semi-automatic clothes washers, and other clothes washers. 10 CFR 430.2. In the RCW test procedure final rule published on June 1, 2022 (''June 2022 RCW Final Rule''), DOE amended the existing RCW test procedure at appendix J2, established a new test procedure at appendix J, and removed appendix J1. 87 FR 33316. Additionally, on March 15, 2024, DOE published in the **Federal Register** a direct final rule adopting amended standards for RCWs based on the new metrics as measured using appendix J (''March 2024 RCW DFR''). 89 FR 19026. Consistent with the June 2022 RCW Final Rule and the March 2024 RCW DFR, DOE is amending the reporting requirements for residential clothes washers.

1. Reporting

Under the existing requirements in 10 CFR 429.20(b)(2)(i), manufacturers of RCWs tested in accordance with the test procedure at appendix J1 must report the following: modified energy factor (''MEF''), capacity, corrected remaining moisture content (''RMC''), and integrated water factor (''IWF''). Under the existing requirements in 10 CFR 429.20(b)(2)(ii), manufacturers of RCWs tested in accordance with the test procedure at appendix J2 must report the following: integrated modified energy factor (''IMEF''), IWF, capacity, RMC, and type of loading (top-loading or front-loading). Under the existing requirements in 10 CFR 429.20(b)(3), all manufacturers of RCWs must also report a list of cycle selections comprising the complete energy test cycle.

DOE is updating these requirements and specifying new reporting requirements that will apply to the new appendix J test procedure and that will be required for certifying compliance with amended standards, beginning March 1, 2028. DOE discusses these updates in the following sections.

a. Removing Appendix J1

Appendix J1 was removed from the CFR as part of the June 2022 RCW Final Rule. 87 FR 33316, 33365. Therefore, the provisions in 10 CFR 429.20(b)(2)(i), which specify reporting requirements for RCWs tested in accordance with appendix J1, are obsolete. For these reasons, DOE proposed to remove these reporting requirements, as well as requested comment on the proposed removal of appendix J1 in the September 2023 CCE NOPR. 88 FR 67458, 67468.

DOE did not receive any comments on its proposal to remove reporting requirements applicable to appendix J1 from 10 CFR 429.20(b)(2)(i). For the reasons discussed in the preceding paragraph and the September 2023 CCE NOPR, DOE is finalizing this update as proposed in the September 2023 CCE NOPR.

b. Clothes Container Capacity

DOE has established separate product classes for RCWs based on clothes container capacity, among other characteristics. 10 CFR 430.32(g)(4). The current test procedure uses the term ''clothes container capacity'' to refer to the measured capacity (*see* section 3.1 of appendix J2), whereas the current reporting requirements at 10 CFR 429.20(b)(2) use the term ''capacity.'' To provide greater consistency in terminology between the test procedure and the reporting requirements, DOE proposed to update the reporting requirement terminology from ''capacity'' to ''clothes container capacity'' in the September 2023 CCE NOPR. 88 FR 67458, 67468. DOE requested comment on its proposed terminology update. *Id.*

DOE did not receive any comments on its proposal to update reporting requirement terminology to specify ''clothes container capacity'' for RCWs. For the reasons discussed in the preceding paragraph and the September 2023 CCE NOPR, DOE is adopting this amendment as proposed in the September 2023 CCE NOPR.

c. Test Cloth Lot Number

In the June 2022 RCW Final Rule, DOE implemented new language in 10 CFR 429.134(c) that provides additional product-specific enforcement provisions for clothes washers to accommodate differences in RMC values that may result from DOE using a different test cloth lot than was used by the manufacturer for testing and certifying the basic model. 87 FR 33316, 33369–33371. To implement this new enforcement provision, DOE proposed to require reporting the test cloth lot number used during certification testing in the September 2023 CCE NOPR. 88 FR 67458, 67469. DOE also proposed that the reported test cloth lot number would not be public. *Id.* DOE requested comment on its proposal to require test cloth lot number to be reported. *Id.*

AHAM commented in support of DOE's proposal to require reporting of test cloth lot number to accommodate differences in RMC values and added that the additional enforcement provision addresses AHAM's concerns related to the test cloth, including challenges surrounding certification and reporting requirements. (AHAM, No. 16 at p. 4)

The CA IOUs commented that DOE should make data publicly available on test cloth lot number for RCWs, asserting that this information would allow efficiency advocates, consumer representatives, and academia to investigate DOE's test cloth challenges. (CA IOUs, No. 8 at p. 2) The CA IOUs commented that disclosure is in the public interest to overcome information asymmetries in understanding product energy consumption and identifying and supporting test procedure changes that better reflect real-world energy use without undue manufacturer burden. (*Id.*)

In response to the CA IOUs' comment, DOE notes that test cloth lot number used for certification would not provide stakeholders with appropriate means to understand product energy consumption or to make comparisons of energy use across different cloth types. The use of test cloth correction factors in the appendix J2 and appendix J test procedures is designed specifically to ensure the consistency and representativeness of the final energy and water use values irrespective of the test cloth lot used. Accordingly, DOE would not expect any meaningful inferences to be drawn from an analysis of test cloth lot number and any of the currently certified energy and water use values. Indeed, requiring the test cloth lot number to be publicly available could introduce confusion to the consumer (for example by suggesting or implying that the certified values for each model are dependent upon the test cloth lot used) or by suggesting or implying that differences in the test cloth lot number among different basic models are indicative of differences in performance or other attributes of each basic model.

To the extent that any technical challenges arise regarding the DOE test cloth, DOE would address those in a separate rulemaking, as appropriate. DOE will coordinate with representatives from AHAM, clothes washer manufacturers, textile manufacturers, test laboratories, and academia with particular subject matter expertise in DOE test cloth and other textiles used for similar purposes in considering any improvements to the DOE test cloth requirements.

Finally, DOE understands that under certain circumstances, manufacturers may consider details such as the test cloth lot number used for testing their products to be confidential or sensitive

business information. For example, patterns in test cloth lot number data could provide indication of which laboratory conducted certification testing, or they could provide insights into research and development strategies—information that manufacturers generally consider to be trade secrets.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting its proposal to require the reporting of the test cloth lot number for RCWs and for the reported test cloth lot number not to be public.

d. Specifying Requirements for Appendix J

The new appendix J test procedure establishes new energy and water efficiency metrics for RCWs. Use of appendix J is required at such time as compliance is required with any amended energy conservation standards based on these new metrics as measured using appendix J. 87 FR 33316. In the March 2024 RCW DFR, DOE adopted amended standards for RCWs based on the new metrics as measured using appendix J. 89 FR 19026. Compliance with amended standards will be required beginning March 1, 2028. Consistent with these new metrics, in the September 2023 CCE NOPR, DOE proposed to specify certification requirements at 10 CFR 429.20(b)(2)(i) corresponding to the use of appendix J, as detailed in the following sections, and requested comment on the proposed requirements. 88 FR 67458, 67469. These reporting requirements will be required to demonstrate compliance with the amended standards based on the new appendix J metrics.

Energy Efficiency Ratio and Water Efficiency Ratio

Appendix J defines new metrics for representing clothes washer efficiency: energy efficiency ratio (''EER'') [16] and water efficiency ratio (''WER'').[17] In the September 2023 CCE NOPR, DOE proposed to require including EER and WER as public information in a certification report for RCWs tested in accordance with appendix J. 88 FR 67458, 67469.

In the June 2022 RCW Final Rule, DOE established rounding requirements for EER and WER in 10 CFR 430.23(j)(2)(ii) and (j)(4)(ii), respectively. 87 FR 33316, 33381. These requirements specify rounding EER to the nearest 0.01 lb/kWh/cycle and rounding WER to the nearest 0.01 gal/kWh/cycle. DOE proposed in the September 2023 CCE NOPR to specify these same rounding requirements for EER and WER at 10 CFR 430.29(c). 88 FR 67458, 67469.

DOE did not receive any comments on its proposed rounding requirements for EER and WER at 10 CFR 430.29(c). For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting its proposal for rounding requirements for EER and WER at 10 CFR 430.29(c) as proposed in the September 2023 CCE NOPR.

Type of Control System

In the March 2024 RCW DFR, DOE re-established a separate product class and separate performance-based energy conservation standards for semi-automatic RCWs.[18] 89 FR 19026. Compliance with these amended standards will be required beginning March 1, 2028. To distinguish basic models as either automatic [19] or semi-automatic for the purpose of determining whether the current performance-based standards apply, as well as which energy conservation standards will apply beginning March 1, 2028, DOE proposed in the September 2023 CCE NOPR to require reporting the type of control system (automatic or semi-automatic) as public information to be included in a certification report for RCWs tested in accordance with appendix J. 88 FR 67458, 67469.

DOE did not receive any comments on its proposal to require reporting the type of control system (*i.e.,* automatic or semi-automatic) for RCWs. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting this requirement as proposed in the September 2023 CCE NOPR.

Other Requirements

For RCWs tested in accordance with appendix J, DOE also proposed in the September 2023 CCE NOPR to establish public reporting requirements for RMC, clothes container capacity, and type of loading (*i.e.,* top-loading or front-loading), consistent with the current reporting requirements specified at 10 CFR 429.20(b)(2)(ii) for RCWs tested in accordance with appendix J2. 88 FR 67458, 67469. These reporting requirements will be required only at such time as use of appendix J is required to demonstrate compliance with standards based on the new appendix J metrics (*i.e.,* on and after March 1, 2028).

DOE did not receive any comments on its proposal to require reporting of RMC, clothes container capacity, and type of loading (*i.e.,* top-loading or front-loading) for RCWs tested in accordance with appendix J. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these requirements as proposed in the September 2023 CCE NOPR.

e. Additional Requirements

In response to the September 2023 CCE NOPR, the CA IOUs suggested that DOE require public reporting of the weighted average cycle time and default inactive/off mode power for RCWs at such time as appendix J is required to be used for compliance. (CA IOUs, No. 8 at p. 5) The CA IOUs asserted that RCWs with shorter cycle times would have an EER weighted more heavily toward default inactive/off mode operation than those with longer cycle times, and that consumers who use a clothes washer multiple times per week are likelier to prioritize active mode operation and energy consumption than consumers who run only one load per week. (*Id.)* The CA IOUs commented that providing consumers with information on the average cycle time and default inactive/off mode power would help them choose the most efficient clothes washer, and asserted that requiring these values to be reported should not result in any material increase in reporting burden. (*Id.*)

As noted by the CA IOUs, DOE does not currently require reporting weighted average cycle time or default inactive/off mode power and did not propose to add these requirements in the September 2023 CCE NOPR.

Default inactive/off mode power is measured as part of the appendix J test procedure to determine the combined low-power mode energy, which is one

[16] EER is defined as the weighted-average load size in pounds (''lbs'') divided by the sum of (1) the per-cycle machine energy, (2) the per-cycle water heating energy, (3) the per-cycle drying energy, and (4) the per-cycle standby and off mode energy consumption, in kilowatt-hours (''kWh'').

[17] WER is defined as the weighted-average load size in lbs divided by the total weighted per-cycle water consumption for all wash cycles in gallons (''gal'').

[18] DOE defines ''semi-automatic clothes washer'' as a class of clothes washer that is the same as an automatic clothes washer except that user intervention is required to regulate the water temperature by adjusting the external water faucet valves. 10 CFR 430.2.

[19] DOE defines ''automatic clothes washer'' as a class of clothes washer that has a control system that is capable of scheduling a preselected combination of operations, such as regulation of water temperature, regulation of the water fill level, and performance of wash, rinse, drain, and spin functions without the need for user intervention subsequent to the initiation of machine operation. Some models may require user intervention to initiate these different segments of the cycle after the machine has begun operation, but they do not require the user to intervene to regulate the water temperature by adjusting the external water faucet valves. 10 CFR 430.2.

of several parameters used to calculate EER.[20] Weighted average cycle time is calculated as part of the appendix J test procedure and used to determine the number of annual hours that a clothes washer spends in low-power modes, which is used to calculate combined low-power mode energy. Neither weighted average cycle time nor default inactive/off mode power would need to be reported for DOE to determine compliance with a standard based on EER. Additionally, these values would not need to be reported to DOE to ensure appropriate assessment or enforcement testing, as these values are measured as part of the DOE test procedure.

DOE further notes that since weighted average cycle time and default inactive/off mode power were not discussed in the September 2023 CCE NOPR, the public did not have an opportunity to consider or provide comment on the CA IOUs' suggestion to add these reporting requirements. In this final rule, DOE is finalizing new reporting requirements for RCWs only for values that are required for determining compliance (and for other products, for ensuring appropriate assessment or enforcement testing) and that the public had an opportunity to comment on through the September 2023 CCE NOPR.

For the reasons discussed in the preceding paragraphs, DOE is not adopting a reporting requirement for weighted average cycle time or default inactive/off mode power.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align RCW certification reporting requirements with the energy conservation requirements that would be applicable to RCWs tested in accordance with appendix J. 88 FR 67458, 67469.

Currently, manufacturers report IMEF, IWF, capacity, RMC, loading type, and cycle selections. In the September 2023 CCR NOPR, DOE noted that under the proposed amendments, manufacturers would additionally report test cloth lot number. DOE additionally proposed that for RCWs manufactured after the compliance date of any future energy conservation standards based on use of appendix J, manufacturers would be required to report EER, WER, capacity, RMC, control system type, loading type, cycle selections, and test cloth lot number.

In the September 2023 CCE NOPR, DOE tentatively determined that the proposed amendments would not impose additional costs for manufacturers because manufacturers of RCWs are already submitting certification reports to DOE and should have readily available the information that DOE is proposing to collect as part of this rulemaking. 88 FR 67458, 67469. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what RCW manufacturers are currently doing today as the proposed amendments are replacement metrics or information that should be readily available. *Id.* at 88 FR 67470.

DOE did not receive any comments on the certification reporting costs of the amendments proposed for RCWs. In this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for RCWs.

For the reasons discussed in the prior paragraphs, in this final rule DOE is adopting the reporting requirements for RCWs as proposed in the September 2023 CCE NOPR. Compliance with the amended reporting requirements for appendix J2 is not required until the next annual certification report filing date on or after 210 days after publication of this final rule. Compliance with the amended reporting requirements for appendix J is not required until March 1, 2028, the compliance date of the amended energy conservation standards based on the use of appendix J.

E. Pool Heaters

DOE is amending the reporting requirements for consumer pool heaters. DOE defines pool heaters as an appliance designed for heating non-potable water contained at atmospheric pressure, including heating water in swimming pools, spas, hot tubs, and similar applications. 10 CFR 430.2. In the final rule published on May 30, 2023 (''May 2023 Pool Heaters Final Rule''), DOE amended the energy conservation standards for consumer pool heaters. 88 FR 34624. While the current standards only apply to gas-fired pool heaters, the new and amended standards apply to both gas-fired pool heaters and electric pool heaters (excluding electric spa heaters) [21] and use an updated efficiency metric. *Id.* at 88 FR 34704. Consistent with the May 2023 Pool Heaters Final Rule, DOE is amending the reporting requirements for consumer pool heaters.

1. Reporting

Under the existing requirements in 10 CFR 429.24, manufacturers of gas-fired pool heaters must report: thermal efficiency in percent and input capacity in Btu/h. 10 CFR 429.24(b)(1)–(2). These requirements provide for certifying compliance with the April 16, 2013 thermal efficiency standards. The amended standards are based on a different metric: integrated thermal efficiency. (*See* 88 FR 34624, 34625). In the September 2023 CCE NOPR, DOE proposed to update these certification requirements and align them with the energy conservation standards outlined in the May 2023 Pool Heaters Final Rule. 88 FR 67458, 67470. DOE additionally proposed general certification requirements for consumer pool heaters. *Id.* DOE discusses these updates in the following paragraphs.

The current standards for consumer pool heaters at 10 CFR 430.32(k) provide only minimum thermal efficiency (''TE'') requirements for gas-fired pool heaters, which does not include standby mode and off mode energy consumption. While the TE metric has historically been used to rate pool heaters, the current test procedure at appendix P to subpart B of 10 CFR part 430 (''appendix P'') includes provisions to determine the new integrated thermal efficiency (''TE_I'') metric, which includes standby mode and off mode energy consumption as required by EPCA. Hence, the May 2023 Pool Heaters Final Rule established new and amended standards for gas-fired pool heaters and electric pool heaters in terms of TE_I. 88 FR 34624, 34625. In the May 2023 Pool Heaters Final Rule, DOE stated that it would consider requirements for reporting and certifying TE_I in lieu of TE in a separate rulemaking. 88 FR 34624, 34636. DOE stated that it would also consider requirements for reporting and certifying active electrical power [22] along with the representative value for TE_I in a separate rulemaking. *Id.*

In the pool heaters energy conservation standards NOPR rulemaking (''April 2022 Pool Heaters

[20] EER is calculated in section 4.9 of appendix J as the weighted average load size divided by the sum of machine electrical energy, hot water heating energy, estimated drying energy, and combined low-power mode energy.

[21] ''Electric pool heater'' means a pool heater other than an electric spa heater that uses electricity as its primary energy source. An ''electric spa heater'' means a pool heater that (1) uses electricity as its primary energy source; (2) has an output capacity of 11 kW or less; and (3) is designed to be installed within a portable electric spa. 88 FR 34624, 34703. DOE did not establish standards for electric spa heaters in the May 2023 Pool Heaters Final Rule, so the certification requirements proposed in this NOPR pertain only to electric pool heaters.

[22] ''Active electrical power'' means the maximum electrical power consumption in active mode for an electric pool heater.

NOPR''), DOE addressed comments from AHRI regarding the level of precision required for representations of TE_I. 87 FR 22640, 22652 (Apr. 15, 2022). AHRI suggested that, for products where the efficiency ratings are less than 100 percent, a change of one or two points may make a difference; however, for products such as heat pump pool heaters with efficiency ratings that can exceed 300 percent, a difference of one or two points is inconsequential. *Id.* DOE stated that it would consider rounding requirements for consumer pool heaters in a separate rulemaking addressing certification reports. *Id.*

In the April 2022 Pool Heaters NOPR, DOE sought comment on changes to certification and enforcement requirements. *Id.* Rheem recommended that DOE update the certification provisions at 10 CFR 429.24 to require certification of TE_I and either input capacity or active electrical power as necessary. (Rheem, Docket No. EERE–2021–BT–STD–0020, No. 19 at p. 2) Rheem also recommended that DOE evaluate adding certification provisions—similar to the requirements for consumer water heaters—which allow for the propane gas version of a basic model to be rated using the natural gas version if the propane gas input rate is within 10 percent of the natural gas input rate. (Rheem, Docket No. EERE–2021–BT–STD–0020, No. 19 at p. 10)

In response to Rheem's request to use representations of natural gas basic models for propane basic models, in the September 2023 CCE NOPR, DOE noted that the water heater certification provisions referenced by the commenter are specifically for AEDMs (*see* 10 CFR 429.70(g)(1)). 88 FR 67458, 67470. DOE additionally stated that manufacturers of consumer pool heaters are not authorized to use AEDMs for representations pertaining to consumer pool heaters (*see* 10 CFR 429.70(a)), and the May 2023 Pool Heaters Final Rule did not establish this allowance. 88 FR 34624. Hence, in the September 2023 CCE NOPR, DOE did not propose special certification requirements for propane gas-fired pool heaters. 88 FR 67458, 67470.

For consumer pool heaters, DOE proposed to clarify provisions for certifying input capacity, establish provisions for certifying active electrical power, and establish certification requirements for TE_I (including rounding requirements) in the September 2023 CCE NOPR. 88 FR 67458, 67470. In the September 2023 CCE NOPR, DOE tentatively determined that certification of input capacity and active electrical power is necessary because these values are used to determine the TE_I standard that applies to a pool heater. 88 FR 67458, 67470.

In the September 2023 CCE NOPR, DOE proposed to clarify that representations of input capacity for gas-fired pool heaters must be made based on the average of the input capacities measured for each tested unit of the basic model, and rounded to the nearest 1,000 Btu/h. 88 FR 67458, 67470. There are currently no certification requirements for electric pool heaters. In the September 2023 CCE NOPR, DOE proposed to establish requirements for active electrical power similar to those for input capacity, because these two values are analogous to each other for electric pool heaters and gas-fired pool heaters, respectively. 88 FR 67458, 67470.

The May 2023 Pool Heaters Final Rule will require compliance with standards using the TE_I metric; hence, in the September 2023 CCE NOPR, DOE also proposed to require certification of this value. 88 FR 67458, 67470. The represented value for TE_I would be rounded to the nearest tenth of one percent for gas-fired pool heaters. However, in consideration of the comments from AHRI indicating that the level of precision does not need to be so stringent for electric pool heaters, DOE proposed that the value for TE_I would be rounded to the nearest 1 percent for electric pool heaters. *Id.* In the September 2023 CCE NOPR, DOE additionally noted that because manufacturers of gas-fired pool heaters must still ensure that these products comply with the current TE standards at 10 CFR 430.32(k), until compliance with new TE_I standards is mandatory, therefore, DOE was maintaining the requirement for certifying TE of gas-fired pool heaters for products that must comply with TE standards. 88 FR 67458, 67470–67471. DOE stated that reporting of TE_I would become mandatory upon the compliance date of the energy conservation standards adopted in the May 2023 Pool Heaters Final Rule, May 30, 2028, at which time manufacturers would no longer be required to report TE. 88 FR 67458, 67471. DOE requested comment on its proposal to require the reporting of input capacity, active electrical power, integrated thermal efficiency, and the proposed rounding requirements. *Id.*

Rheem commented in support of DOE requiring the reporting of input capacity, active electrical power, and integrated thermal efficiency, all of which, it noted, are necessary to determine compliance with the recently amended energy conservation standards. However, Rheem recommended that DOE explicitly state the required certification date for both electric and gas-fired pool heaters in the final rule. Rheem commented that its understanding is that gas-fired pool heaters must be filed by May 1, 2028, and comply with the energy conservation standards currently in effect, then re-filed by May 30, 2028, with models complying with the amended standards. Rheem commented it also understands for electric pool heaters, the initial filing date would be May 30, 2028. (Rheem, No. 15 at p. 2; Rheem, Public Meeting Transcript, No. 6 at pp. 16–17)

In terms of rounding requirements, Rheem commented it currently has heat pump pool heaters with active electrical power ranging between 1.15–7.6 kW (3,923–25,932 Btu/h) and by the compliance date of the energy conservation standards rulemaking, Rheem expects models above and below this range to be available. Rheem commented that the proposed rounding requirement would result in well over the ±5 percent allowed in the enforcement provisions at 10 CFR 429.134(cc). Rheem further noted that the integrated thermal efficiency standards that an electric pool heater must meet are based on active electrical power, and by rounding to the nearest 1,000 Btu/h, large jumps in the required integrated thermal efficiency are observed. Rheem requested that DOE reevaluate the active electrical power rounding requirements for electric pool heaters, as rounding to the nearest 100 Btu/h resulted in ~5-percent change from the actual active electrical power. (Rheem, No. 15 at pp. 2–3)

Regarding the required certification dates, DOE clarifies that, as Rheem stated in its comment, gas-fired pool heater ratings must be certified to DOE and comply with the energy conservation standards currently in effect by the required annual certification date of May 1. Manufacturers may choose to submit certification reports prior to the annual certification date. Regarding the amended standards compliance date of May 30, 2028, DOE notes that it makes its best effort to finalize certification templates to give certifiers sufficient time to prepare for the compliance dates of any upcoming amended energy conservation standards. Subsequently, gas-fired pool heaters can be certified in accordance with the energy conservation standards that take effect on May 30, 2028 in advance of the May 1 annual filing date to avoid having to submit multiple certification reports in a brief period of time. For electric pool heaters, which were only recently covered by energy conservation

standards adopted in the May 2023 Pool Heaters Final Rule, the initial required certification date will be May 30, 2028 (and manufacturers may similarly choose to submit certification reports in advance of the required date).

Regarding the rounding requirements proposed in the September 2023 CCE NOPR, DOE appreciates Rheem's comments and has reconsidered the rounding requirements proposed for reporting of active electric power (''PE''), for electric pool heaters. In the September 2023 CCE NOPR, DOE proposed that PE be reported and rounded to the nearest 1,000 Btu/h, in alignment with the reporting and rounding requirements for input capacity of gas-fired pool heaters. 88 FR 67458, 67470. Energy conservation standards for pool heaters are set by the integrated thermal efficiency metric (''TE_I''), and the efficiency level is a function of PE for electric pool heaters, and input capacity for gas pool heaters. Based on its own analysis of the range of PE values that exist on the electric pool heater market, DOE agrees with Rheem that rounding PE to the nearest 1,000 Btu/h would result in large ''jumps'' in the required TE_I, particularly for electric pool heaters with lower PE values. Furthermore, the product-specific enforcement provisions for pool heaters state that if the PE value found during testing deviates from the certified value by more than 5 percent, DOE would use the tested value instead of the certified value as the basis for calculation of the TE_I standard. (10 CFR 429.134(cc)(2)(ii)) Therefore, if the certified value is, as a result of the rounding requirements, necessarily going to deviate from the actual PE by more than 5 percent, this would mean that the minimum TE_I value used by DOE to determine compliance could consistently be different from the minimum TE_I value that would correspond to the product's certification—in other words, there would be greater uncertainty regarding which minimum TE_I value manufacturers must design their products to meet.

DOE has concluded that a tighter input capacity rounding requirement for electric pool heaters than for gas-fired pool heaters is justified, due to the fact that, based on DOE's observations, the median PE for electric pool heaters currently on the market is 17,500 Btu/h whereas the median input capacity for gas-fired pool heaters is 266,000 Btu/h. That is, because the typical PE values for electric pool heaters are much smaller than the typical input capacity values for gas-fired pool heaters, it is justifiable for the rounding requirements for PE to be tighter in order to be more proportional to the ratings themselves. A rounding requirement of 100 Btu/h, as suggested by Rheem, allows for a more accurate calculation of the applicable standard for electric pool heaters (*i.e.,* it reduces the size of the ''jumps'' in the standard that the commenter had noted). Secondly, the tighter rounding requirement better ensures the measured PE and the certified PE remain within 5 percent of each other. Based on DOE research, the smallest heat pump electric pool heaters on the market today may have PE values of about 4,000 Btu/h, and a variation in certification due to rounding to the nearest 100 Btu/h would constitute a deviation of less than 5 percent, which is the threshold included in 10 CFR 429.134(cc)(2)(ii) for the use of the certified PE value during enforcement testing. By contrast, a rounding requirement of 1,000 Btu/h could result in a deviation of over 5 percent. Lastly, DOE has determined that adopting a rounding requirement of 100 Btu/h for PE would result in no change in compliance for electric heat pump pool heaters currently on the market compared to a rounding requirement of 1,000 Btu/h, as these pool heaters are not currently subject to energy conservation standards.

Therefore, in order to improve the accuracy of the TE_I standards calculated based on PE values for electric pool heaters, DOE adopts a requirement that PE be reported and rounded to the nearest 100 Btu/h in this final rule.

DOE is adopting all other requirements for pool heaters as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align pool heater certification reporting requirements with the energy conservation requirements that would be applicable to pool heaters, as finalized in the May 2023 Pool Heaters Final Rule. 88 FR 67458, 67471.

For gas-fired pool heaters, manufacturers currently report TE as a percentage and input capacity in Btu/h. As a result of the amended standards, manufacturers of gas-fired pool heaters would be required to report TE_I as a percentage in lieu of TE when certifying compliance with the revised standards. For electric pool heaters, manufacturers are not currently required to submit certification reports as there are no applicable standards at this time. As a result of the amended standards, manufacturers of electric pool heaters would be required to report TE_I as a percentage and active electrical power in Btu/h. 88 FR 34624, 34704.

In the September 2023 CCE NOPR, DOE tentatively determined that these proposed amendments would not impose additional costs for manufacturers of gas-fired pool heaters because manufacturers of gas-fired pool heaters are already submitting certification reports to DOE and should have the information that DOE is proposing to collect as part of this rulemaking readily available. DOE stated that it did not believe the revised reporting requirements would cause any appreciable increase in any manufacturer's reporting burden or hours compared to certifying under current gas-fired pool heater requirements. For electric pool heaters, manufacturers are not currently required to submit certification reports to DOE because electric pool heaters are not currently subject to any applicable energy conservation standards. Any manufacturer of electric pool heaters would be required to submit certification reports for electric pool heaters upon the compliance date of the amended energy conservation standards, May 30, 2028. 88 FR 34624, 34704.

Rheem commented that it expects the certification and reporting costs of the amendments proposed for pool heaters to increase, but this increase will not be overly burdensome. (Rheem, No. 15 at pp. 3–4)

In this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for gas-fired pool heaters. Costs associated with the new reporting requirements pertaining to electric pool heaters are discussed in section IV.C of this document. Compliance with the new and amended reporting requirements is not required until the compliance date of the associated energy conservation standards.

F. Dehumidifiers

DOE is amending the reporting requirements for dehumidifiers, which DOE defines as products—other than portable air conditioners, room air conditioners, or packaged terminal air conditioners—that are self-contained, electrically operated, and mechanically encased assemblies consisting of (1) a refrigerated surface (evaporator) that condenses moisture from the atmosphere; (2) a refrigerating system, including an electric motor; (3) an air-circulating fan; and (4) a means for collecting or disposing of the condensate. 10 CFR 430.2. Use of appendix X1 to subpart B of 10 CFR part

430 (''appendix X1'') is currently required for any representations of energy use or efficiency of portable and whole-home dehumidifiers, including demonstrating compliance with the currently applicable energy conservation standards. Consequently, appendix X is obsolete for dehumidifiers manufactured on or after June 13, 2019. Therefore, DOE is removing the outdated appendix X reporting requirements consistent with the removal of appendix X in the test procedure final rule published on July 26, 2023 (''July 2023 Dehumidifiers Final Rule''). 88 FR 48035.

1. Reporting

Under the existing requirements in 10 CFR 429.36, manufacturers must report: energy factor in liters per kilowatt hour (''liters/kWh'') and capacity in pints per day when certifying compliance with dehumidifiers tested in accordance with appendix X. 10 CFR 429.36(b)(2)(i). However, use of appendix X is no longer permitted for compliance because use of appendix X1 is required to demonstrate compliance with standards for products manufactured on or after June 13, 2019, and the July 2023 Dehumidifiers Final Rule removed appendix X. 88 FR 48035. In the September 2023 CCE NOPR, DOE proposed to remove the outdated appendix X certification requirements consistent with the removal of appendix X that was proposed at that time (see 87 FR 35286) and requested comment on its proposal. 88 FR 67458, 67471.

AHAM commented it had no objection to the removal of appendix X per the June 2022 Dehumidifiers NOPR as appendix X1 is now required to demonstrate compliance with standards for products manufactured on or after June 13, 2019. (AHAM, No. 16 at p. 4)

For the reasons discussed, DOE is finalizing its proposal and removing the outdated appendix X certification requirements, as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align dehumidifier certification reporting requirements with the appendix X1 test procedure requirements, use of which was required beginning on June 13, 2019, by removing the appendix X requirements applicable to dehumidifiers manufactured prior to June 13, 2019. 88 FR 67458, 67471.

In the September 2023 CCE NOPR, DOE stated that it tentatively determined that the proposed amendments would not impose additional costs for manufacturers because the only proposed amendments were the removal of outdated requirements. DOE did not propose any amendments to the reporting requirements associated with appendix X1 and proposed to remove certification requirements associated with a prior appendix. Therefore, DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours compared to certifying under current dehumidifier requirements. *Id.*

DOE did not receive any comments on the certification reporting costs of the amendments proposed for dehumidifiers. In this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for Dehumidifier manufacturers.

For the reasons discussed in the prior paragraphs, in this final rule DOE is removing the outdated reporting requirements associated with appendix X, as proposed in the September 2023 CCE NOPR.

G. External Power Supplies

DOE is amending the reporting requirements for EPSs. DOE defines an EPS as an external power supply circuit that is used to convert household electric current into direct current or lower-voltage AC current to operate a consumer product. 10 CFR 430.2. In the test procedure final rule published on August 19, 2022, DOE amended the appendix Z test procedure for EPSs. 87 FR 51200. Consistent with that final rule, DOE is amending the reporting requirements for EPSs.

1. Reporting

Under the existing requirements in 10 CFR 429.37(b)(2), manufacturers must report the following based on the EPS type:

For EPSs, manufacturers currently report the average active mode efficiency as a percentage, no-load mode power consumption in watts, nameplate output power in watts, and, if missing from the nameplate, the output current in amperes of the basic model or the output current in amperes of the highest- and lowest-voltage models within the external power supply design family.

For switch-selectable single-voltage EPSs, manufacturers currently report the average active mode efficiency as a percentage, no-load mode power consumption in watts using the lowest and highest selectable output voltages, nameplate output power in watts, and, if missing from the nameplate, the output current in amperes.

For adaptive single-voltage EPSs, manufacturers currently report the average active-mode efficiency as a percentage at the highest and lowest nameplate output voltages, no-load mode power consumption in watts, nameplate output power in watts at the lowest and highest nameplate output voltages, and, if missing from the nameplate, the output current in amperes at the lowest and highest nameplate output voltages.

For EPSs that are exempt from no-load mode requirements, manufacturers currently report a statement that the product is designed to be connected to a security or life safety alarm or surveillance system component, the average active-mode efficiency as a percentage, the nameplate output power in watts, and if missing from the nameplate, the certification report must also include the output current in amperes of the basic model or the output current in amperes of the lowest- and highest-voltage models within the external power supply design family. Manufacturers of these exempt external power supplies are additionally required to report, if the aggregate total number of exempt EPSs sold as spare and service parts exceeds 1,000 units across all models: the importer or domestic manufacturer's name and address, the brand name, and the number of units sold during the most recent 12-calendar-month period ending on July 31. 10 CFR 429.37(b)(3) and 10 CFR 429.37(c).

These requirements for certifying compliance with the energy conservation standards are applicable to EPSs manufactured on or after February 10, 2014. In this final rule, DOE is aligning the reporting requirements with the amended appendix Z test procedure, use of which was required beginning September 19, 2022, and adopting general certification requirements for EPSs. DOE discusses these updates in the sections as follows.

a. Output Cord Specifications

DOE's amended EPS test procedure requires that EPSs be tested with the output cord they are shipped with. For EPSs not shipped with an output cord, the EPS must be tested with a manufacturer's recommended output cord. For EPSs not shipped with an output cord and for which the manufacturer does not recommend an output cord, the amendments specify that the EPS must be tested with a 3-foot-long output cord with a conductor thickness that is minimally sufficient to carry the maximum required current. *See* section 4(g) of appendix Z.

To better align the reporting requirements with the test procedure, in the September 2023 CCE NOPR, DOE proposed to add a reporting requirement of the included output cord specifications (gauge and length); for EPSs not shipped with an output cord, the specifications (gauge and length) for the manufacturer's recommended output cord would be provided. 88 FR 67458, 67472. For EPSs not shipped with an output cord and for which the manufacturer does not recommend an output cord, the gauge of the 3-foot-long output cord will be provided. *Id.* DOE requested comment on these proposed requirements. *Id.*

During the NOPR public meeting, AHAM asked the purpose of collecting information regarding the output cord specification in certification reports as opposed to some other avenue. (AHAM, Public Meeting Transcript, No. 6 at pp. 18–19) Additionally, in written comments, AHAM commented it did not object to DOE's proposals regarding aligning EPS reporting requirements with the amended appendix Z test procedure and proposing general certification requirements; adding a reporting requirement of the included output cord; and not including manufacturer specifications for EPSs not shipped with an output cord (instead, the gauge of the 3-foot-long output cord will be provided). (AHAM, No. 16 at p. 5)

ASAP *et al.* commented requesting DOE to provide additional clarity regarding EPS reporting provisions for output cords. ASAP *et al.* expressed concern that the term ''specifications'' is too vague and asked that, for additional clarity, DOE list the specifications so the specific relevant information necessary for the performance validation of EPSs could be collected. ASAP *et al.* additionally noted that during the NOPR public meeting, gauge and length were listed as specifications. (ASAP *et al.,* No. 14 at p. 2)

As stated during the NOPR public meeting, the purpose of collecting information related to the output cord is to ensure that output cord requirements for EPSs that are not shipped with output cords are met and to ensure that DOE is able to recreate the testing conditions for verification testing. DOE notes that it identified the output cord specifications to be reported as wire gauge and length in the September 2023 CCE NOPR and the NOPR public meeting. *See* 88 67458, 67472. Accordingly, DOE clarifies that the output cord specifications to be reported are effective wire gauge and length, and DOE is aligning 10 CFR 429.37(b)(2) and the corresponding EPS reporting templates accordingly.

For the reasons discussed, in this final rule, DOE is adopting the amendments as clarified from the September 2023 CCE NOPR.

b. Output Voltage

In DOE's current EPS test procedure and energy conservation standards, determining factors for EPS type and product class are the nature of the output voltage and its measured value. Output voltage type (*i.e.,* AC, DC, multiple voltage and/or adaptive) determines the applicable portion of the test procedure and the template that must be used for certification purposes. The measured value of the voltage determines whether the EPS falls within the basic or low voltage product class. To better align the reporting requirements with the test procedure and energy conservation standards for EPSs, DOE proposed to add a reporting requirement for the measured output voltage for each port in the September 2023 CCE NOPR. 88 FR 67458, 67472. DOE requested comment on this proposed requirement. *Id.*

AHAM commented that it did not object to DOE's proposal for EPSs regarding adding a reporting requirement for the measured output voltage for each port. (AHAM, No. 16 at p. 5)

For the reasons discussed, in this final rule, DOE is adopting the amendments as proposed in the September 2023 CCE NOPR.

c. Additional Date Reporting Requirements for Exempt EPSs

To further clarify the time period during which the exempt EPSs were sold, DOE proposed to require the manufacturer to report the applicable timeframe of which the number of exempt EPSs were sold in the September 2023 CCE NOPR. 88 FR 67458, 67472. DOE requested comment on this proposed requirement. *Id.*

AHAM commented that it did not object to DOE's proposal for EPSs. (AHAM, No. 16 at p. 5)

For the reasons discussed, in this final rule, DOE is adopting the amendment as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align EPS certification reporting requirements with the revised appendix Z test procedure requirements, use of which was required beginning September 19, 2022. 88 FR 67458, 67472.

For switch-selectable single-voltage EPSs, manufacturers currently report the average active mode efficiency as a percentage, no-load mode power consumption in watts using the lowest and highest selectable output voltages, nameplate output power in watts, and, if missing from the nameplate, the output current in amperes, and would additionally report included or recommended output cord specifications and the measured output voltage at the lowest and highest selectable output voltages if the proposed amendments are adopted.

For adaptive single-voltage EPSs, manufacturers currently report the average active-mode efficiency as a percentage at the highest and lowest nameplate output voltages, no-load mode power consumption in watts, nameplate output power in watts at the lowest and highest nameplate output voltages, and, if missing from the nameplate, the output current in amperes at the lowest and highest nameplate output voltages, and would additionally report included or recommended output cord specifications and the measured output voltage at the lowest and highest nameplate output voltages if the proposed amendments are adopted.

For EPSs that are exempt from no-load mode requirements, manufacturers currently report a statement that the product is designed to be connected to a security or life safety alarm or surveillance system component, the average active-mode efficiency as a percentage, the nameplate output power in watts, and if missing from the nameplate, the certification report must also include the output current in amperes of the basic model or the output current in amperes of the lowest- and highest-voltage models within the external power supply design family, and would additionally report included or recommended output cord specifications and the measured output voltage or the measured output voltage of the lowest and highest voltage models within the external power supply design family, and the timeframe of which these exempt EPSs were sold, if the proposed amendments are adopted.

For all other EPSs, manufacturers currently report the average active mode efficiency as a percentage, no-load mode power consumption in watts, nameplate output power in watts, and, if missing from the nameplate, the output current in amperes of the basic model or the output current in amperes of the highest- and lowest-voltage models within the external power supply design family.

In the September 2023 CCE NOPR, DOE noted that under the proposed amendments manufacturers would additionally report included or recommended output cord specifications and the measured output voltage or the measured output voltage of the lower and highest voltage models within the EPS design family if the proposed amendments are adopted. *Id.* at 88 FR 67473.

In the September 2023 CCE NOPR, DOE tentatively determined that the proposed amendments would not impose additional costs for manufacturers because manufacturers of EPSs are already submitting certification reports to DOE and should have readily available the information that DOE is proposing to collect as part of this rulemaking. *Id.* DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what EPS manufacturers are currently doing today. *Id.*

DOE did not receive any comments on the certification reporting costs of the amendments proposed for EPSs. As a result, in this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for EPSs.

For the reasons discussed in the prior paragraphs and in the September 2023 CCE NOPR, in this final rule, DOE is adopting the reporting requirements for EPSs as proposed in the September 2023 CCE NOPR. Compliance with these amended reporting requirements is not required until the next annual certification report filing date on or after 210 days after publication of this final rule.

H. Battery Chargers

DOE is amending the reporting requirements for battery chargers, which DOE defines as devices that charge batteries for consumer products, including battery chargers embedded in other consumer products. 10 CFR 430.2. In the test procedure final rule published on September 8, 2022 (''September 2022 Battery Charger Final Rule''), DOE amended the scope of coverage and test procedure provisions for battery chargers. 87 FR 55090. On March 15, 2023, DOE published an energy conservation standards NOPR for battery chargers that was developed based on the amended test procedure. 88 FR 16112. Consistent with the test procedure final rule and the energy conservation standards NOPR, DOE is reorganizing current reporting requirements and adding new reporting requirements that will become mandatory upon the compliance date of any future amended energy conservation standards for battery chargers.

1. Reporting

Under the existing requirements in 10 CFR 429.39, manufacturers must report: (1) the nameplate battery voltage of the test battery in volts, the nameplate battery charge capacity of the test battery in ampere-hours, and the nameplate battery energy capacity of the test battery in watt-hours; (2) the represented values for the maintenance mode power (P_m), standby mode power (P_{sb}), off mode power (P_{off}), battery discharge energy (E_{batt}), 24-hour energy consumption (E_{24}), duration of the charge and maintenance mode test (t_{cd}), and unit energy consumption (UEC); and (3) the manufacturer and model of the test battery, and the manufacturer and model, when applicable, of the external power supply. 10 CFR 429.39. These requirements provide for certifying compliance with the energy conservation standards applicable to battery chargers manufactured on or after June 13, 2018. DOE is reorganizing these requirements and aligning the reporting requirements with the amended test procedure at appendix Y to subpart B of part 430 (''appendix Y''), use of which was required beginning on March 7, 2023. DOE is also adopting new reporting requirements to the certification requirements for battery chargers tested under appendix Y1, use of which would be required upon the compliance date of any future amended energy conservation standards for battery chargers. *Id.* DOE discusses these updates in the sections as follows.

a. Reporting Requirements for Battery Chargers Tested Under Appendix Y1

In the September 2022 Battery Charger Final Rule, DOE established a new appendix Y1 for the multi-metric testing approach for battery chargers. Under the new multi-metric testing approach, instead of computing and reporting the UEC value, which captures the performance of a battery charger in all modes of operation into a single metric, manufacturers are required to calculate and report the battery charger energy and power values for each mode of operation separately. These modes consist of active charge mode, standby mode, and off mode. 87 FR 55090, 55100–55105.

In the September 2023 CCE NOPR, DOE proposed to update the battery charger reporting requirements in 10 CFR 429.39 to align with the new multi-metric test procedure by (1) removing the UEC reporting requirement for both wired and fixed-location wireless battery chargers tested under appendix Y1, and (2) adding reporting requirements for active charge energy E_a and no-battery mode power P_{nb}. 88 FR 67458, 67473. Additionally, DOE proposed to include active charge energy E_a (as measured in accordance with appendix Y1) as an optional reporting requirement when certifying compliance with the existing appendix Y requirements to assist DOE in gathering data for any future amended energy conservation standards. *Id.* Whether manufacturers choose to report this proposed optional information would have no impact on the validity of representations made when certifying compliance with appendix Y or the current energy conservation standards. DOE requested comment on its proposed reporting requirements for battery chargers tested under appendix Y1. *Id.*

During the NOPR public meeting, AHAM asked whether DOE has any enforcement policy on whether it can enforce an optional reporting requirement that may be inaccurate. (AHAM, Public Meeting Transcript, No. 6 at p. 21) In written comments, AHAM commented that including active charge energy E_a (as measured in accordance with appendix Y1) as an optional reporting requirement is not the appropriate mechanism for data collection as it falls outside the scope of the PRA. (AHAM, No. 16 at p. 5) AHAM commented that if DOE wishes to collect data for future amended standards, it should do so through that rulemaking process, not through certification, compliance, and enforcement provisions. (AHAM, No. 16 at p. 5; AHAM, No. 9 at p. 2) Further, AHAM stated that DOE can always seek such data under its authority to request records. AHAM commented that by including proposed collections of information in the appropriate processes, DOE will be able to demonstrate practical utility and appropriateness of the information for its intended use and other requirements of the PRA. (AHAM, No. 9 at p. 2) AHAM stated that if DOE chooses to move forward with this optional reporting, DOE should also exercise discretion while manufacturers learn to use it and the reporting template should clearly distinguish required and optional elements, as should any public-facing documentation. (AHAM, No. 16 at p. 5)

DOE notes that if manufacturers are making energy use representations for a DOE regulated product or equipment, the specified energy representations

would need to be made in accordance with DOE's corresponding test procedure and certification requirements. Such energy representations made would be subject to DOE's enforcement requirements in subpart C of 10 CFR 429. Based on stakeholder comments received and to avoid any potential confusion of the active charge energy being an optional metric, DOE is not adopting the proposal to include the optional active charge energy reporting requirement when certifying compliance according to appendix Y in this final rule.

ASAP *et al.* commented that in the proposed regulatory text at 10 CFR 429.39, there was an inconsistency in the style of maintenance mode power, $P_{m,}$ wherein the letter ''m'' was written as a subscript in all references except in 10 CFR 429.39(a)(1)(ii). (ASAP *et al.,* No. 14 at p. 4) DOE notes that the letter ''m'' should indeed be a subscript in the regulatory text and made that correction in the regulatory text section of this final rule.

DOE is adopting the other September 2023 CCE NOPR proposed amendments regarding appendix Y1 in this final rule as proposed in the September 2023 CCE NOPR.

b. Reporting Requirements for Open-Placement Wireless Battery Chargers Tested Under Appendix Y1

In the September 2022 Battery Charger Final Rule, DOE expanded the battery charger testing scope to include testing of fixed-location wireless chargers in all modes of operation and testing of open-placement wireless chargers in no-battery mode only. 87 FR 55090, 55095–55098.

Under the current appendix Y test procedure, all modes of operation would need to be tested for battery chargers covered under the test procedure scope. As such, there was no need to differentiate the reporting requirements for wired vs. wireless chargers. However, under appendix Y1, open-placement wireless chargers will only need to be tested in the no-battery mode of operation. Accordingly, DOE proposed in the September 2023 CCE NOPR to further specify that for open-placement wireless chargers, only the no-battery mode power, P_{nb}, would need to be reported. 88 FR 67458, 67473. DOE requested comment on its proposed reporting requirements for open-placement battery chargers tested under appendix Y1. *Id.*

DOE did not receive any comments on the proposal to further specify the reporting requirements for open-placement wireless battery chargers tested under appendix Y1. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the amendments as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align battery charger certification reporting requirements with the amended appendix Y test procedural requirements, use of which was required beginning on October 11, 2022, and the newly established appendix Y1 test procedure, use of which would be required at such time as compliance is required with any amended energy conservation standards based on these new metrics as measured using appendix Y1. 88 FR 67458, 67473.

For wired chargers tested under current appendix Y, manufacturers currently report (1) the nameplate battery voltage of the test battery in volts, the nameplate battery charge capacity of the test battery in ampere-hours, and the nameplate battery energy capacity of the test battery in watt-hours; and (2) the represented values for the P_m, P_{sb}, P_{off}, E_{batt}, E_{24}, t_{cd}, and UEC; and (3) the manufacturer and model of the test battery, and the manufacturer and model, when applicable, of the external power supply. In the September 2023 CCE NOPR, DOE noted that if the proposed amendments were adopted, when tested under appendix Y1, instead of reporting UEC and E_{24} values, manufacturers would report the active charge energy (E_a) and no-battery mode power, P_{nb}. 88 FR 67458, 67474.

In the September 2023 CCE NOPR, DOE additionally noted for fixed-location wireless chargers tested under appendix Y1, manufacturers would need to report (1) the nameplate battery voltage of the test battery in volts, the nameplate battery charge capacity of the test battery in ampere-hours, and the nameplate battery energy capacity of the test battery in watt-hours; (2) the represented values for the P_m, P_{nb}, P_{sb}, P_{off}, E_{batt}, E_a, and duration of the charge and t_{cd}; and (3) the manufacturer and model of the test battery, and the manufacturer and model—when applicable—of the external power supply, if the proposed amendments were adopted. *Id.*

For open-placement wireless chargers tested under appendix Y1, DOE noted that manufacturers would need to report the represented values for P_{nb}, and the manufacturer and model, when applicable, of the EPS, if the proposed amendments were adopted. *Id.*

In the September 2023 CCE NOPR, DOE tentatively determined that the proposed amendments would not impose additional costs for manufacturers because manufacturers of battery chargers are already submitting certification reports to DOE and the additional information that DOE was proposing to collect as part of this rulemaking should be readily available to manufacturers and would not require additional testing. 88 FR 67458, 67474. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what battery charger manufacturers are currently doing today. *Id.*

DOE did not receive any comments on the certification reporting costs of the amendments proposed for battery chargers. In this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for battery chargers.

For the reasons discussed in the prior paragraphs, in this final rule DOE is adopting the reporting requirements for battery chargers as proposed in the September 2023 CCE NOPR, other than removing the optional active charge energy reporting requirement when certifying compliance according to appendix Y. Compliance with these amended reporting requirements is not required until the use of appendix Y1 is required.

I. Computer Room Air Conditioners

DOE is amending the reporting requirements for CRACs. DOE defines ''computer room air conditioner'' as a basic model of commercial package air-conditioning and heating equipment (packaged or split) that is: marketed for use in computer rooms, data processing rooms, or other information technology cooling applications; and is not a covered consumer product under 42 U.S.C. 6291(1)–(2) and 42 U.S.C. 6292. A CRAC may be provided with, or have as available options, an integrated humidifier, temperature and/or humidity control of the supplied air, and reheating function. 10 CFR 431.92. In the energy conservation standards final rule published in the **Federal Register** on June 2, 2023 (''June 2023 CRACs Final Rule''), DOE amended the energy conservation standards for CRACs and adopted the NSenCOP metric. 88 FR 36392. Consistent with the June 2023 CRACs final rule, DOE is amending the reporting requirements for CRACs.

1. Reporting

Under the existing reporting requirements for CRACs in 10 CFR 429.43(b)(2)(ix), manufacturers must report: net sensible cooling capacity in

Btu/h, net cooling capacity in Btu/h, configuration (upflow/downflow), economizer presence (or lack thereof), condenser medium (air, water, or glycol-cooled), SCOP, and rated airflow in standard cubic feet per minute (''SCFM''). These requirements provide for certifying compliance with the standards applicable to CRACs manufactured on or after October 29, 2012, for units of capacity less than 65,000 Btu/hr, and October 29, 2013, for the remainder of covered CRACs. 10 CFR 431.97(f)(1). DOE is updating these requirements and aligning the reporting requirements with the energy conservation standards in the June 2023 CRACs final rule. DOE is also adopting other general certification requirements for CRACs to better ascertain applicable standards and represented values, including whether the basic model is split system or single-package, unit configuration, and refrigerant utilized. DOE discusses these updates in the sections as follows.

a. Revising Certification Reporting Requirements at 10 CFR 429.43(b)(2)(ix) When Certifying With NSenCOP Standards

Manufacturers are currently required to certify compliance with SCOP standards, in addition to the other equipment-specific reporting requirements. In the September 2023 CCE NOPR, DOE proposed to amend the certification requirements to allow certifying compliance with NSenCOP standards and related equipment-specific reporting requirements. 88 FR 67458, 67474 (Sept. 29, 2023). Specifically, DOE proposed to place the existing reporting requirements for SCOP standards in new 10 CFR 429.43(b)(2)(ix)(A), and to place the new reporting requirements for NSenCOP standards in new 10 CFR 429.43(b)(2)(ix)(B). *Id.* The NSenCOP standard reporting requirements include the net sensible cooling capacity in Btu/h, the net total cooling capacity in Btu/h, whether the basic model is split system or single-package, the configuration (*e.g.,* downflow, upflow ducted, upflow non-ducted, horizontal flow, ceiling-mounted ducted, ceiling-mounted non-ducted), fluid economizer presence (or lack thereof), condenser heat rejection medium (air, water, or glycol-cooled), NSenCOP, rated airflow in SCFM, and the refrigerant used to determine the represented values at 10 CFR 429.43(b)(2)(ix). DOE requested comment on these proposed requirements. *Id.*

ASAP *et al.* stated that in the proposed 10 CFR 429.43(ix)(B) and the draft certification template, the listed configurations of a CRAC model for which a manufacturer would need to certify compliance with an NSenCOP standard do not include roof-mounted or wall-mounted types. However, the commenters noted that DOE included these configurations in the test procedure final rule for CRACs published in the **Federal Register** on April 11, 2023 (''April 2023 TP Final Rule;'' 88 FR 21816), which also reflects the additions in AHRI 1360–2022 (I–P), ''Performance Rating of Computer and Data Processing Room Air Conditioners.'' For completeness, ASAP *et al.* requested DOE to include roof-mounted or wall-mounted configurations in the certification reporting requirements and expand the listed product codes in the product certification template to include these configurations. (ASAP *et al.,* No. 14 at p. 2)

In response, DOE would like to clarify that while the April 2023 TP Final Rule includes provisions for rating roof-mounted and wall-mounted CRAC configurations in terms of the NSenCOP metric, there are currently no NSenCOP standards for roof-mounted or wall-mounted CRACs. As such, the certification reporting requirements and the product certification template do not include the roof-mounted or wall-mounted CRAC configurations. Should standards in terms of NSenCOP be adopted for roof-mounted or wall-mounted CRACs, DOE will consider adjustments to the certification reporting requirements and product certification template to reflect those CRAC configurations.

AHRI commented in support of CRAC certification reporting requirements to make them consistent with amended energy conservation standards established in the June 2023 CRACs Final Rule, noting that compliance with the amended standards is required on and after May 28, 2024. AHRI commented that the final rule added 66 equipment class categories, bringing the total number of Federally-regulated equipment classes to 120, which, AHRI stated, prompted DOE to propose 120 product group codes. However, AHRI suggested that the indication of upflow or downflow configuration for applicable products would be better supplied in a column, as reducing the number of product group codes would reduce the burden in terms of AHRI's programming and manufacturers' data entry. AHRI urged DOE to complete finalization of this rulemaking and final templates for issuance no later than January 2, 2024, in order to allow for appropriate time to comply for newly scoped-in equipment classes. (AHRI, No. 18 at pp. 7–8)

In response to AHRI's recommendation that the indication of upflow or downflow configurations be supplied in a column when dealing with product group codes for CRACs, DOE notes that upflow and downflow equipment are distinctly separated with different applicable energy conservation standards. DOE typically assigns different product group codes to classes of products or equipment with different energy conservation standards and, therefore, considers it appropriate that the upflow and downflow configurations be represented by different product group codes. As such, DOE has determined to maintain upflow and downflow configurations of CRACs under different product codes.

AHRI expressed support for DOE's proposal to require the reporting of net sensible cooling capacity in Btu/h; net total cooling capacity in Btu/h; whether the basic model is split system or single-package; the configuration (*e.g.,* downflow, upflow ducted, upflow non-ducted, horizontal flow, ceiling-mounted ducted, ceiling-mounted non-ducted); fluid economizer presence (or lack thereof); condenser heat rejection medium (air, water, or glycol-cooled); NSenCOP; rated airflow in SCFM; and the refrigerant used to determine the represented values. (AHRI, No. 18 at p. 8)

ASAP *et al.* commented by providing the following suggested editorial change to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.43(b)(2)(ix)(B): replacing the term ''glycol-cooled'' with ''glycol solution.'' (ASAP *et al.,* No. 14 at p. 5)

In response, DOE notes that the use of ''glycol-cooled'' to describe cooling mediums is consistent with the regulatory text used in the energy conservation standards specified in 10 CFR 431.97(e), which mirrors the terminology used in ASHRAE Standard 90.1–2022.[23] To maintain consistent terminology, DOE has determined not to change the terminology used at 10 CFR 429.43(b)(2)(ix)(B).

Based upon stakeholder support, as well as the reasons discussed in the preceding paragraphs, DOE is adopting the provisions for CRAC certification reporting requirements for NSenCOP standards as proposed in the September 2023 CCE NOPR.

[23] Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings, ASHRAE Standard 90.1–2022.

b. Adding Supplemental Testing Instructions for CRACs at 10 CFR 429.43(b)(4)(viii)

Currently, manufacturers must submit supplemental information regarding additional testing instructions, if applicable, and specify which special features, if any, were included in rating the basic model. 10 CFR 429.43(b)(4)(viii). The supplemental information submitted in PDF format allows for third-party testing of equipment. For CRACs, there are currently no specific requirements for the supplemental PDF. For SCOP certification, in the September 2023 CCE NOPR, DOE proposed to maintain the current requirements of 10 CFR 429.43(b)(4)(viii), but move them to 10 CFR 429.43(b)(4)(viii)(A). 88 FR 67458, 67474. For NSenCOP certification, DOE proposed to specify the information required in supplemental testing instructions that would enable independent testing of the relevant equipment and to align with the corresponding requirements for CUACs, where appropriate. *Id.* This includes, but is not limited to, supplementary information about compressor break-in period duration, control set points, optional motor/drive kits and associated settings, and any other additional testing instructions. DOE proposed to add these new provisions when certifying to NSenCOP in 10 CFR 429.43(b)(4)(viii)(B). *Id.*

In the September 2023 CCE NOPR, DOE noted that the proposed certification requirements provide further direction to the existing requirements and would not result in significant additional burden for manufacturers. DOE observed that where it identifies specific test-related information, the relevant information is already collected by or available to the manufacturer, and as such, reporting that information to DOE would result in minimal additional burden. DOE requested comments on its proposal. *Id.*

AHRI supported DOE's proposed supplemental testing instructions requirements for CRACs when certifying compliance with NSenCOP standards. (AHRI, No. 18 at p. 8)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the amendments related to the supplemental testing instructions for CRACs as proposed in the September 2023 CCE NOPR.

c. Certification of Model Numbers for Split Systems

DOE's current certification reporting requirements for CRACs at 10 CFR 429.43(b)(2)(ix) do not specify the model numbers that the manufacturer must certify. Specifically, for split systems, the current regulations do not explicitly require certification of both the outdoor and indoor unit model numbers. Therefore, in the September 2023 CCE NOPR, DOE proposed at 10 CFR 429.43(b)(6) to clarify that the manufacturer must certify individual model numbers for both the indoor unit and the outdoor unit. 88 FR 67458, 67475. DOE requested comment on this proposed requirement. *Id.*

AHRI commented that it did not object to DOE's proposal to require the reporting of both indoor unit and outdoor unit individual model numbers for split-system CRACs, because while not explicitly stated in the regulation, AHRI certification for CRACs is for matched split systems. (AHRI, No. 18 at p. 8; AHRI, Public Meeting, No. 6 at pp. 23–24) During the NOPR public meeting, AHRI sought additional information about how individual condensing units for such products may be distributed in the market. AHRI noted that for residential CAC/HPs, there are specific provisions for outdoor units with no match, but it does not seem that there would be a similar testing requirement for CRACs. (AHRI, Public Meeting Transcript, No. 6 at pp. 23–24)

In response, DOE notes that the Federal test procedure for CRACs does not include any test provisions specific to outdoor units with no match. As such, DOE is not adopting any CRAC certification provisions specific to outdoor units with no match.

For the reasons discussed, DOE is adopting the amendments to split-system model number reporting requirements as proposed in the September 2023 CCE NOPR.

d. AEDM Tolerance for NSenCOP

DOE's existing testing regulations allow the use of an AEDM in lieu of testing to simulate the efficiency of CRACs. 10 CFR 429.43(a). For models certified with an AEDM, results from DOE verification tests are subject to certain tolerances when compared to certified ratings. Currently, DOE specifies a 5-percent tolerance for CRAC verification tests for SCOP, identical to the current tolerance specified for single-point metrics (*i.e.,* EER and COP) for other categories of commercial air conditioners and heat pumps. *See* table 2 to paragraph (c)(5)(vi)(B) at 10 CFR 429.70. In alignment with the tolerance specified for SCOP, DOE proposed to specify a tolerance of 5 percent for CRAC verification tests for NSenCOP in the September 2023 CCE NOPR. 88 FR 67458, 67475. DOE requested comment on the proposed AEDM tolerance. *Id.*

During the NOPR public meeting, AHRI asked whether the tolerance of 5 percent added to the AEDM was consistent with other commercial products. (AHRI, Public Meeting Transcript, No. 6 at p. 26) DOE clarified that the AEDM tolerance for CRACs of 5 percent is consistent with other commercial products. (DOE, Public Meeting Transcript, No. 6 at p. 26) Subsequently, AHRI commented that it does not have any objection to DOE's proposal to specify a tolerance of 5 percent for CRAC verification tests for NSenCOP. (AHRI, No. 18 at p. 8)

For the reasons discussed, DOE is adopting the 5-percent tolerance to the AEDM for CRACs as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align CRAC certification reporting requirements with the amended energy conservation standards in the June 2023 CRACs Final Rule. 88 FR 67458, 67475.

In the September 2023 CCE NOPR, DOE tentatively determined that the proposed amendments would not impose additional costs for manufacturers because manufacturers of CRACs are already submitting certification reports to DOE and should have readily available the information that DOE was proposing to collect as part of this rulemaking. *Id.* DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what CRACs manufacturers are currently doing, and the Department requested comment on this tentative conclusion. *Id.*

AHRI commented that DOE has understated its estimate of certification reporting costs for the proposed CRAC amendments. On this point, the commenter argued that the scope of regulated equipment more than doubled with amended energy conservation standards established in the June 2023 CRACs Final Rule. Thus, AHRI stated that even with the proposed adoption of AEDMs, which AHRI supports, there is a substantial increase in burden that should be acknowledged. (AHRI, No. 18 at p. 8)

In response, DOE notes that AHRI did not provide any data or detailed explanation to support their claim of increased costs to manufacturers related to reporting. DOE estimated the burden associated with implementing amended energy conservation standards in the June 2023 CRACs Final Rule. As such, in this rulemaking, DOE is estimating

the burden associated only with certifying compliance to the amended standards. Because manufacturers are already required to submit certification reports pertaining to CRACs, DOE does not expect any additional burden to certify compliance with the amended reporting requirements, even with expanded coverage of CRACs. Based on the preceding rationale and the discussion in the September 2023 CCE NOPR, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours as compared to what CRACs manufacturers are currently doing today.

For the reasons discussed in the preceding paragraphs, in this final rule, DOE is adopting the reporting requirements for CRACs as proposed in the September 2023 CCE NOPR. Compliance with these amended reporting requirements is required 210 days after publication of this final rule.

J. Direct Expansion-Dedicated Outdoor Air Systems

DOE is establishing reporting requirements for DX–DOASes. DOE defines ''direct expansion-dedicated outdoor air system'' as a basic model of commercial package air-conditioning and heating equipment (packaged or split) that is a unitary dedicated outdoor air system [24] that is capable of dehumidifying air to a 55 °F dew point—when operating under Standard Rating Condition A as specified in Table 4 or Table 5 of AHRI 920 (I–P)–2020, ''2020 Standard for Performance Rating of DX-Dedicated Outdoor Air System Units, with Addendum 1'' (''AHRI 920–2020'') with a barometric pressure of 29.92 in Hg—for any part of the range of airflow rates advertised in manufacturer materials, and has a moisture removal capacity of less than 324 pounds per hour (''lb/h''). 10 CFR 431.92. In a final rule published in the **Federal Register** on November 1, 2022 (''November 2022 DX–DOAS Final Rule''), DOE adopted energy conservation standards for DX–DOASes. 87 FR 65651. Consistent with that final rule, DOE is establishing reporting requirements for DX–DOASes.

1. Reporting

Prior to the adoption of energy conservation standards in the November 2022 DX–DOAS Final Rule, there were no energy conservation standards for DX–DOASes in 10 CFR 431.97, nor were there reporting requirements for this equipment in 10 CFR 429.43.[25] Because DOE has now adopted energy conservation standards for DX–DOASes, DOE is establishing reporting requirements in alignment with the standards adopted in the November 2022 DX–DOAS Final Rule. DOE discusses these reporting requirements in the following sections.

a. Addition of Certification Requirements To Include the New Metrics ISMRE2 and ISCOP2

In the September 2023 NOPR, DOE proposed certification requirements for certifying compliance with the new energy conservation standards for DX–DOAS, expressed in terms of integrated seasonal moisture removal efficiency 2 (''ISMRE2'') and integrated seasonal coefficient of performance 2 (''ISCOP2''), as adopted in the November 2022 DX–DOAS Final Rule. 88 FR 67458, 67475. Specifically, DOE proposed to add a new section 10 CFR 429.43(b)(2)(xi)(A) and to require the following when certifying compliance with an ISMRE2 standard: the ISMRE2 in lb/kWh, the rated moisture removal capacity at Standard Rating Condition A according to AHRI 920–2020 (MRC in lb/h), and the rated supply airflow rate for 100 percent outdoor air applications (Q_{SA} in standard cubic feet per minute). *Id.* DOE noted that the moisture removal capacity is used for certifying compliance and the rated supply airflow rate must be specified to determine how to test a basic model according to the DOE test procedure at appendix B to subpart F of 10 CFR part 431. *Id.*

Additionally, DOE proposed to require the following at 10 CFR 429.43(b)(2)(xi)(B) when certifying compliance with an ISCOP2 standard in addition to an ISMRE2 standard: [26] the ISCOP2 in watts of heating per watts of power input (''W/W''). *Id.*

DOE also proposed at 10 CFR 429.43(b)(2)(xi)(C) to require the configuration of the basic model number (*i.e.,* ''single-package'' or ''split system'') to be reported. *Id.*

DOE proposed to include these certification provisions for DX–DOASes in 10 CFR 429.43(b), consistent with other commercial HVAC equipment. As a result, DOE noted in the September 2023 CCE NOPR that the general requirements applicable to certification reports outlined in 10 CFR 429.12 would apply to DX–DOASes, as currently outlined in the existing reporting requirements for commercial HVAC equipment at 10 CFR 429.43(b)(1). *Id.*

DOE sought comment on requiring the reporting of ISMRE2 and ISCOP2 to certify compliance with the standards applicable to DX–DOASes manufactured on or after May 1, 2024. 88 FR 67458, 67476. DOE also sought comment on reporting rated moisture removal capacity and rated supply airflow rate. *Id.* at 88 FR 67476.

AHRI supported the reporting of ISMRE2 and ISCOP2 to certify compliance with the energy conservation standards applicable to DX–DOASes, but requested DOE consider exercising its enforcement discretion to delay until January 1, 2025 enforcement for R–410A models manufactured on or after May 1, 2024. AHRI explained that the U.S. Environmental Protection Agency's (''EPA's'') Technology Transitions rule prohibiting the manufacture, import, or installation of residential and light CAC/HPs (including DX–DOASes) using refrigerant with GWPs of ≥700 on or after January 1, 2025 means that AHRI does not expect any R–410A packaged equipment to be installed after that date. AHRI commented that DX–DOAS are tested in the same chambers as HVAC equipment that is undergoing necessary testing with new low-GWP refrigerants, and occupying test chambers with R–410A equipment that will only be sold for a few months is burdensome and unnecessary. AHRI added that any low-GWP DX–DOAS equipment manufactured and offered for sale after May 1, 2024 should be listed on time. AHRI pointed out that third-party test laboratories have been significantly delayed making necessary upgrades that allow for testing of DX–DOAS over 10 tons with energy recovery ventilators using ''Option 1,'' or direct testing as steam generators are required in the psychrometric chambers to test the DX–DOAS's moisture removal capability. AHRI commented it has been assured that the upgrades to the larger test chamber (that can accommodate units over 10 tons) will be made by the end of 2023; however, this upgrade was originally slated for the beginning of

[24] DOE defines ''unitary dedicated outdoor air system'' as a category of small, large, or very large commercial package air-conditioning and heating equipment that is capable of providing ventilation and conditioning of 100-percent outdoor air and is marketed in materials (including but not limited to, specification sheets, insert sheets, and online materials) as having such capability.

[25] In the November 2022 DX–DOAS Final Rule, DOE adopted a requirement in 10 CFR 429.43(a)(3)(i) that the represented value of moisture removal capacity (''MRC'') be either between 95 and 100 percent of the mean of the measured capacities of the units in the selected sample rounded to the nearest lb/hr multiple using the same values as in Table 3 of AHRI 920–2020 or the MRC output simulated by an AEDM rounded to the nearest lb/hr multiple using the same values as in Table 3 of AHRI 920–2020. 87 FR 65651, 65658, 65667 (Nov. 1, 2022).

[26] Certification and compliance with both the applicable ISCOP2 and ISMRE2 standards are required for the air-source heat pump and water-source heat pump DX–DOAS equipment classes.

2023. AHRI commented that prioritizing the low-GWP DX–DOAS equipment testing would be the best use of limited testing resources. AHRI added that it supports DOE's proposals regarding reporting rated moisture removal capacity and rated supply airflow rate. (AHRI, No. 18 at pp. 8–9)

In response, the Department notes that DOE's testing regulations allow the use of an AEDM, in lieu of testing, to simulate the efficiency of DX–DOASes. 10 CFR 429.43(a). As a result, DOE notes that manufacturers may use AEDMs that are refrigerant agnostic to certify equipment to alleviate testing burdens. For these reasons, DOE is declining to delay enforcement of standards applicable to DX–DOASes for models that use R–410A until January 1, 2025, as requested by AHRI.

ASAP *et al.* commented by providing the following suggested editorial change to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.43(b)(2)(xi)(A): removing the word ''rate'' from ''the rated supply airflow rate for 100% outdoor air applications.'' (ASAP *et al.,* No. 14 at p. 4)

DOE notes that the terminology ''airflow rate'' is used throughout AHRI 920–2020,[27] which is the industry test standard adopted by reference in the DOE test procedure for DX–DOASes. As a result, to prevent confusion and to maintain consistency with the prevailing industry test standard, DOE is maintaining this language as proposed.

Accordingly, for the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting reporting requirements, as proposed in the September 2023 CCE NOPR, for certifying compliance with the new energy conservation standards for DX–DOASes.

b. Reporting Requirements for DX–DOASes With Ventilation Energy Recovery Systems

In the November 2022 DX–DOAS Final Rule, DOE adopted product-specific enforcement provisions for DX–DOASes in 10 CFR 429.134(s) in addition to the revised energy conservation standards. These enforcement provisions specify how DOE would determine the ISMRE2 and ISCOP2 values when conducting enforcement testing for DX–DOASes with Ventilation Energy Recovery Systems (''VERS''). As outlined in 10 CFR 429.134(s)(2)–(3), these provisions rely on values of VERS performance certified to DOE as the basis for determining the ISMRE2 and/or ISCOP2 of the basic model being tested in some scenarios.

To inform DOE's enforcement testing, in the September 2023 CCE NOPR, DOE proposed additional non-public certification reporting requirements for DX–DOASes with VERS in new subparagraph 10 CFR 429.43(b)(3)(iii). 88 FR 67458, 67476. In the September 2023 CCE NOPR, DOE noted that these reporting requirements would include the method of determination of the exhaust air transfer ratio (''EATR''), sensible effectiveness, latent effectiveness of the ventilation energy recovery system *(*name and version of certified performance modeling software or if the device was directly tested), the test method (*i.e.,* Option 1 or Option 2) for units rated based on testing, and motor control settings (including rotational speed) for energy recovery wheels—all of which would be used by DOE to determine ISMRE2 and/or ISCOP2 for enforcement testing and would be considered non-public information if adopted. DOE requested comment on its proposal to include reporting requirements for DX–DOASes with VERS. *Id.*

AHRI commented that it does not object to DOE's proposal to include reporting requirements for DX–DOASes with ventilation energy recovery systems. (AHRI, No. 18 at p. 9)

ASAP *et al.* commented by providing the following suggested editorial change to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.43(b)(2)(xi)(C)(3): moving the text ''(name and version of certified performance modeling software or if the device was directly tested)'' after the word ''EATR,'' which would, therefore, not include the sensible and latent effectiveness of the ventilation energy recovery system within the ambit of that parenthetical. (ASAP *et al.,* No. 14 at pp. 4–5)

In response, DOE notes that EATR, sensible effectiveness, and latent effectiveness values are all determined through either a certified performance modeling software or through direct testing. DOE maintains that it would be appropriate to obtain the requested information for all three of these parameters, because verification and enforcement testing for DX–DOAS with VERS would otherwise require both verification of the VERS performance and testing of the DX–DOAS model utilizing the VERS, which would add significant burden to DOE testing that is inconsistent with manufacturer testing, and which is expected for nearly all models to be based on calculation of these values rather than separate testing of VERS. As a result, DOE is not changing the regulatory text as suggested by ASAP *et al.*

Accordingly, for the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the reporting requirements for DX–DOASes with VERS as proposed in the September 2023 CCE NOPR.

c. Supplemental Testing Instructions

Currently, manufacturers of other covered commercial HVAC equipment types must submit in PDF format supplemental information regarding additional testing instructions, if applicable, and they must also specify which, if any, special features were included in rating the basic model. 10 CFR 429.43(b)(4). The supplemental information submitted in PDF format allows for third-party testing of equipment. Consistent with other commercial HVAC equipment types, in the September 2023 CCE NOPR, DOE proposed to specify information required in supplemental testing instructions submitted in PDF format for DX–DOASes to enable independent testing of the relevant equipment and to align with the corresponding requirements for CUACs, where appropriate. 88 FR 67458, 67476.

Specifically, for all DX–DOASes, DOE proposed at 10 CFR 429.43(b)(4)(x)(A) the following content requirements for the supplemental instructions PDF attachment: water flow rate in gallons per minute (''gpm'') for water-cooled and water-source units, rated external static pressure (''ESP'') in inches of water column for the supply air stream, frequency or control set points for variable speed components (*e.g.,* compressors, Variable Frequency Drives (''VFDs'')), required dip switch/control settings for step or variable components (*e.g.,* reheat or head pressure control valves), a statement as to whether the model will operate at test conditions without manufacturer programming, and any additional testing instructions specified in appendix B to subpart F of part 431, if applicable (*e.g.,* supply air dry-bulb temperatures for ISMRE2 tests, equipment settings for airflow, installation priority for split-system units, defrost control settings for air-source heat pump units, compressor break-in period, or condenser head pressure controls). *Id.* Additionally, if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, DOE proposed that the supplemental file also include the model number, the specifications of the

[27] AHRI 920 (I–P) and 921 (SI): Performance Rating of Direct Expansion-Dedicated Outdoor Air System Units.

motor (including efficiency, horsepower, open/closed, and number of poles) and the drive kit (including settings) associated with that specific motor that were used to determine the certified rating. *Id.*

For DX–DOASes with VERS, DOE proposed at 10 CFR 429.43(b)(4)(x)(B) the following additional content requirements for the supplemental instruction PDF attachment: rated ESP in inches of water column for the return air stream, exhaust air transfer ratio at the rated supply airflow rate and a neutral pressure difference between return and supply airflow (EATR as a percent value), sensible and latent effectiveness of the ventilation energy recovery system at 75 percent of the nominal supply airflow and zero pressure differential in accordance with the DOE test procedure in appendix B to subpart F of part 431 of this chapter, sensible and latent effectiveness of the ventilation energy recovery system at 100 percent of the nominal supply airflow and zero pressure differential in accordance with the DOE test procedure in appendix B to subpart F of part 431 of this chapter, and any additional testing instructions, if applicable (*e.g.,* deactivation of VERS or VERS bypass in accordance with appendix B to subpart F or part 431 of this chapter). *Id.*

DOE requested comment on its proposal to require supplemental testing instruction file contents for DX–DOASes. *Id.*

AHRI commented that DOE's proposal to require supplemental testing instruction file contents for DX–DOASes is reasonable. (AHRI, No. 18 at p. 9)

Accordingly, for the reasons discussed, DOE is adopting the supplemental testing instruction file contents for DX–DOASes as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE noted that the addition of reporting requirements for DX–DOASes would newly require manufacturers to report this information. 88 FR 67458, 67476. DOE discussed the reporting cost impacts corresponding to the proposal in the September 2023 CCE NOPR in section IV.C of that document. *Id.* at 88 FR 67494–67495.

AHRI commented that, as with CRACs, DOE's estimation of the burden of new reporting requirements for DX–DOASes, while necessary, is understated. (AHRI, No. 18 at p. 9)

In response, DOE notes that its estimated burden of new reporting requirements for DX–DOASes pertains only to completing and submitting the certification reports. The burden associated with implementing new standards was considered in the November 2022 DX–DOAS Final Rule. In the absence of additional data or information from AHRI regarding cost or time estimates pertaining to complying with the certification requirements for DX–DOASes, DOE has maintained its methodology to estimate the burden from the September 2023 CCE NOPR, while updating costs to reflect current values.

Costs associated with the new reporting requirements for DX–DOASes are discussed in section IV.C of this document. Compliance with these reporting requirements is required 210 days after publication of this final rule.

K. Air-Cooled, Three-Phase, Small Commercial Package Air Conditioners and Heat Pumps With a Cooling Capacity of Less Than 65,000 Btu/h and Air-Cooled, Three-Phase, Variable Refrigerant Flow Air Conditioners and Heat Pumps With a Cooling Capacity of Less Than 65,000 Btu/h

DOE is amending the reporting requirements for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF. Three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF are both categories of small commercial package air conditioning and heating equipment. Commercial package air-conditioning and heating equipment may be air cooled, water cooled, evaporatively cooled, or water source based (not including ground water source). This equipment is electrically operated and designed as unitary central air conditioners or central air conditioning heat pumps for use in commercial applications. 10 CFR 431.92.

In a final rule published on June 2, 2023 (''June 2023 3-Phase Final Rule''), DOE amended energy conservation standards for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF to be in terms of the new cooling and heating metrics, SEER2 and HSPF2, respectively, as determined by using the new test procedure at appendix F1 to subpart F of 10 CFR part 431. 88 FR 36368. Consistent with that final rule, DOE is amending the reporting requirements for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF.

1. Reporting

Under the existing requirements in 10 CFR 429.67(f)(2)(i) and (ii) for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, manufacturers must report the seasonal energy efficiency ratio (''SEER'') in British thermal units per Watt-hour (''Btu/Wh''), the rated cooling capacity in Btu/h, and (for heat pumps) the heating seasonal performance factor (''HSPF'') in Btu/Wh.

Under the existing requirements in 10 CFR 429.67(f)(2)(iii) and (iv) for three-phase, less than 65,000 Btu/h VRF, manufacturers must report the SEER in Btu/Wh, rated cooling capacity in Btu/h, and (for heat pumps) the HSPF in Btu/Wh.

These requirements provide for certifying compliance with the standards applicable to three-phase, less than 65,000 Btu/h ACUACs and ACUHPs manufactured on or after January 1, 2017, and the standards applicable to three-phase, less than 65,000 Btu/h VRF manufactured on or after June 16, 2008. 88 FR 36368, 36389. DOE is updating these reporting requirements to align with the amended standards adopted by the June 2023 3-Phase Final Rule that apply to three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF manufactured on or after January 1, 2025. *See id.* Additionally, DOE is specifying general certification requirements for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF. DOE discusses these updates in the sections as follows.

a. Updating the Certification Requirements To Include the New Metrics, SEER2 and HSPF2

In the June 2023 3-Phase Final Rule, DOE amended energy conservation standards for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF to be in terms of the new cooling and heating metrics, SEER2 and HSPF2. *Id.* Accordingly, in the September 2023 CCE NOPR, DOE proposed to update the certification requirements at 10 CFR 429.67(f)(2) to include ratings in terms of SEER2 and HSPF2, which would become the required reporting metrics upon the compliance date of the amended standards. 88 FR 67458, 67477. Manufacturers may use appendix F1 to certify compliance with the amended standards based on SEER2 and HSPF2 prior to the applicable compliance date for the amended energy conservation standards. DOE requested comment on its proposal to require the reporting of new metrics, such as SEER2 and HSPF2. *Id.*

AHRI and Carrier supported DOE's proposal to require the reporting of new metrics, such as SEER2 and HSPF2.

(AHRI, No. 18 at p. 9; Carrier, No. 12 at p. 3)

ASAP *et al.* commented providing the following editorial correction to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.67(f)(3)(i): replacing the text ''rated static pressure in inches of water'' with ''rated external static pressure in inches of water.'' (ASAP *et al.,* No. 14 at p. 5)

DOE agrees that replacing the text ''rated static pressure'' with ''rated external static pressure'' is a helpful clarification and better represents the intent of the proposal in the September 2023 CCE NOPR. DOE has also determined that this clarification is appropriate in one instance at 10 CFR 429.67(f)(3)(ii) as well.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, in this final rule, DOE is adopting these updates as proposed in the September 2023 CCE NOPR with the additional clarification as recommended by commenters.

b. Aligning Basic Model Number and Individual Model Number(s) Reporting Requirements With Single-Phase Products

In the September 2023 CCE NOPR, DOE proposed to include additional instructions regarding the basic model number and individual model number(s) required to be reported under 10 CFR 429.12(b)(6). 88 FR 67458, 67477. DOE noted in the September 2023 CCE NOPR that this proposal is consistent with the requirement for single-phase products and represents readily available information to the manufacturer regarding the requirements for three-phase equipment. *Id.* DOE requested comment on the proposed model number reporting requirements. *Id.*

Specifically, DOE noted that it would require in new subparagraph 10 CFR 429.67(f)(4) that the basic model number and individual model number(s) reported under 10 CFR 429.12(b)(6) consist of the following:

Equipment type	Basic model number	Individual model number(s)		
		1	2	3
Single-Package (including Space-Constrained).	Number unique to the basic model.	Package	N/A	N/A.
Single-Split System (including Space-Constrained and SDHV).	Number unique to the basic model.	Outdoor Unit ..	Indoor Unit	If applicable—Air Mover (could be same as indoor unit if fan is part of indoor unit model number).
Multi-Split, Multi-Circuit, and Multi-Head Mini-Split System (including Space-Constrained and SDHV).	Number unique to the basic model.	Outdoor Unit ..	When certifying a basic model based on tested combination(s): * * *.	If applicable—When certifying a basic model based on tested combination(s): * * *.
			When certifying an individual combination: Each indoor units paired with the outdoor unit.	When certifying an individual combination: Each air movers paired with the outdoor unit.
Outdoor Unit with No Match ..	Number unique to the basic model.	Outdoor Unit ..	N/A	N/A.

DOE did not receive any comments on its proposal to include additional instructions regarding the basic model number and individual model number(s) required to be reported under 10 CFR 429.12(b)(6) in response to the September 2023 CCE NOPR. For the reasons discussed, in this final rule, DOE is adopting these requirements as proposed in the September 2023 CCE NOPR.

c. Outdoor Units With No Match

In the September 2023 CCE NOPR, for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs with outdoor units having no matching indoor component, DOE proposed requiring that supplemental testing instructions also include any additional testing and testing set up instructions necessary to operate the basic model under the required conditions specified by the test procedure in addition to any supplemental testing instructions used to satisfy the existing requirement in 10 CFR 429.67(f)(3). *Id.* Specifically, DOE proposed that manufacturers must provide information regarding the following characteristics of the indoor coil: the face area, the coil depth in the direction of airflow, the fin density (fins per inch), the fin material, the fin style, the tube diameter, the tube material, and the numbers of tubes high and deep. *Id.* DOE noted that this proposed requirement would be consistent with the 10 CFR 429.16 requirement for single-phase products, as well as with the test requirements in ASHRAE 90.1–2019, which, in turn, references ANSI/AHRI 210/240, ''2023 Standard for Performance Rating of Unitary Air-conditioning & Air-source Heat Pump Equipment'' (''ANSI/AHRI 210/240'').[28] *Id.* Therefore, DOE surmised that this information should be readily available to manufacturers and would not add manufacturer burden. *Id.* DOE requested comment on the proposed requirements for outdoor units with no match. *Id.*

DOE did not receive any comments on its proposal to include supplemental testing and testing setup instructions necessary to operate the basic model under the required conditions specified by the test procedure. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, in this final rule, DOE is adopting these requirements as proposed in the September 2023 CCE NOPR.

d. Sampling Corrections

Currently, DOE's sampling provisions for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF state that any represented value of cooling capacity and heating capacity must each be a self-declared value that is less than or equal to the lower of the mean of the sample, or the lower 90 percent confidence limit of the true mean (''LCL'') divided by 0.95. 10 CFR 429.67(c)(2)(ii)(A)(2). The sampling provisions also state that the LCL should be calculated using the Student's t-Distribution Values for a 90 percent one-tailed confidence interval with n-1 degrees of freedom from appendix D to subpart B of part 429, where ''n'' is the number of samples. *Id.* However, the

[28] 2023 Standard for Performance Rating of Unitary Air-conditioning & Air-source Heat Pump Equipment (''AHRI 210/240–2023'')

appendix containing Student's t-Distribution Values has moved to appendix A to subpart B of part 429. To correct this discrepancy, in the September 2023 CCE NOPR, DOE proposed to revise 10 CFR 429.67(c)(2)(ii)(A)(2) to specify that the LCL should be calculated using the Student's t-Distribution Values for a 90 percent one-tailed confidence interval outlined in appendix A and requested comment on its proposal. *Id.* at 88 FR 67477–67478. DOE requested comment on the proposed sampling corrections. *Id.*

AHRI and Carrier supported DOE's proposal to correct the sampling provisions for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF to reference appendix A. (AHRI, No. 18 at p. 9; Carrier, No. 12 at p. 3)

For the reasons discussed, in this final rule, DOE is amending this requirement as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align the three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF certification reporting requirements with the amended standards adopted by the June 2023 3-Phase Final Rule that apply to products manufactured on or after January 1, 2025. 88 FR 67458, 67478.

DOE proposed that for three-phase, less than 65,000 Btu/h ACUACs and three-phase, less than 65,000 Btu/h VRF air conditioners, while manufacturers currently report SEER in Btu/Wh and rated cooling capacity in Btu/h, manufacturers would report SEER2 in Btu/Wh in lieu of SEER under the amended standards. *Id.* DOE proposed for three-phase, less than 65,000 Btu/h ACUHPs and three-phase, less than 65,000 Btu/h VRF heat pumps, while manufacturers currently report SEER in Btu/Wh, HSPF in Btu/Wh, and rated cooling capacity in Btu/h, manufacturers would be required to report SEER2 in Btu/Wh and HSPF2 in Btu/Wh in lieu of SEER and HSPF. *Id.*

In the September 2023 CCE NOPR, DOE tentatively determined that these proposed amendments would not impose additional costs for manufacturers because manufacturers of three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF are already submitting certification reports to DOE and should have readily available the information that DOE is proposing to collect as part of the proposed rulemaking. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF manufacturers are doing currently, but DOE requested comment on the certification reporting costs. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF. In this final rule, DOE makes a final determination that these amendments to the reporting requirements for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF would not cause any measurable change in reporting burden or hours for three-phase, less than 65,000 Btu/h ACUACs and ACUHPs and three-phase, less than 65,000 Btu/h VRF manufacturers. Compliance with these reporting requirements is required 210 days after publication of this final rule.

L. Commercial Water Heating Equipment

DOE is amending the reporting requirements for CWHs. EPCA prescribes energy conservation standards for several classes of CWHs manufactured on or after January 1, 1994. (42 U.S.C. 6313(a)(5)) DOE codified these standards in its regulations for CWHs at 10 CFR 431.110. However, when codifying these standards from EPCA, DOE inadvertently omitted the standards put in place by EPCA for electric instantaneous water heaters, which are instantaneous water heaters with a rated input both greater than 12 kW and not less than 4,000 Btu/h per gallon of stored water (*see* 10 CFR 431.102). Therefore, in a final rule published on October 6, 2023 (''October 2023 CWH Final Rule''), DOE codified these standards in its regulations at 10 CFR 431.110. 88 FR 69686, 69699.

Consistent with the October 2023 CWH Final Rule, DOE is establishing reporting requirements for commercial electric instantaneous water heaters (except for residential-duty commercial electric instantaneous water heaters for which certification is already addressed in 10 CFR 429.44).

Additionally, DOE is adding reporting requirements for commercial electric storage water heaters to ensure that the input rating of all certified models exceeds the 12 kW threshold as well as the required *ratio of input rate per gallon of stored water* that is part of the definition of electric storage water heaters at 10 CFR 431.102.

1. Reporting

a. Electric Instantaneous Water Heaters

Under the existing requirements in 10 CFR 429.44, manufacturer certification reports for commercial water heating equipment are not required to include information about electric instantaneous water heaters. 10 CFR 429.44(c)(2).

Therefore, for commercial electric instantaneous water heaters of all storage volumes (except for residential-duty commercial electric instantaneous water heaters), in the September 2023 CCE NOPR, DOE proposed to add certification requirements for thermal efficiency, storage volume, rated input, and whether the storage volume is determined using a weight-based test (in accordance with 10 CFR 431.106) or the calculation-based method (in accordance with 10 CFR 429.72(e), as discussed in the following paragraph). 88 FR 67458, 67478.

Additionally, for electric instantaneous water heaters with storage volume greater than or equal to 10 gallons (and thus subject to a standby loss standard), DOE proposed to require that the following information be certified to ensure compliance with standby loss standards and to enable DOE to understand how the standby test was conducted for each basic model: (1) standby loss, (2) whether the water heater initiates heating element operation based on a temperature-controlled call for heating that is internal to the water heater, (3) whether the water heater includes an integral pump purge functionality, and (4) the default duration of the pump off delay (for models equipped with integral pump purge). *Id.*

DOE also proposed to allow use of a calculation-based method for determining the storage volume of electric instantaneous water heaters that is the same as the method for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers found at 10 CFR 429.72(e). *Id.* Furthermore, DOE proposed to clarify that the method for calculating volume for instantaneous water heaters found at 10 CFR 429.72(e) does not apply to storage-type instantaneous water heaters. *Id.*

DOE requested comment on its proposal to require the reporting of thermal efficiency, storage volume, rated input, and whether the storage volume is determined using a weight-based test or the calculation-based method for commercial electric

instantaneous water heaters of all storage volumes (except for residential-duty commercial electric instantaneous water heaters). *Id.* DOE also sought comment on its proposal to require the reporting of standby loss, whether the water heater initiates heating element operation based on a temperature-controlled call for heating that is internal to the water heater, whether the water heater includes an integral pump purge functionality, and the default duration of the pump off delay (for models equipped with integral pump purge) for electric instantaneous water heaters with storage volume greater than or equal to 10 gallons. *Id.* Additionally, DOE requested comment on its proposed calculation-based method for determining storage volume of electric instantaneous water heaters. *Id.*

Thermal Efficiency

Rheem commented that the DOE test procedures for commercial electric instantaneous water heaters at 10 CFR 431 appendix B and 10 CFR 431 appendix D assume a thermal efficiency of 98 percent for commercial electric instantaneous water heaters, but there is no DOE test procedure that describes how to measure thermal efficiency. Rheem recommended that DOE either clarify whether a thermal efficiency of 98 percent can be used for all commercial electric instantaneous water heaters that use immersed heating elements or remove the thermal efficiency certification requirement. (Rheem, No. 15 at pp. 4–5; Rheem, Public Meeting Transcript, No. 6 at p. 36) AHRI opposed the reporting of thermal efficiency for commercial electric instantaneous water heaters of all storage volumes because the DOE test procedure for this equipment assumes a thermal efficiency of 98 percent and does not include a method for measuring thermal efficiency. AHRI stated that thermal efficiency is not reported for commercial electric storage water heaters, and therefore, it should not be required for other commercial electric equipment. AHRI recommended removing the requirement to report thermal efficiency for commercial electric instantaneous water heaters in the reporting template. (AHRI, No. 18 at p. 10) BWC recommended that thermal efficiency be removed from the reporting requirements for commercial electric instantaneous water heaters of all storage volumes as the inclusion of thermal efficiency does not provide additional meaningful information to DOE or consumers looking to obtain information about a product's energy performance and ultimately increases the complexity of the reporting templates, which could lead to an increase in potential errors in addition to an increased time burden. (BWC, No. 13 at p. 1)

In response, DOE notes that there are standards in effect for electric instantaneous water heaters (*see* 10 CFR 431.110), and, therefore, manufacturers must certify thermal efficiency to DOE to ensure compliance. As a result, DOE is adopting its proposal to require certification of thermal efficiency for electric instantaneous water heaters. Furthermore, DOE clarifies that for commercial electric instantaneous water heaters with immersed heating elements, manufacturers should set the thermal efficiency equal to 98 percent, consistent with the assumed value in the standby loss calculation of the DOE test procedure specified in appendix D to subpart G of 10 CFR part 431. Additionally, in response to BWC's concerns about increased complexity and the potential for certification errors, DOE will include a note in the certification template to instruct the user to enter 98 percent in the template's field for the thermal efficiency of electric instantaneous water heaters.

Storage Volume Less Than 10 Gallons

BWC commented that reporting requirements for commercial electric instantaneous water heaters with a storage volume less than 10 gallons should be removed from the reporting template as the October 2023 CWH Final Rule does not require standby loss to be reported for electric instantaneous water heaters with a storage volume less than 10 gallons. (BWC, No. 13 at p. 2) AHRI commented that electric instantaneous water heaters with storage volumes of less than 10 gallons are not subject to testing and should therefore be excluded from certification and reporting requirements. (AHRI, No. 18 at p. 10)

In response to the comments regarding electric instantaneous water heaters with a storage volume less than 10 gallons, DOE notes that certification requirements are necessary to ensure that standards are being met and to determine the appropriate equipment class and applicable standard(s). Particularly, certification of thermal efficiency ensures compliance with the minimum standard; rated input checks would be used to confirm that the input rating of all certified models exceeds the 12 kW threshold that is part of the definition of commercial instantaneous water heaters at 10 CFR 431.102, and storage volume is necessary to determine whether the standby loss standard applies to the certified model. In addition, the rated input and the storage volume are used to determine whether a water heater is instantaneous or storage. Completely removing the certification and reporting requirements for electric instantaneous water heaters with storage volume less than 10 gallons would omit information that is necessary for DOE to confirm the applicable standard. Further, similar to electric instantaneous water heaters with a storage capacity of 10 or more gallons, DOE will allow for storage volume to be measured and certified to either the weight-based test or calculation-based method.

Standby Loss

BWC commented that it did not support reporting standby loss based on the other functional criteria outlined in September 2023 CCE NOPR, as adding that level of complexity would increase the time-burden to complete the reporting template according to BWC. (*Id.*) BWC requested that DOE clarify why providing this information would inform DOE or consumers regarding the efficiency of electric instantaneous water heaters. (BWC, No. 13 at p. 2) Rheem supported DOE's requirement of reporting standby loss, whether the water heater initiates heating element operation based on a temperature-controlled call for heating that is internal to the water heater, whether the water heater includes an integral pump purge functionality, and the default duration of the pump off delay (for models equipped with integral pump purge) for electric instantaneous water heaters with storage volume greater than or equal to 10 gallons. Rheem stated its understanding is that this information is necessary to properly perform the test procedure at 10 CFR 431 appendix D for non-storage type instantaneous commercial electric instantaneous water heaters. (Rheem, No. 15 at p. 6)

As noted previously, energy conservation standards for commercial electric instantaneous water heaters were updated in the October 2023 CWH Final Rule to reflect the standards already outlined in EPCA, which include both thermal efficiency standards and standby loss standards. 88 FR 69686. Specifically, EPCA prescribes maximum standby loss requirements for electric instantaneous water heaters with a storage volume of 10 gallons or more. (42 U.S.C. 6313(a)(5)(D)–(I)). Thus, reporting of standby loss is necessary to determine compliance with the maximum standby loss standards.

Furthermore, in response to BWC's comments, DOE notes that the reporting of additional functional criteria are

necessary for DOE to understand how the standby test was conducted for each basic model. DOE agrees with Rheem that this information is needed to properly perform the standby loss test procedure. DOE has separate standby loss tests for internally activated and flow/externally activated water heaters. Since the call for heating can be internally activated or flow-activated and remote-sensor based thermostatically activated (*i.e.,* externally activated), it is necessary for manufacturers to certify whether the water heater initiates operation based on a temperature-controlled call for heating that is internal to the water heater. Within the standby loss test method for flow/externally activated water heaters, there are separate criteria depending on whether the water heater is equipped with an integral pump purge. Thus, certification of whether the water heater includes an integral pump purge functionality is necessary to understand how the standby loss test specifically for flow/externally activated water heaters was conducted. Additionally, the pump delay time impacts the test time and when the heat exchanger outlet water temperature is measured. Thus, certification of the default duration of the pump off delay is necessary for models equipped with an integral pump purge.

Storage Volume Determination Method

BWC commented that it appreciated DOE making the option available to report either weight-based or calculation-based storage volume for electric instantaneous water heaters, along with confirmation of which method was used when reporting. (BWC, No. 13 at p. 2) Rheem commented that it supports allowing commercial electric instantaneous water heaters (other than storage-type instantaneous water heaters) to use a calculation-based method for determining storage volume of electric instantaneous water heaters. Rheem noted that there are two references in 10 CFR 429.72 to ''§ 429.44(c)(3)(iv)–(vii)'' and that the second reference should be ''§ 429.44(c)(3)(i)–(ii)''. (Rheem, No. 15 at p. 6)

DOE agrees with the comments in support of the weight-based and calculation-based storage volume determination options and is adopting the proposal to allow manufacturers to determine electric instantaneous water heater storage volume using either of these two methods. Additionally, DOE notes that the reference to ''§ 429.44(c)(3)(iv)–(vii),'' which Rheem suggested should be changed to ''§ 429.44(c)(3)(i)–(ii),'' is not necessary and has been removed from the regulatory text.

Storage Capacity Greater Than 10 Gallons

Rheem recommended that similar to the requirement for commercial gas-fired and oil-fired instantaneous water heaters at 10 CFR 429.44(c)(2)(iv), DOE should add the requirement to declare ''whether the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons (Yes/No)'' to 10 CFR 429.44(c)(2)(vi) for commercial electric instantaneous water heaters with a storage tank with storage volume greater than 10 gallons and less than or equal to 140 gallons. Rheem noted that this question appears in the sample template PDF. (Rheem, No. 15 at p. 5)

DOE agrees that the requirement to declare whether the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons should be included in 10 CFR 429.44(c)(2)(vi) to align the certification requirements of commercial electric instantaneous water heaters more closely with those for commercial gas-fired and oil-fired instantaneous water heaters. Furthermore, this additional certification requirement will more clearly enable DOE to understand whether each basic model meets the definition of a storage-type instantaneous water heater (as set forth in 10 CFR 431.102). Further, the response to this question would determine whether testing was conducted according to appendix B or D to subpart G at 10 CFR part 431. Therefore, DOE is adopting this requirement in this final rule.

Compliance Date

Rheem commented that it supported DOE requiring the certification of commercial electric instantaneous water heaters under EPCA. However, Rheem requested clarification on when certification would be required and recommended that the certification date be set at the compliance date of the most recent standards final rule (*i.e.,* October 6, 2026). (Rheem, No. 15 at p. 4) AHRI commented requesting DOE to clarify when certification would be required for commercial electric instantaneous water heaters as the proposal to include reporting for this equipment is based on the May 19, 2022 proposed rule at 87 FR 30610 (''May 2022 CWH NOPR''), but AHRI noted that there was not any clarity regarding when compliance would be required. AHRI noted that the October 2023 CWH Final Rule was published on October 6, 2023, with compliance to the amended standards required October 6, 2026; however, AHRI noted that DOE has stated that compliance for commercial electric instantaneous water heaters has been required since January 1, 1994. (AHRI, No. 18 at p. 10)

DOE notes that although compliance with the October 2023 amended commercial water heating standards is required on or after October 6, 2026, compliance with EPCA's standards for electric instantaneous water heater standards has been required since January 1, 1994. Since the compliance date for electric instantaneous water heater standards has passed and DOE does not expect manufacturers to need to conduct additional testing for these added certification requirements, DOE does not believe that a compliance date of October 6, 2026 is necessary. However, DOE recognizes the need for time to adjust to the new requirements in this final rule after publication and therefore DOE is requiring compliance of the outlined commercial water heating equipment 210 days after publication of this final rule.

General

Rheem commented that 10 CFR 429.44(c)(2)(vi) describes certification requirements for unfired hot water storage tanks, but the proposed requirements for electric instantaneous water heaters were inserted above this section and the unfired hot water storage tank section was not renumbered within the regulatory text. (Rheem, No. 15 at p. 4)

DOE notes that the September 2023 CCE NOPR as well as this final rule include amendatory instructions in the regulatory text for 10 CFR 429.44, which states that paragraph (c)(2)(vi) with requirements for unfired hot water storage tanks is renumbered as (c)(2)(viii).

b. Electric Storage Water Heaters

For commercial electric storage water heaters, in the September 2023 CCE NOPR, DOE proposed adding a certification requirement for rated input to ensure that the input rating of all certified models exceeds the 12 kW threshold that is part of the definition of electric storage water heaters at 10 CFR 431.102. 88 FR 67458, 67478. DOE proposed that manufacturers would be required to comply with the certification requirement beginning on the date of the next annual filing of certification reports required for CWHs following the publication of a final

rule.[29] *Id.* DOE sought comment on its proposal to add a requirement for the reporting of rated input for commercial electric storage water heaters. *Id.*

BWC stated that it did not support DOE's proposal to add a requirement for the reporting of rated input for commercial electric storage water heaters. BWC commented that DOE should include a Yes/No response in the field looking to confirm an input rating of all certified models exceeding the 12 kW threshold that is part of the definition of commercial electric storage water heaters, which it said would be a practice similar to other reporting requirements for commercial water heating equipment. (BWC, No. 13 at p. 2) AHRI commented opposing DOE's proposal to add a requirement for the reporting of rated input for commercial electric storage water heaters. AHRI noted that input rate does not impact the efficiency rating but has the potential to increase the number of basic models by a factor of at least 10.

Rheem supported requiring the certification of all available input rates for commercial electric storage water heaters and recommended the required certification date be set at the compliance date of the most recent standards final rule (*i.e.,* October 6, 2026). Rheem noted models that can be manufactured with many different input rates are currently certified under the same model number, a practice likely due to the input rate and thermal efficiency not being certified as well as the small effect that input rate would have on standby loss. Rheem requested that DOE clarify whether the existing standby loss ratings for a model can be applied across all input rates that the model will be required to certify. Rheem also requested DOE to clarify what constitutes a basic model (*i.e.,* can a basic model include all input rates with the individual models having different input rates, or will each input rate require a different basic model). (Rheem, No. 15 at p. 6) ASAP *et al.* supported the inclusion of input rating as a reporting requirement for commercial electric storage water heaters. ASAP *et al.* noted that this requirement would help ensure that equipment certified under 10 CFR 429.44 meets the input threshold of 12 kW that is defined for commercial equipment. (ASAP *et al.,* No. 14 at p. 2)

As noted by commenters, DOE is aware that historically some manufacturers have certified a range of input capacities under one model number. DOE has found that in some cases models were incorrectly categorized as commercial equipment when they were below the threshold of 12 kW of input necessary to be classified as a commercial water heater (and instead should have been categorized as a consumer water heater). Typically, this occurred when the range of inputs available for the model family extended from below 12 kW to above 12 kW. Thus, in the September 2023 CCE NOPR, DOE proposed to require certification of input rate for commercial electric water heaters so that DOE could verify that the model is correctly categorized. Input rate information is needed to determine the correct categorization, both for the purpose of determining whether a model is a consumer product or commercial equipment and also whether it is instantaneous-type or storage-type (which is based on the ratio of input rate to stored volume). However, after considering stakeholder comments, DOE is requiring manufacturers to certify a ''Yes/No'' for whether the input rate is greater than 12kW and ''Yes/No'' for whether the ratio of input rate to stored volume is less than 4,000 Btu/h per gallon of stored water. These requirements will allow DOE to determine which standards apply to the model certified while also minimizing burden on manufacturers by not requiring each input rate to be certified separately. DOE is requiring compliance of the outlined CWHs certification requirements when certifying compliance in accordance with the next annual certification report filing date on or after 210 days after publication of this final rule.

In response to Rheem's comment on certifying standby loss across all input rates of a model and what constitutes a basic model, DOE defines a basic model at 10 CFR 431.102 as all water heaters, hot water supply boilers, or unfired hot water storage tanks manufactured by one manufacturer within a single equipment class, having the same primary energy source (*e.g.,* gas or oil) and that have essentially identical electrical, physical and functional characteristics that affect energy efficiency. If a group of individual models meets these criteria they can be grouped as a single basic model. Specifically with respect to input rate, if the manufacturer determines that input rate does not affect energy efficiency, then models with different input rates may be grouped under a single basic model if they also are in the same equipment class.

Storage Capacity Greater Than 140 Gallons

AHRI commented that commercial electric storage water heaters greater than or equal to 140 gallons are not subject to standards but require confirmation they meet the design requirement of jacket insulation that is ≥ R–12.5. AHRI commented there is also no standby loss testing required for this equipment and details regarding the input rate are not needed as this is an assigned rating, rather than a tested value. AHRI commented asking if rather than reporting an input capacity number, the field response could be Y/N to indicate equipment class. (AHRI, No. 18 at p. 10) During the NOPR public meeting, AHRI commented that the draft certification template seemed to suggest that additional information might be reported for the rated input kilowatt-hours for capacities greater than 140 gallons and asked if this requirement was applicable to all products or products less than or equal to 140 gallons only. (AHRI, Public Meeting Transcript, No. 6 at pp. 31–34)

Rheem commented that commercial electric storage water heaters are divided into two groups: less than or equal to 140 gallons and greater than 140 gallons, but 10 CFR 429.44(c)(2)(iii) does not require the rated input for commercial water heaters with storage volumes greater than 140 gallons to always be reported and does not have the appropriate units for electric equipment. Rheem additionally commented that the draft certification template states, ''For models with a storage capacity greater than 140 gallons only, enter the Rated Input in kilowatts (kW) in the cells below. This should be a decimal number greater than zero.'' Therefore, Rheem commented that the template only requires rated input be reported for greater than 140 gallons, which does not reflect the proposed language in either 10 CFR 429.44(c)(2)(i) or (iii). (Rheem, No. 15 at pp. 6–7)

Rheem also requested that DOE evaluate whether certification requirements for ''commercial water heaters and hot water supply boilers with storage capacity greater than 140 gallons'' at 10 CFR 429.44(c)(2)(iii) should be updated to include units for electric equipment as well as the units already required for gas and oil-fired equipment. (Rheem, No. 15 at p. 5)

In response to AHRI's comment, DOE clarifies that commercial electric storage water heaters greater than or equal to 140 gallons are required to report standby loss, measured storage volume, and rated input if the tank surface area is not thermally insulated to R–12.5 or

[29] The annual certification report filings for commercial water heating equipment are due on May 1. *See* 10 CFR 429.12.

more, with the R-value as defined in § 431.102. Therefore, the rated input requirements will apply to all storage water heater products, including those greater than 140 gallons, to allow for verification of correct equipment classification as discussed and the template will be updated accordingly. In addition, 10 CFR 429.44(c)(2)(iii) is applicable to electric equipment and this final rule updates the requirements to reflect the correct units, including standby loss in percent per hour and rated input in kilowatts.

Storage Capacity Terminology

Rheem commented that ''storage capacity'' is used throughout 10 CFR 429.44 when describing the 10- and 140-gallon thresholds, but stated it is not clear whether rated storage volume or measured storage volume should be used to make these determinations. Rheem requested that DOE clarify within 10 CFR 429.44 which volume value should be used. Rheem stated that its understanding was that measured storage volume is used for electric water heaters and rated storage volume is used for gas and oil-fired water heaters and recommended that ''storage capacity'' be amended to align with the required certification volume. (Rheem, No. 15 at p. 4)

In response to Rheem's comment, DOE clarifies that standards for gas and oil-fired CWHs are a function of ''rated storage volume'' and standards for electric CWHs are a function of ''measured storage volume.'' (*See* 10 CFR 431.110.) Thus, DOE agrees with Rheem's suggested approach to specify either measured or rated storage volume, as applicable based on the fuel type (rated storage volume for gas/oil and measured storage volume for electric), rather than use the term ''storage capacity.'' This change will clarify the appropriate volume to use when determining how to apply the thresholds and will align with standards structure.

Hot Water Supply Boilers

Rheem recommended that DOE clarify whether electric hot water supply boilers are covered by the energy conservation standards at 10 CFR 431.110(a) and, if so, amend the certification requirements to include hot water supply boilers in sections 10 CFR 429.44(c)(2)(vi)–(vii). Rheem commented that a hot water supply boiler is defined as a packaged boiler at 10 CFR 431.102 and a packaged boiler is defined at 10 CFR 431.82, but neither definition includes a description of the fuel type; therefore, within the definitions of the CFR, an electric hot water supply boiler can exist. (Rheem, No. 15 at p. 5)

DOE agrees that the definition for a hot water supply boiler at 10 CFR 431.102 does not specify a fuel type, thus including electric hot water supply boilers in the definition. However, the inclusion of hot water supply boiler standards for gas-fired and oil-fired hot water supply boilers in 10 CFR 431.110(a) stem from their coverage in ASHRAE 90.1. DOE established these standards in a final rule published in 2001, which adopted the standard levels for gas-fired and oil-fired hot water supply boilers in ASHRAE 90.1–1989. 66 FR 3336. The current version of ASHRAE 90.1 (*i.e.,* ASHRAE 90.1–2023) still only covers standards for gas- and oil-fired hot water supply boilers and EPCA does not prescribe any standards at 42 U.S.C. 4313. Thus, electric hot water supply boilers are not covered by the standards in 431.110(a) and it is therefore not necessary to establish certification requirements for electric hot water supply boilers.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the certification reporting requirements for electric CWH as proposed in the September 2023 CCE NOPR, with the amendments discussed in the preceding sections.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align the certification reporting requirements for commercial electric instantaneous water heaters (except for residential-duty commercial electric instantaneous water heaters) with the energy conservation standards for such equipment as required by EPCA, and as codified at 10 CFR 431.110 by the October 2023 CWH Final Rule. 88 FR 69686, 69699.

In the September 2023 CCE NOPR, DOE noted that manufacturers of commercial electric instantaneous water heaters (except for residential-duty commercial electric instantaneous water heaters) do not currently report any information about the performance or characteristics of such equipment, but would be required to report thermal efficiency, storage volume, rated input, and whether the storage volume is determined using a weight-based test (in accordance with 10 CFR 431.106) or the calculation-based method (in accordance with 10 CFR 429.72(e)) under the proposals discussed in the September 2023 CCE NOPR. 88 FR 67458, 67479.

Additionally, for electric instantaneous water heaters with storage volume greater than or equal to 10 gallons (and thus subject to a standby loss standard), DOE noted that manufacturers would also be required to report standby loss, whether the water heater initiates heating element operation based on a temperature-controlled call for heating that is internal to the water heater, whether the water heater includes an integral pump purge functionality, and the default duration of the pump off delay (for models equipped with integral pump purge) under the proposals of the September 2023 CCE NOPR. *Id.*

In the September 2023 CCE NOPR, DOE noted that any manufacturer of commercial electric instantaneous water heaters would be required to begin submitting certification reports under the proposed reporting requirements discussed in the September 2023 CCE NOPR. *Id.* Costs associated with the proposed updates to reporting requirements were discussed in section IV.C of the September 2023 CCE NOPR. 88 FR 67458, 67495.

In the September 2023 NOPR, DOE also proposed to amend the certification reporting requirements for commercial electric storage water heaters to require manufacturers to report rated input. 88 FR 67458, 67479.

In the September 2023 NOPR, DOE tentatively determined that the proposed amendments would not impose additional costs for manufacturers of commercial electric storage water heaters because they are already submitting certification reports to DOE and should have readily available the information that DOE is proposing to collect as part of this rulemaking. *Id.* DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what commercial electric storage water heaters manufacturers are currently doing today, but DOE requested comment on the certification reporting costs. *Id.*

Rheem commented that it did not expect certification and reporting costs for commercial electric storage water heaters to increase because of the proposed requirement to report rated input rate. Rheem commented that if additional standby loss testing is required, then the testing and certification costs would be significant. Rheem additionally commented that for commercial electric instantaneous water heaters, if DOE requires testing of thermal efficiency, then the certification and reporting costs would be significant. (Rheem, No. 15 at p. 7)

As discussed previously, the thermal efficiency for electric instantaneous

water heaters should be certified as 98 percent as specified in the standby loss test procedure, which would not require testing. Additionally, DOE notes that standby loss testing and certification of electric storage water heaters is already required at 10 CFR 429.44(c)(2)(i) and in some instances 10 CFR 429.44(c)(2)(iii).

In this final rule, DOE makes a final determination that the amendments to the reporting requirements for electric storage CWHs would not cause any measurable change in reporting burden or hours for CWH manufacturers. DOE also makes a final determination that the new reporting requirements for electric instantaneous CWHs would have an associated cost which are discussed in section IV.C of this document.

Compliance with the amended reporting requirements for electric storage CWHs is not required until the next annual certification report filing date on or after 210 days after publication of this final rule. Compliance with the new reporting requirements for electric instantaneous CWHs is required 210 days after publication of this final rule.

M. Automatic Commercial Ice Makers

DOE is amending the reporting requirements for ACIMs, which are factory-made assemblies (not necessarily shipped in 1 package) that (1) consist of a condensing unit and ice-making section operating as an integrated unit, with means for making and harvesting ice; and (2) may include means for storing ice, dispensing ice, or storing and dispensing ice. 10 CFR 431.132. In the November 1, 2022 Automatic Commercial Ice Maker Test Procedure Final Rule (''November 2022 ACIM Final Rule''), DOE replaced the terms ''maximum energy use'' and ''maximum condenser water use'' with ''energy use'' and ''condenser water use,'' respectively, for ACIMs. 87 FR 65856, 56892. Consistent with that rulemaking, DOE is adopting amendments to the reporting requirements for ACIMs.

1. Reporting

Under the existing requirements in 10 CFR 429.45, manufacturers must report maximum energy use in kWh per 100 pounds of ice, maximum condenser water use in gallons per 100 pounds of ice, harvest rate in pounds of ice per 24 hours, type of cooling, and equipment type. 10 CFR 429.45(b)(2). These requirements provide for certifying compliance with the standards applicable to ACIMs manufactured on or after January 28, 2018. 10 CFR 431.136(c) and (d). DOE is updating these requirements and aligning the reporting requirements with the November 2022 ACIM Final Rule and adopting general certification requirements for ACIMs. DOE discusses these updates in the sections as follows.

a. Energy and Water Condenser Use

For ACIMs, the current reporting requirements include maximum energy use in kWh per 100 pounds of ice and maximum condenser water use in gallons per 100 pounds of ice. 10 CFR 429.45(b)(2). In the November 2022 ACIM Final Rule, DOE determined that the reference to ''maximum energy use'' and ''maximum condenser water use'' in 10 CFR 429.45 could be misinterpreted to refer to the energy and water conservation standard levels for that basic model (*i.e.,* the maximum allowable energy and maximum allowable condenser water use), as opposed to the tested performance. 87 FR 65856, 65891. Therefore, in the November 2022 ACIM Final Rule, for consistency and clarity, DOE replaced the term ''maximum energy use'' with the term ''energy use'' and the term ''maximum condenser water use'' with the term ''condenser water use.'' *Id.* at 87 FR 65892. In addition, values of both energy and condenser water consumption are relevant for ACIMs. *Id.* at 87 FR 65891. As such, DOE modified the language at 10 CFR 429.45 to specify expressly that the sampling plan at 10 CFR 429.45(a)(2)(i) applies both to measures of energy and condenser water use for which consumers would favor lower values. *Id.* at 87 FR 65892.

Similarly, 10 CFR 431.132 included a definition for the term ''maximum condenser water use.'' This language may also be misinterpreted to refer to the condenser water conservation standard level for a basic model as opposed to the tested condenser water use. Therefore, in the November 2022 ACIM Final Rule, DOE modified the term and definition of ''maximum condenser water use'' to instead refer to the term ''condenser water use.'' *Id.*

In the November 2022 ACIM Final Rule, DOE did not revise the reporting requirements in 10 CFR 429.45 to remove the term ''maximum'' and align the requirements with the newly adopted definitions for ''energy use'' and ''condenser water use.'' *Id.* at 87 FR 65897. As a result, in the September 2023 CCE NOPR, DOE proposed to update the reporting requirements to specify ''energy use'' and ''condenser water use.'' 88 FR 67458, 67479. DOE requested comment on its proposal to align ACIM reporting requirement terminology with the amended terms. *Id.*

AHRI supported DOE's proposal to replace the terms ''maximum energy use'' and ''maximum condenser water use'' with ''energy use'' and ''condenser water use,'' respectively, for ACIMs. (AHRI, No. 18 at p. 11)

AHAM commented it did not have objections to the proposals in the September 2023 CCE NOPR concerning reporting requirements for ACIMs as they are currently defined. However, AHAM restated its objection to DOE's inclusion of residential icemakers within the scope of the ACIMs energy conservation standard proposed rulemaking. (AHAM, No. 16 at pp. 5–6; AHAM, Public Meeting Transcript, No. 6 at p. 38) AHAM added that if DOE does include residential ice makers within the scope of the ACIMs rulemaking, AHAM may have additional comments on the proposed and existing reporting requirements and/or the other applicable compliance and enforcement provisions. (AHAM, No. 16 at pp. 5–6)

DOE acknowledges the comments from AHAM regarding the separate proposed energy conservation standards rulemaking for ACIMs but notes that DOE has not established energy conservation standards for low-capacity ACIMs.

Therefore, DOE is not establishing reporting requirements for this category of ACIMs but would consider establishing such reporting requirements if DOE establishes energy conservation standards in the future. Otherwise, for the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, in this final rule, DOE is adopting the amendments as proposed in the September 2023 CCE NOPR.

b. Rounding Requirements

DOE currently requires test results for ACIMs to be rounded, as outlined in the ACIMs test procedure. 10 CFR 431.134(g). However, the certification requirements in 10 CFR 429.45 do not specify how values calculated in accordance with 10 CFR 429.45(a) would be rounded for reporting per 10 CFR 429.45(b). To ensure consistency among ACIM certification reports, in the September 2023 CCE NOPR, DOE proposed that any reported values be rounded consistent with the rounding requirements for individual test results. 88 FR 67458, 67479. Specifically, DOE proposed to require that reported values be rounded as follows: energy use to the nearest 0.01 kWh/100 lb, condenser water use to the nearest gal/100 lb, and harvest rate to the nearest 1 lb/24 h (for ACIMs with harvest rates greater than 50 lb/24 h) or to the nearest 0.1 lb/24

h (for ACIMs with harvest rates less than or equal to 50 lb/24 h). *Id.* DOE requested comment on its proposal to establish rounding requirements for ACIMs. *Id.* at 88 FR 67480.

AHRI commented asking if the draft template column headers and product codes had been updated to include the new smaller size categories (*i.e.,* low-capacity ACIMs). AHRI cited directions in the draft template for the Harvest Rate column to ''Enter the Harvest Rate in pounds of ice per 24 hours in the cells below. This should be a decimal number greater than zero.'' and asked if the reported harvest rate should be 0.1 lb/24 hr for ACIMs with harvest rates less than or equal to 50 lbs/24 hr and the nearest 1 lb/24 hr for ACIMs with harvest rates greater than 50 lb/24 h. (AHRI, No. 18 at p. 11)

In response to AHRI's comment, DOE has not established energy conservation standards for low-capacity ACIMs. Accordingly, DOE is not establishing specific rounding instructions or product group codes for certifying compliance for such equipment. DOE would consider establishing such provisions should DOE establish energy conservation standards for this equipment in the future.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, in this final rule, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR, except that DOE is not establishing rounding requirements for low-capacity ACIMs.

c. Sampling Corrections

DOE's sampling provisions for ACIMs state that any represented value of energy use, condenser water use, or other measure of consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of the mean of the sample, or the upper 95-percent confidence limit of the true mean divided by 1.10. 10 CFR 429.45(a)(2). The sampling provisions also state that the UCL should be calculated using the Student's t-Distribution Values for Certification Testing for a 95-percent two-tailed confidence interval with $n-1$ degrees of freedom from appendix A, where ''n'' is the number of samples. *Id.* However, appendix A outlines Student's t-Distribution Values that are based on a one-tailed confidence interval, rather than the two-tailed confidence interval specified in 10 CFR 429.45(a)(2)(ii). To correct this discrepancy, in the September 2023 CCE NOPR, DOE proposed to revise 10 CFR 429.45(a)(2)(ii) to specify that the UCL should be calculated using the Student's t-Distribution Values for Certification Testing for a 95-percent one-tailed confidence interval outlined in appendix A. 88 FR 67458, 67480. DOE requested comment on its proposal to correct the sampling provisions for ACIMs. *Id.*

During the NOPR public meeting, AHRI asked if the sampling provisions would impact any non-efficiency features such as capacity or bin volume. AHRI also asked if the sampling requirements would impact manufacturers' ability to rate conservatively. (AHRI, Public Meeting Transcript, No. 6 at pp. 38–39) AHAM also asked if ''one-sided'' confidence interval was the same as ''one-tailed'' confidence interval because AHAM had observed that both terms were used interchangeably. (AHAM, Public Meeting Transcript, No. 6 at p. 40)

In the NOPR public meeting, DOE responded that the intent of the proposal is for an energy consumption rating, or any rating, for which consumers would prefer lower values. (DOE, Public Meeting Transcript, No. 6 at pp. 39–40) A one-tailed interval provides a reasonable assurance to the consumer that the rating, as determined based on the tested sample, limits the potential value of rated energy use based on the test sample. Therefore, it is intended to provide a conservative rating and does not impact any non-efficiency features. DOE also confirmed that the ''one-sided'' confidence interval was the same as ''one-tailed'' confidence interval. (*Id.* at p. 40)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, in this final rule, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align ACIM certification reporting requirements with the amended terms adopted in the November 2022 ACIM Final Rule. 88 FR 67458, 67480. For ACIMs, manufacturers currently report maximum energy use and maximum condenser water use and would report energy use and condenser water use under the amended requirements, which are substantially similar to the previous requirement as discussed in the September 2023 CCE NOPR. *Id.*

In the September 2023 CCE NOPR, DOE tentatively determined that these proposed amendments would not impose additional costs for manufacturers because manufacturers of ACIMs are already submitting certification reports to DOE containing these values and should have readily available the information that DOE proposed to collect. *Id.* DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what ACIM manufacturers are doing currently, but DOE requested comment on the certification reporting costs. *Id.*

AHRI commented that the certification reporting amendments proposed for ACIMs will involve costs to manufacturers and related burden to report to DOE because products in the new smaller harvest rate category—below 50 lbs/24 h—are not in the AHRI ACIM Certification Program. (AHRI, No. 18 at p. 11)

In response to AHRI's comment, as stated previously, DOE is not establishing certification requirements for low-capacity ACIMs as DOE has not established energy conservation standards for this equipment category. Therefore, in this final rule, DOE makes a final determination that the amendments to the reporting requirements for ACIMs would not cause any measurable change in reporting burden or hours for ACIM manufacturers. Compliance with these reporting requirements is not required until the next annual certification report filing date on or after 210 days after publication of this final rule.

N. Walk-In Coolers and Freezers

DOE is amending the reporting requirements for walk-in coolers and walk-in freezers (''walk-ins''), which are enclosed storage spaces including, but not limited to, panels, doors, and refrigeration system, refrigerated to temperatures, respectively, above and at or below 32 °F that can be walked into and have a total chilled storage area of less than 3,000 square feet. The terms ''walk-in cooler'' and ''walk-in freezer'' do not include products designed and marketed exclusively for medical, scientific, or research purposes. 10 CFR 431.302. In the test procedure final rule published on May 4, 2023 (''May 2023 Walk-ins TP Final Rule''), DOE amended the test procedure provisions for walk-ins. 88 FR 28780. Consistent with the May 2023 Walk-ins TP Final Rule, DOE is adopting amendments to the reporting requirements in this final rule.

1. Reporting

Under the existing requirements in 10 CFR 429.53, manufacturers must report the following public information:

(1) For all walk-in doors: the door type, R-value of the door insulation, a declaration that the manufacturer has

incorporated the applicable design requirements, door energy consumption, and rated surface area in square feet. 10 CFR 429.53(b)(2)(i) and (b)(3)(i).

(2) For walk-in doors with transparent reach-in doors and windows, the glass type of the doors and windows (*e.g.,* double-pane with heat reflective treatment, triple-pane glass with gas fill), and the power draw of the antisweat heater in watts per square foot of door opening. 10 CFR 429.53(b)(i).

(3) For walk-in panels: the insulation R-value. 10 CFR 429.53(b)(ii).

(4) For walk-in refrigeration systems: the installed motor's function purpose (*i.e.,* evaporator fan motor or condenser fan motor), its rated horsepower, a declaration that the manufacturer has incorporated the applicable walk-in-specific design requirements into the motor, annual walk-in energy factor (''AWEF''), net capacity, the configuration tested for certification (*e.g.,* condensing unit only, unit cooler only, single-packaged dedicated system, or matched pair), and if an indoor dedicated condensing unit is also certified as an outdoor dedicated condensing unit (and, if so, the basic model number for the outdoor dedicated condensing unit). 10 CFR 429.53(b)(2)(iii), (b)(3)(ii), (b)(5).

Under the existing requirements in 10 CFR 429.53, manufacturers must report the following non-public information for all walk-in doors: (1) rated power of each light, heater wire, and/or other electricity consuming device; and (2) whether such device(s) has/have a timer, control system, or other demand-based control that reduces the device's power consumption. 10 CFR 429.53(b)(4)(i).

These requirements provide for certifying compliance with the standards applicable to walk-in doors, panels, and medium temperature dedicated condensing units (including medium-temperature single-packaged dedicated systems and matched pairs) manufactured on or after June 5, 2017 and with the standards applicable to walk-in low-temperature dedicated condensing units (including low-temperature single-packaged dedicated systems and matched pairs), low-temperature unit coolers, and medium-temperature unit coolers manufactured on or after July 10, 2020. DOE is updating these requirements and aligning the reporting requirements with the May 2023 Walk-ins TP Final Rule. DOE discusses these updates in the sections as follows.

a. Combining the Publicly Required Reporting Requirements in 10 CFR 429.53(b)(2), 429.53 (b)(3), and 429.53(b)(5)

The current reporting requirements at 10 CFR 429.53(b) specify public reporting requirements in three paragraphs—(b)(2), (b)(3), and (b)(5)—based on whether the reporting requirement was submitted before or after June 5, 2017. Given this date has passed, in the September 2023 CCE NOPR, DOE proposed to combine the public product-specific reporting requirements at 10 CFR 429.53(b)(2) and moving the non-public product-specific reporting requirements from 10 CFR 429.53(b)(4) to 10 CFR 429.53(b)(3). 88 FR 67458, 67480. DOE requested comment on these proposed changes. *Id.*

DOE did not receive any comments on its proposal to combine the public product-specific reporting requirements for walk-ins. For the reasons discussed in the preceding paragraph and in the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

b. CO_2 Systems

DOE has granted waivers to Heat Transfer Products Group, Hussmann, KeepRite, and RefPlus for an alternate test procedure for specific unit cooler basic models that utilize CO_2 as a refrigerant.[30] The alternate test procedure provided in these waivers modifies the test condition values to reflect typical operating conditions for a transcritical [31] CO_2 booster system. Specifically, the waiver test procedures require that CO_2 unit cooler testing is conducted at a liquid inlet saturation temperature of 38 °F and a liquid inlet subcooling temperature of 5 °F.

In the May 2023 Walk-ins TP Final Rule, DOE amended appendix C to include the alternate test conditions specified in the waivers. DOE also adopted these requirements into the new appendix C1. 88 FR 28780, 28809. Additionally, in the May 2023 Walk-ins TP Final Rule, DOE defined a ''CO_2 unit cooler'' as ''a unit cooler that includes a nameplate listing only CO_2 as an approved refrigerant.'' 88 FR 28780, 28790.

Accordingly, in the September 2023 CCE NOPR, DOE proposed to amend the public reporting requirements at 10 CFR 429.53(b)(2)(iii) to require that manufacturers report whether a given basic model meets the definition of a CO_2 unit cooler as defined in the May 2023 Walk-ins TP Final Rule. 88 FR 67458, 67481 (*see also,* 10 CFR 431.302). DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule.[32] *Id.* DOE requested comments on its proposal to require reporting of whether a basic model meets the definition of a CO_2 unit cooler. *Id.*

DOE did not receive any comments on its proposal to require reporting of whether a basic model meets the definition of a CO_2 unit cooler. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

DOE did receive comments specific to its proposal regarding labeling of CO_2 unit coolers. These comments are discussed in section III.N.3.

c. Detachable Single-Packaged Dedicated Systems and Attached Split Systems

In the May 2023 Walk-ins TP Final Rule, DOE defined a ''detachable single-packaged dedicated system'' as a system consisting of a dedicated condensing unit and an insulated evaporator section in which the evaporator section is designed to be installed external to the walk-in enclosure and circulating air through the enclosure wall, and the condensing unit is designed to be installed either attached to the evaporator section or mounted remotely with a set of refrigerant lines connecting the two components. 88 FR 28780, 28790. Since detachable single-packaged dedicated systems have thermal losses similar to those for single-packaged dedicated systems, DOE adopted the air enthalpy test method for single-packaged dedicated systems in the May 2023 Walk-ins TP Final Rule. 88 FR 28780, 28815–28816.

Additionally, DOE defined an ''attached split system'' in the May 2023 Walk-ins TP Final Rule as a matched pair refrigeration system that is designed to be installed with the evaporator entirely inside the walk-in enclosure and the condenser entirely outside the walk-in enclosure, where

[30] HTPG Decision and Order, 86 FR 14887 (March 19, 2021); Hussmann Decision and Order, 86 FR 24606 (May 7, 2021); KeepRite Decision and Order, 86 FR 24603 (May 7, 2021); RefPlus Interim Waiver, 86 FR 43633 (Aug. 10, 2021).

[31] CO_2 refrigeration systems are transcritical because the high-temperature refrigerant that is cooled by ambient air is in a supercritical state, above the 87.8 °F critical point temperature, above which the refrigerant cannot exist as separate vapor and liquid phases.

[32] The annual certification report filings for walk-ins are due no later than August 1. *See* 10 CFR 429.12, Table 1 to paragraph (d).

the evaporator and condenser are permanently connected with structural members extending through the walk-in wall. 88 FR 28780, 28790. DOE has confirmed through testing that these systems still experience some heat leakage when compared to traditionally installed systems that have the dedicated condensing unit and the unit cooler in separate housings. This heat leakage has not been fully studied, however, so in the May 2023 Walk-ins TP Final Rule, DOE specified that these systems should be tested as a matched pair using refrigerant enthalpy methods. 88 FR 28780, 28816.

Although both detachable single-packaged dedicated systems and attached split systems would be considered a ''single-packaged dedicated system,'' the two would be tested differently. Some of the previously discussed test procedure waivers specify basic models that meet the definition of a detachable single-packaged dedicated system or an attached split system. To ensure appropriate testing and consistent reporting, it is important that these models be identified during certification.

Accordingly, in the September 2023 CCE NOPR, DOE proposed to amend the public reporting requirements at 10 CFR 429.53(b)(2)(iii) to require that manufacturers report whether a given basic model meets the definition of a ''detachable single-packaged dedicated system'' or an ''attached split system'' as defined in the May 2023 Walk-ins TP Final Rule. 88 FR 67458, 67481. DOE also proposed that manufacturers would be required to comply with the proposed reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule and requested comment on this topic. *Id.* DOE requested comment on these proposed requirements. *Id.*

DOE did not receive any comments on its proposal to require the reporting of whether a basic model meets the definition of a detachable single-packaged dedicated system or an attached split system. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

d. Flooded Head Pressure Control

In the May 2023 Walk-ins TP Final Rule, DOE adopted refrigerant charging provisions for walk-in dedicated condensing systems that use valves to ''flood'' the condenser with liquid refrigerant to maintain sufficiently high condensing temperature under cold air temperatures. 88 FR 28780, 28804–28806. Specifically, DOE noted that charging in the ''C'' test condition rather than the ''A'' test condition is appropriate for dedicated condensing systems (dedicated condensing units, matched systems, and single-packaged dedicated systems) that use a flooded condenser design. *Id.* However, for dedicated condensing systems that use fan controls to maintain condensing temperature for low ambient operating conditions, the test procedure specifies charging at the ''A'' test condition. 88 FR 28780, 28804–28806.

Accordingly, in the September 2023 CCE NOPR, DOE proposed to amend the non-public reporting requirements at 10 CFR 429.53(b)(3)(ii) [33] to require that manufacturers report whether a given dedicated condensing system basic model is sold with flooded head pressure controls for maintaining condensing temperature at low ambient temperatures. 88 FR 67458, 67481. DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule and requested comment on this topic. *Id.* DOE requested comment on this proposed requirement. *Id.*

DOE did not receive any comments on its proposal to require the reporting of whether a dedicated condensing system basic model includes flooded head pressure controls. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

e. Compressor Break-In

Although the DOE test procedure for walk-in refrigeration systems does not require a compressor ''break-in'' period, DOE recognizes that walk-in refrigeration manufacturers may routinely break-in the refrigeration system compressor for some time prior to conducting testing. This break-in period can reduce variation in compressor performance.

In a CAC/HPs test procedure final rule published June 8, 2016, DOE noted that the most significant improvements in both compressor performance and reduction in variation among compressor models occur during roughly the first 20 hours of run time. 81 FR 36992, 37034. Ultimately, DOE adopted the provision to limit the optional break-in period to 20 hours to achieve the most uniform compressor performance while limiting test burden. *Id.* DOE additionally included provisions for manufacturers to have the option to report the use of a break-in period and its duration as part of the test data underlying their product certifications, the use of the same break-in period specified in product certifications for testing conducted by DOE, and the use of the 20 hours break-in period for products certified using an AEDM. 81 FR 36992, 37033.

Other DOE-regulated equipment (*e.g.,* air-cooled unitary air conditioners and heat pumps (''CUACs and CUHPs''), DX–DOASes, CRACs, *etc.*) include required or optional provisions for compressor break-in either as part of the test procedure or as a certification option, so that any potential enforcement testing uses conditions similar to those used for rating a given unit. Whether required or optional, break-in duration is limited to a maximum of 20 hours for dedicated outdoor air supply units, SPVUs, and CUACs.

Accordingly, in the September 2023 CCE NOPR, DOE proposed to amend the non-public reporting requirements at 10 CFR 429.53(b)(3)(ii) [34] to provide an option for manufacturers to report the compressor break-in period, in hours, used to obtain a basic model's certified rating; however, the break-in duration may not exceed 20 hours in length. 88 FR 67458, 67482. DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule and requested comment on this topic. *Id.* DOE requested comment on its proposal to provide an option for manufacturers to report compressor break-in duration. *Id.*

DOE did not receive any comments on its proposal to amend the reporting requirements and provide an option for manufacturers to report compressor break-in. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

[33] Note that currently 10 CFR 429.53(b)(3) specifies public reporting requirements. In this final rule, DOE is revising 10 CFR 429.53(b) such that paragraph (b)(2) specifies the public reporting requirements and paragraph (b)(3) specifies non-public reporting requirements.

[34] Note that currently 10 CFR 429.53(b)(3) specifies public reporting requirements. In this final rule, DOE revising 10 CFR 429.53(b) such that paragraph (b)(2) specifies public reporting requirements and paragraph (b)(3) specifies non-public reporting requirements.

f. Supplemental Testing Instructions

As discussed previously, DOE requires manufacturers of covered commercial HVAC equipment to submit supplemental information regarding additional testing instructions, if applicable, and they must also specify which, if any, special features were included to rate a basic model. DOE also requires supplemental testing instructions from manufacturers of commercial warm air furnaces (*see* 10 CFR 429.41(b)(4)), commercial refrigeration equipment (*see* 10 CFR 429.42(b)(4)), and commercial water heating equipment (*see* 10 CFR 429.44(c)(4)). The supplemental information submitted in PDF format provides information to allow for third-party laboratories to complete a valid test according to the DOE test procedure.

Consistent with its requirements for other commercial equipment, in the September 2023 CCE NOPR, DOE proposed to require that, if such information would be needed for a third party to independently run a valid test, manufacturers must submit supplemental testing instructions at the time each basic model is certified. 88 FR 67458, 67482. Supplemental testing instructions for walk-ins might include (but are not limited to) specific charging instructions, control of fan cycling at specific test conditions, and type of expansion valve. Consistent with the supplemental testing instructions DOE has established for other commercial equipment, DOE noted in the September 2023 CCE NOPR that any supplemental information for testing walk-ins would need to be consistent with manufacturer installation instructions associated with the equipment under test. *See* section 3.2.6 of appendix C to subpart R of 10 CFR part 431 and section 3.5.2.4 of appendix C1 to subpart R of 10 CFR part 431. DOE further noted in the September 2023 CCE NOPR that prior to testing any walk-in refrigeration system basic model under its enforcement provisions, DOE would determine if supplemental testing instructions were included with certification of the basic model. If supplemental testing instructions were included with certification, DOE would review these instructions and compare them to the manufacturer's installation instructions. Once DOE has determined that the supplemental instructions are consistent with the manufacturer's installation instructions, DOE would instruct the third-party test lab to incorporate the supplemental testing instructions into its test plan. 88 FR 67458, 67481.

Under this proposal, DOE noted that manufacturers would need to provide the complete name of the PDF containing the supplemental testing instructions as part of the certification report. DOE further stated in the September 2023 CCE NOPR that if the manufacturer changes the supplemental testing instructions and as a result changes the file name, then the manufacturer must update the certification report. *Id.*

In the September 2023 CCE NOPR, DOE proposed to require that, if necessary to run a valid test, manufacturers must submit supplemental testing instructions at the time each basic model is certified. *Id.* DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule. *Id.* DOE requested comment on its proposal to require, if necessary to run a valid test, supplemental testing information as a PDF file at the time of certification. *Id.*

In response to the September 2023 CCE NOPR, AHRI commented that it did not oppose DOE's proposal to require, if necessary to run a valid test, supplemental testing information as a PDF file at the time of certification. (AHRI, No. 18 at p. 11)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR

g. Anti-Sweat Heater Wire With Controls

For walk-ins with transparent reach-in doors, EPCA prescribes specific ASH-related requirements: (1) walk-ins without anti-sweat heater controls must have a heater power draw of no more than 7.1 or 3.0 watts per square foot of door opening for freezers and coolers, respectively; (2) walk-ins with anti-sweat heater controls must either have a heater power draw of no more than 7.1 or 3.0 watts per square foot of door opening for freezers and coolers, respectively; or (3) the anti-sweat heater controls must reduce the energy use of the heater in a quantity corresponding to the relative humidity of the air outside the door or to the condensation on the inner glass pane for walk-ins with more than 7.1 or 3.0 watts of anti-sweat heat per square foot of door opening for freezers and coolers, respectively. *See* 42 U.S.C. 6313(f)(3)(C)–(D). These requirements are also codified at 10 CFR 431.306(b)(3)–(4).

The current test procedure assigns percent time off (''PTO'') values to various walk-in door components, including anti-sweat heaters, to reflect the hours in a day that an electricity-consuming device operates at its full rated or certified power. For walk-in cooler doors with ASH controls, the PTO value is 75 percent and for walk-in freezer doors with ASH controls, the PTO value is 50 percent. For doors without ASH controls, the PTO is 0 percent. The test procedure does not distinguish between types of ASH controls, just the presence of them.

DOE recognizes that walk-in coolers and freezers may be installed in a variety of environments, including different geographical climate zones, different indoor building installations, and even outdoor installations. Thus, walk-ins may experience a wide variety of ambient conditions. Consumers looking to purchase walk-in doors with ASH controls may benefit from publicly available information on the conditions at which the ASH is activated based on any controls provided as part of the door.

Additionally, during enforcement testing, DOE calculates the door's energy consumption using the input power listed on the nameplate of each electricity-consuming device shipped with the door. In the absence of a value listed on the nameplate, DOE uses the device's rated input power included in the door's certification report. In the absence of either a nameplate or certified value, DOE may measure the input power for the purposes of calculating a door's energy consumption. 10 CFR 429.134(q)(4). Manufacturers are required to certify to DOE whether each electricity-consuming device, including ASH, has controls. 10 CFR 429.53(b)(4)(i). If there is no certification for the basic model, it can be difficult to discern whether the unit has controls without destroying the door.

For these reasons, DOE proposed in the September 2023 CCE NOPR that manufacturers of doors with ASH controls certify the conditions (*i.e.,* temperature, humidity, etc.) at which the controls activate the ASH wire. 88 FR 67458, 67483. DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule. *Id.* DOE requested comments on its proposal to require reporting of the conditions at which the controls activate the ASH wire for walk-in doors with ASH controls. *Id.*

During the NOPR public meeting, Dover Food Retail asked about the type of doors (*e.g.,* freight doors, personnel pass-through doors, and display doors) the ASH requirements would be applicable to. Dover Food Retail additionally commented that most of the time in a commercial application like a supermarket, the ASH control is field-installed, field-supplied, field-connected, and not part of a display door package and asked how such information should be included on a label. (Dover Food Retail, Public Meeting Transcript, No. 6 at pp. 44–45)

As noted during the NOPR public meeting, the ASH requirements are applicable to all types of doors. DOE additionally notes that in the September 2023 CCE NOPR, DOE did not propose labeling requirements for doors with ASH controls, but rather proposed reporting (*i.e.,* certification) requirements for doors with ASH controls. To the extent that basic models of doors include manufacturer-supplied factory or field-installed ASH controls that are considered in the calculation of daily energy consumption per the test procedure at appendix A to subpart R of 10 CFR 431, the manufacturer should be able to report the conditions at which the controls they offer activate. DOE understands the point made by Dover Food Retail that the exact conditions that the ASH controls are activated at in the field may differ based on the installation location. DOE has concluded that requiring that manufacturers of doors with ASH controls certify the range of potential conditions (*i.e.,* temperature, humidity, etc.) at which the controls activate the ASH wire would address Dover Food Retail's concern. To the extent that basic models of doors do not include manufacturer-supplied ASH controls, it would not be appropriate to consider the presence of ASH controls in the calculation of daily energy consumption per the test procedure at appendix A to subpart R of 10 CFR 431.

During the NOPR public meeting, Scott Martin asked about the compliance date for DOE's proposed ASH control reporting requirements. (Scott Martin, Public Meeting Transcript, No. 6 at pp. 46–47)

Manufacturers of doors with ASH controls would be required to comply with the reporting requirements adopted in this final rule beginning on the next certification report annual filing date required for walk-in components following 210 days after the publication of this final rule (*i.e.,* August 1).

ASAP *et al.* commented providing the following editorial corrections to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.53(b)(2)(i)(H): moving ''in degrees Fahrenheit'' from the end of the paragraph to be after the word ''temperature'' within parenthesis; and, replacing ''humidity'' with ''relative humidity (in percent, %).'' ASAP *et al.* also noted that the word ''antisweat'' appeared both hyphenated and non-hyphenated in this section. (ASAP *et al.,* No. 14 at p. 5)

DOE has concluded that the editorial changes suggested by ASAP *et al.* do not change the intent of what DOE proposed and would provide further clarity to the instruction. Therefore, DOE has amended the regulatory text at 10 CFR 429.53(b)(2)(i)(H) to include the editorial changes recommended by ASAP *et al.* DOE has also replaced the word ''antisweat'' with ''anti-sweat'' for consistency in 10 CFR 429.53.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the requirement that manufacturers certify the range of conditions at which the ASH controls activate and with the minor corrections recommended by ASAP *et al.*

h. Door Conduction Load

DOE's test procedure for measuring walk-in door energy consumption accounts for thermal conduction through the door and the direct and indirect electricity use of any electrical components associated with the door. 10 CFR 431.304(b)(1)-(2) and 10 CFR part 431, subpart R, appendix A.

The direct and indirect electricity use of the electrical components associated with the door is based on the certified or nameplate input power values of each component, which are certified to DOE as non-public information. DOE does not, at present, require certification of the thermal conduction through the door.

In the September 2023 CCE NOPR, DOE proposed to require certification of thermal conduction load through the door in Btu/h and proposed to add this requirement to the non-public reporting requirements in 10 CFR 429.53(b)(3)(i). 88 FR 67458, 67483. DOE stated that manufacturers are already calculating conduction load as part of the current test procedure at sections 6.2.1 and 6.3.1 of appendix A to subpart R of 10 CFR part 431 for display doors and non-display doors, respectively. DOE noted that the conduction load is required for calculating the daily energy consumption. DOE has evaluated the theoretical thermal conduction for all walk-in doors certified to DOE and found in some cases that the calculated values may not be consistent with the values that would be expected based on the currently reported data (*i.e.,* wattage, presence of controls) for the door's electricity-consuming devices. To remedy this situation, DOE proposed that walk-in door manufacturers certify thermal conduction load as non-public data, in addition to the requirements already listed in 10 CFR 429.53(b)(3)(i). *Id.* DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification report annual filing date required for walk-in components following the publication of this final rule. DOE requested comments on this proposal. *Id.*

During the NOPR public meeting, Hussmann asked if the conduction load requirements were applicable to just a solid door product or if they would also apply to a solid, opaque, or transparent display door. (Hussmann, Public Meeting Transcript, No. 6 at p. 46)

DOE notes that the thermal conduction load reporting requirements proposed in the September 2023 CCE NOPR would be applicable to all doors (*i.e.,* both display and non-display doors as defined at 10 CFR 431.302).

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align walk-in certification reporting requirements with the test procedure requirements applicable to walk-ins manufactured on and after October 31, 2023. 88 FR 67458, 67483. For all walk-in doors, manufacturers currently report the door type, R-value of the door insulation, a declaration that the manufacturer has incorporated the applicable design requirements, door energy consumption, rated surface area, rated power of each light, heater wire, and/or other electricity-consuming device and whether such device(s) has a timer, control system, or other demand-based control that reduces the device's power consumption. For transparent reach-in display doors and windows, manufacturers must currently also report the glass type of the doors and windows, and the power draw of the ASH. Based on the proposed reporting requirements in the September 2023 CCE NOPR, manufacturers would additionally report the conduction load through the door, and the temperature and/or humidity conditions at which the ASH controls engage if the proposed amendments are adopted. *Id.*

For walk-in refrigeration systems, manufacturers currently report the installed motor's function purpose (*i.e.,* evaporator fan motor or condenser fan motor), its rated horsepower, a declaration that the manufacturer has incorporated the applicable walk-in-specific design requirements into the motor, AWEF, net capacity, the configuration tested for certification (*e.g.,* condensing unit only, unit cooler only, single-packaged dedicated system, or matched pair), and if an indoor dedicated condensing unit is also certified as an outdoor dedicated condensing unit (and, if so, the basic model number for the outdoor dedicated condensing unit). In the September 2023 CCE NOPR, DOE noted that if the proposed amendments are adopted, manufacturers would additionally report whether the basic model meets the definition of a CO_2 unit cooler, whether a basic model meets the definition of a detachable single-packaged dedicated system or an attached split system, whether a dedicated condensing system has flooded head pressure control, and whether a compressor break-in period was used, and if so, the duration of the break-in period. *Id.* Additionally, manufacturers would be required to submit supplemental testing instructions in PDF format if these instructions are necessary to run a valid test. *Id.*

In the September 2023 CCE NOPR, DOE tentatively determined that these proposed amendments would not impose additional costs for manufacturers because manufacturers of walk-ins are already submitting certification reports to DOE and should have readily available the information that DOE proposed to collect as part of this rulemaking. DOE stated that it does not believe the revised reporting requirements will cause any appreciable change in reporting burden or hours as compared to what walk-in manufacturers are currently doing today, but DOE requested comment on the certification reporting costs. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for walk-ins. In this final rule, DOE has determined that these amendments would not cause any measurable change in reporting burden or hours for walk-in manufacturers. Compliance with these amended reporting requirements is not required until the next annual certification report filing date on or after 210 days after publication of this final rule.

3. Labeling

If the Secretary has prescribed test procedures for any class of covered equipment, a labeling rule applicable to such class of covered equipment must be prescribed. *See* 42 U.S.C. 6315(a). EPCA, however, also sets out certain criteria that must be met prior to prescribing a given labeling rule. Specifically, to establish these requirements, DOE must determine that: (1) labeling in accordance with section 6315 is technologically and economically feasible with respect to any equipment class; (2) significant energy savings will likely result from such labeling; and (3) labeling in accordance with section 6315 is likely to assist consumers in making purchasing decisions. (*See* 42 U.S.C. 6315(h))

If these criteria are met, EPCA specifies certain aspects of equipment labeling that DOE must consider in any rulemaking establishing labeling requirements for covered equipment. At a minimum, such labels must include the energy efficiency of the affected equipment as tested under the prescribed DOE test procedure. The labeling provisions may also consider the addition of other requirements, including: (1) directions for the display of the label; (2) a requirement to display on the label additional information related to energy efficiency or energy consumption, which may include instructions for maintenance and repair of the covered equipment, as necessary, to provide adequate information to purchasers; and (3) requirements that printed matter displayed or distributed with the equipment at the point of sale also include the information required to be placed on the label. (42 U.S.C. 6315(b) and 42 U.S.C. 6315(c))

DOE previously established labeling requirements for walk-in components, codified at 10 CFR 431.305, in a final rule published on December 28, 2016 (''December 2016 Walk-in Final Rule''). 81 FR 95758, 95802. For walk-in panels, DOE had initially proposed in the NOPR leading to the aforementioned final rule to include the date of manufacture on the nameplate of a panel. 81 FR 54925, 54942 (Aug. 17, 2016). At the time, DOE estimated the total cost of applying labels specifically to non-display doors and panels, which may include date of manufacture, to be less than 0.1 percent of an average manufacturer's annual revenue. *Id.* In consideration of stakeholder comments indicating that affixing a panel label with date of manufacture was not technologically feasible, in the December 2016 Walk-in Final Rule, DOE did not finalize its proposal to require the date of manufacture on the nameplate. 81 FR 95758, 95802.

In the September 2023 CCE NOPR, DOE again proposed to require that date of manufacture be affixed to each walk-in panel via the nameplate or via another method (*i.e.,* stamping) at 10 CFR 431.305(a)(1)(ii). 88 FR 67458, 67484. DOE has found that date of manufacture is often included on the nameplate or stamped elsewhere on walk-in panels, indicating that it is not overly burdensome to include and is technologically feasible.

DOE did not receive any comments regarding its proposal to require that date of manufacture be affixed to each walk-in panel via the nameplate or another method. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the labeling requirement to require that date of manufacture be affixed to each walk-in panel via the nameplate or via another method (*i.e.,* stamping) at 10 CFR 431.305(a)(1)(ii) as proposed in the September 2023 CCE NOPR.

Additionally, in the May 2023 Walk-ins TP Final Rule, DOE added test provisions for CO_2 unit coolers. 88 FR 28780, 28809. To easily determine which walk-in units these test provisions apply to, DOE defined CO_2 unit coolers as ''unit coolers that include a nameplate listing only CO_2 as an approved refrigerant.'' 88 FR 28780, 28790. Based on walk-in units previously tested by DOE, DOE expects that most manufacturers are already including a refrigerant indication on the labels of walk-in unit coolers. Additionally, as discussed in the May 2023 Walk-ins TP Final Rule, manufacturers supported the finalized definition for CO_2 unit coolers, including the language regarding the nameplates. *Id.* DOE therefore tentatively concluded in the September 2023 CCE NOPR that it would not be burdensome for manufacturers to label unit coolers designed for use with CO_2 as a refrigerant. 88 FR 67458, 67484. Additionally, DOE stated in the September 2023 CCE NOPR that it consulted with the Federal Trade Commission (''FTC''), and they had no comments on the amendment as proposed in the September 2023 CCE NOPR. *Id.* Therefore, in the September 2023 CCE NOPR, DOE proposed that unit coolers designed to be used with CO_2 as a refrigerant include the statement ''Only CO_2 is approved as a refrigerant for this system'' on the unit nameplate. *Id.* DOE requested comments on its proposal for labeling requirements for walk-ins. *Id.*

In response, AHRI commented that it opposed DOE's proposal to require CO_2 unit coolers be labeled with the statement ''Only CO_2 is approved as a refrigerant for this system.'' AHRI stated that refrigerant information is required to be included on the equipment nameplate per the equipment's safety standard, UL 60335–2–89,[35] and including further labeling with the same information would be duplicative, burdensome to include, and may necessitate unnecessary costs. (AHRI, No. 18 at p. 12; AHRI, Public Meeting Transcript, No. 6 at pp. 42–43)

Given that CO_2 unit coolers are already required to include refrigerant information on the equipment label (as specified in the UL safety standard and the CO_2 unit cooler definition in 10 CFR 431.301), DOE agrees that duplicative labeling requirements are unnecessary. Accordingly, DOE is not adopting the labeling requirements for CO_2 unit coolers that were discussed and proposed in the September 2023 CCE NOPR.

4. Labeling Costs and Impact

Labeling requirements for panels are codified at 10 CFR 431.305(a). Since manufacturers are already required to apply a permanent nameplate to walk-in panels, DOE stated in the September 2023 CCE NOPR that it assumes there would be no additional cost to the nameplate material or nameplate application to include date of manufacturer on the panel nameplate. 88 FR 67458, 67484. However, DOE recognized that manufacturers may need to make changes to panel nameplates to include date of manufacture. *Id.*

In the September 2023 CCE NOPR, DOE also stated it assumes that the date of manufacture would be automatically etched or printed on each nameplate and that there would be a one-time cost for programming date of manufacturer into the nameplate printing software. *Id.* DOE estimated that it would take an electrical engineer a maximum of 8 hours to configure the nameplate printing software. The fully burdened wage for an electrical engineer at the time of the September 2023 CCE NOPR was $69.97,[36] resulting in an estimated one-time cost per manufacturer of $560 to include date of manufacture on panel nameplates. *Id.*

DOE did not receive any comments on its estimated costs. Additionally, for labeling requirements pertaining to printing or etching the date of manufacture on each nameplate, the fully burdened wage for an electrical engineering as of December 2023 is $79.46,[37] resulting in an approximate one-time cost per manufacturer of $640 to include date of manufacture on panel nameplates.

O. Commercial and Industrial Pumps

DOE is amending the reporting requirements for commercial and industrial pumps (''pumps''), which DOE defines as equipment designed to move liquids (which may include dissolved gases, free solids, and totally dissolved solids) by physical or mechanical action. A pump includes a bare pump and, if included by the manufacturer at the time of sale, mechanical equipment, driver, and controls. 10 CFR 431.462. DOE is not adopting the additional requirements proposed in the September 2023 CCE NOPR in this final rule, as discussed in the following sections.

1. Reporting

Under the existing requirements in 10 CFR 429.59(b)(2) and (b)(4), manufacturers must report the following as determined according to the DOE test procedure at appendix A to subpart Y of 10 CFR part 431:

- *For section III:* the pump configuration; the constant load pump energy index (''PEI_{CL}''); the nominal speed of rotation in revolutions per minute (''rpm''); pump total head in feet (''ft'') at BEP and nominal speed; volume per unit time (''flow rate'') in gallons per minute (''gpm'') at BEP and nominal speed; calculated driver power input at each load point corrected to nominal speed, in horsepower (''hp''); full impeller diameter in inches (''in''); for radially split, multi-stage, vertical, in-line diffuser casing (''RSV'') pumps and submersible turbine (''ST'') pumps, the number of stages tested; and for ST pumps, the bowl diameter in inches (''in''). 10 CFR 429.59(b)(2)(i); 10 CFR 429.59(b)(4)(i).
- *For section IV or section V:* all the above in addition to whether the PEI_{CL} is calculated or tested; and for pumps sold with electric motors regulated by DOE's energy conservation standards for electric motors, the nominal motor efficiency in percent (''%'') and the motor horsepower (''hp'') for the motor with which the pump is being rated. 10 CFR 429.59(b)(2)(ii); 10 CFR 429.59(b)(4)(ii).
- *For section VI or section VII:* pump configuration; variable load pump energy index (''PEI_{VL}'') instead of PEI_{CL}; pump total head in feet (''ft'') at BEP and nominal speed; volume per unit time (''flow rate'') in gallons per minute (''gpm'') at BEP and nominal speed; driver power input measured as the input power to the driver and controls at each load point corrected to nominal speed, in horsepower (''hp''), full impeller diameter in inches (''in''); whether PEI_{VL} is calculated or tested; for radially split, multi-stage, vertical, in-line diffuser casing (''RSV'') pumps and submersible turbine (''ST'') pumps, the number of stages tested; for ST pumps, the bowl diameter in inches (''in''); and for pumps sold with electric motors regulated by DOE's energy conservation standards for electric motors, the nominal motor efficiency in percent (''%'') and the motor horsepower (''hp'') for the motor with which the pump is being rated. 10 CFR 429.59(b)(2)(iii); 10 CFR 429.59(b)(4)(iii).

These requirements provide for certifying compliance with the standards for commercial and industrial pumps manufactured on or after January 27, 2020 . Under the existing requirements in 10 CFR 429.59(b)(3), manufacturers have the option to report pump efficiency at BEP in percent and PER_{CL} (for constant load pumps) or pump efficiency at BEP in percent and PER_{VL} (for variable load pumps), as determined according to appendix A to subpart Y of 10 CFR part 431.

In the September 2023 CCE NOPR, DOE proposed to require certification of pump efficiency at BEP in percent, PER_{CL}, and PER_{VL}—these metrics would be added to the existing reporting requirements in 10 CFR 429.59(b)(2). 88 FR 67458, 67485. DOE also proposed that manufacturers would be required to comply with the reporting requirement beginning on the next certification

[35] AHRI's comment referred to ISO 60335–2–89. However, DOE understands that AHRI was likely intending to refer to UL 60335–2–89, ''Household and similar electrical appliances—Safety—Part 2–89: Particular requirements for commercial refrigerating appliances and ice-makers with an incorporated or remote refrigerant unit or motor-compressor,'' published October 2021.

[36] DOE estimated the hourly wage using data from BLS's ''Occupational Employment and Wages, May 2022'' publication. DOE used the ''Electrical Engineers'' mean hourly wage of $48.28 to estimate the hourly wage rate. *www.bls.gov/oes/current/oes172071.htm*. DOE then used BLS's ''Employer Costs for Employee Compensation—June 2022'' to estimate that wages and salary account for approximately 69 percent for private industry workers. *www.bls.gov/news.release/pdf/ecec.pdf* (last accessed Dec. 1, 2022). Therefore, DOE estimated a fully burdened labor rate of $69.97 ($48.28 ÷ 0.69 = $69.97).

[37] DOE estimated the hourly wage using data from BLS's ''Occupational Employment and Wages, May 2022'' publication. DOE used the ''Electrical Engineers'' mean hourly wage of $54.83 to estimate the hourly wage rate. *www.bls.gov/oes/current/oes172071.htm* (last accessed Dec. 19, 2023). DOE then used BLS's ''Employer Costs for Employee Compensation—September 2023'' to estimate that wages and salary account for approximately 69 percent for private industry workers. *www.bls.gov/news.release/pdf/ecec.pdf* (last accessed Dec. 19, 2023). Therefore, DOE estimated a fully burdened labor rate of $79.46 ($54.83 ÷ 0.69 = $69.97).

report annual filing date required for commercial and industrial pumps following the publication of this final rule. *Id.*

Pump efficiency at BEP, PER_{CL}, and PER_{VL} are required for calculating PEI_{CL} or PEI_{VL}. In the September 2023 CCE NOPR, DOE noted that some manufacturers are already reporting pump efficiency at BEP, PER_{CL}, and/or PER_{VL}, and these metrics are already calculated in appendix A to subpart Y of 10 CFR part 431. *Id.* DOE stated that this reporting requirement would standardize the information reported to DOE by different pump manufacturers. *Id.* In addition, having these metrics available in DOE's compliance certification database would provide pump end users with greater insight into pump operation at part load conditions. *Id.* DOE requested comment on its proposed reporting requirements for commercial and industrial pumps. *Id.*

Grundfos commented opposing DOE's proposal for additional certification reporting for pump efficiency at BEP in percent, PEI_{CL}, and PEI_{VL}, noting that these data points were optional in the January 2016 Pumps Test Procedure Final Rule (81 FR 4086). Grundfos commented that DOE's rationale that these data points would provide pump end users with greater insight into pump operation at part-load conditions is false for the following reasons: pump efficiency at BEP only applies to a single load point (*i.e.,* BEP); part-load power inputs are already available in the CCMS database and PER values can be determined from this information; part-load power inputs are marginally useful given the limited number of pumps operating at these specific load points; end users can calculate their own weighted averages based on their specific system without the need for DOE to mandate additional reporting; and, additional data for pumps in the CCMS database would serve only to confuse the public. (Grundfos, No. 10 at p. 1) Grundfos commented questioning the reasoning behind DOE's choice to modify reporting of pump data within this rulemaking instead of handling it within the upcoming energy conservation standards notice. Grundfos stated that DOE should be working to minimize burden on manufacturers and not creating additional burden by including modifications across multiple regulatory actions. (Grundfos, No. 10 at p. 2)

HI commented that DOE should not include the proposed new reporting requirements for commercial and industrial pumps to additionally include ''pump efficiency at BEP in percent'' and ''PER_{CL} (for constant load pumps)'' or ''PER_{VL} (for variable load pumps)'' for the following reasons: reporting these values would not standardize reporting; it would not provide users with part load information; it would increase testing and administrative burden without energy savings benefit; and, these requirements were not agreed to by the ASRAC working group [38] because reporting of these values was either redundant or counterproductive to the use of PEI. (HI, No. 20 at p. 2)

HI commented it was not clear what DOE was asking for in the requirement to report ''pump efficiency at BEP.'' HI stated that depending on the section of the test procedure that the pump is tested, BEP could be determined based on the bare pump efficiency (*see* sections III, V, or VII) or overall efficiency at BEP (*see* sections IV or VI). HI commented that in the April 2022 Pumps Test Procedure NOPR (87 FR 21268), DOE changed the wording from ''overall efficiency'' to ''pump efficiency'' for the section IV and VI tests, which led HI to believe that DOE is using the term ''pump efficiency'' and ''overall efficiency'' interchangeably even though they are different, according to HI. (HI, No. 20 at p. 2)

HI commented that DOE should not start publishing ''pump efficiency at BEP'' because it would cause confusion. HI stated that PEI is the DOE regulatory metric, which considers the pump design flow rate, specific speed, multiple tested load points, and driver and control losses, while ''pump efficiency at BEP'' is only useful for a user purchasing a pump that will operate at that BEP 100 percent of the time. HI stated that comparing ''pump efficiency at BEP'' for pumps with different BEP flow and/or head will lead to improper pump selection and higher energy consumption. (HI, No. 20 at p. 2)

HI commented that PER_{CL} and PER_{VL} could be calculated directly from driver or control input power at the prescribed load points and by requiring manufacturers to report these redundant values, DOE would be increasing the chance of reporting errors, conflicting data, and confusion in the marketplace. (HI, No. 20 at pp. 2–3)

HI commented the new reporting also would not provide users with part load information as suggested by DOE because DOE has defined pump BEP as 100 percent flow rate. HI additionally noted that the part load driver or control input power that is used to calculate PER_{CL} and PER_{VL} is already reported and listed for each model on DOE's CCMS database and therefore, this proposed addition would not add value to a customer trying to identify the energy consumption. (HI, No. 20 at p. 3)

ASAP *et al.* commented providing the following editorial correction to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.59(b)(2)(i): replacing Pini with $P_{ini.}$ (ASAP *et al.,* No. 14 at p. 5)

In response to ASAP *et al.,* DOE is replacing P^{in}_{i} with P_i^{in} in this rulemaking to be consistent with variables defined in subpart Y of 10 CFR part 431.

As commented by HI, the efficiency at BEP only represents one load point and is not representative of part-load applications, which is a common technique used to properly size a pump. Further, as commented by HI and Grundfos, the proposed PER_{CL} and PER_{VL} requirement would not provide deeper insight into part-load conditions. DOE has determined that the CCMS database already collects sufficient data for end users to correctly size pumps in part load applications. Therefore, as these proposed additional requirements would not provide greater insight into pump operation at part-load conditions, DOE is not adopting the additional reporting requirements proposed in the September 2023 CCE NOPR in this final rule.

In response to Grundfos' comment regarding the proposal to make this change in the September 2023 CCE NOPR instead of the next pumps standards notice, DOE notes that it published the September 2023 CCE NOPR with proposed updates for up to 20 different products/equipment. DOE conducts a single certification reporting requirements rulemaking for combined products and equipment because it would be more onerous for DOE to publish proposed and final certification related rulemakings for each product/equipment separately.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to amend the reporting requirements for commercial and industrial pumps. 88 FR 67458, 67484. In response, Grundfos and HI commented regarding the costs that

[38] On July 23, 2013, DOE issued a notice of intent to establish a Working Group under the Appliance Standards and Rulemaking Federal Advisory Committee (''ASRAC'') to negotiate proposed Federal standards for the energy efficiency of commercial and industrial pumps (''the CIP Working Group''). 78 FR 44036. DOE held seven open meetings and two webinars, during which the CIP Working Group discussed scope, metrics, test procedures, and standard levels for pumps. The CIP Working Group concluded their negotiations on June 19, 2014 with a supportive vote on several recommendations for DOE regarding the regulation of pumps. (Docket No. EERE–2013–BT–NOC–0039, No. 92)

would be incurred if DOE were to adopt the proposed reporting requirements. (Grundfos, No. 10 at p. 2; HI, No. 20 at p. 3)

As discussed in section III.O.1, DOE is not adopting the additional reporting requirements of pump efficiency at BEP in percent, PER_{CL}, and PER_{VL}. Therefore, manufacturers would not incur any additional certification reporting costs as a result of this final rule.

P. Portable Air Conditioners

DOE is amending the reporting requirements for portable ACs, which DOE defines as a consumer product that consists of a portable encased assembly, other than a ''packaged terminal air conditioner,'' ''room air conditioner,'' or ''dehumidifier,'' that delivers cooled, conditioned air to an enclosed space, and is powered by single-phase electric current. 10 CFR 430.2. In the portable AC test procedure final rule published on May 15, 2023 (''May 2023 Portable AC Final Rule''), DOE amended the test procedures for portable ACs at appendix CC to subpart B of 10 CFR part 430 (''appendix CC'') to incorporate a measure of variable-speed portable AC performance and make minor clarifying edits. 88 FR 31102. Consistent with that final rule, DOE is amending the reporting requirements.

1. Reporting

The current reporting requirements for portable ACs at 10 CFR 429.62 include the following: (1) the combined energy efficiency ratio (''CEER'') in Btu/Wh); (2) the seasonally adjusted cooling capacity (''SACC'') in Btu/h; (3) the duct configuration (*i.e.,* single-duct, dual-duct, or ability to operate in both configurations); (4) presence of heating function; and (5) primary condensate removal feature (*i.e.,* auto-evaporation, gravity drain, removable internal collection bucket, or condensate pump). 10 CFR 429.62. These requirements provide for certifying compliance with the standards that will go into effect for single-duct and dual-duct portable ACs that are manufactured on or after January 10, 2025. DOE is updating these requirements and aligning the reporting requirements with the recent test procedure amendments and is also adopting general certification requirements for portable ACs. DOE discusses these updates in the sections as follows.

a. Duct-Configuration

DOE defines two portable AC configurations: single-duct and dual-duct. Single-duct portable ACs draw all the condenser inlet air from the conditioned space without the means of a duct and discharge the condenser outlet air outside the conditioned space through a single duct attached to an adjustable window bracket. Dual-duct portable ACs draw some or all the condenser inlet air from outside the conditioned space through a duct attached to an adjustable window bracket, may draw additional condenser inlet air from the conditioned space, and discharge the condenser outlet air outside the conditioned space by means of a separate duct attached to an adjustable window bracket. *Id.*

The current test procedure for portable ACs, found in appendix CC, notes that if a portable AC is able to operate as both a single-duct and dual-duct portable AC as distributed in commerce by the manufacturer, it must be tested and rated for both duct configurations. Section 3.1.1 in appendix CC.

Similarly, in 10 CFR 429.62(a)(5), DOE states that single-duct and dual-duct portable ACs distributed in commerce by the manufacturer with multiple duct configuration options that meet DOE's definitions for single-duct portable AC and dual-duct portable AC, must be rated and certified under both applicable duct configurations.

Under the existing certification reporting requirements in 10 CFR 429.62(b)(2), manufacturers of portable ACs must report the following: (1) the CEER in Btu/Wh; (2) the SACC in Btu/h; (3) the duct configuration (*i.e.,* single-duct, dual-duct, or ability to operate in both configurations); (4) presence of heating function; and (5) primary condensate removal feature (*i.e.,* auto-evaporation, gravity drain, removable internal collection bucket, or condensate pump).

In the September 2023 CCE NOPR, DOE proposed to include clarifying amendments to these reporting requirements to specify that each certification report must include an indication of the duct configuration used for testing (*i.e.,* single-duct or dual-duct) and whether the certified model is distributed in commerce by the manufacturer with multiple duct configuration options that meet DOE's definitions for single-duct portable AC and dual-duct portable AC (*i.e.,* yes or no). 88 FR 67458, 67485–67486. DOE requested comment on these proposed reporting requirements for portable ACs. *Id.*

ASAP *et al.* commented providing the following editorial correction to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.62(b)(2): replacing the text ''the ability to operate in both configurations'' with ''the ability to operate in both duct configurations.'' (ASAP *et al.,* No. 14 at p. 5)

DOE agrees that adding the word ''duct'' when referring to the ability of a portable AC to operate in both single-duct and dual-duct configuration is a helpful clarification and better represents the intent of the proposal in the September 2023 CCE NOPR.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR with the additional clarification as recommended by commenters.

b. Full-Load Seasonally Adjusted Cooling Capacity

In the May 2023 Portable AC Final Rule, DOE amended the appendix CC test procedures to include a new capacity metric for variable-speed portable ACs, full-load seasonally adjusted cooling capacity (''$SACC_{Full}$''), for purposes of representation and certification. 88 FR 31102, 31112–31114. Consistent with that final rule, in the September 2023 CCE NOPR, DOE proposed to amend the certification report requirements by adding a new section, 10 CFR 429.62(b)(3), to require reporting whether a basic model is variable-speed, as defined in appendix CC, and if so, to report the $SACC_{Full}$, in Btu/h. 88 FR 67458, 67486. DOE requested comment on these proposed requirements. *Id.*

ASAP *et al.* commented providing the following editorial corrections to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.62(b)(3): replacing ''SACC_Full'' with ''$SACC_{Full}$.'' ASAP *et al.* also noted that the current portable AC test procedure specifies that variable-speed units calculate $SACC_{Full\_SD}$ and $SACC_{Full\_DD}$ for single- and dual-duct configurations and this distinction should be reflected in the certification template. (ASAP *et al.,* No. 14 at p. 5)

DOE agrees that the amended text in 10 CFR 429.62(b)(3) should have consistent subscript formatting for the $SACC_{Full}$ variable, and notes that this is the current approach in 10 CFR 429.62(a)(2) and (3).

Regarding further clarification of $SACC_{Full}$, DOE notes that the reporting requirements in 10 CFR 429.62(b)(2) already require identifying the duct configuration (*i.e.,* single-duct or dual-duct), so DOE does not expect there to be confusion as to which $SACC_{Full}$ must be reported (*i.e.,* $SACC_{Full\_SD}$ or $SACC_{Full\_DD}$, for single-duct and dual-duct, respectively). Furthermore, 10 CFR 429.62(b)(2) already introduces the

term ''$SACC_{Full}$'' and refers to the DOE test procedure where both $SACC_{Full\_SD}$ and $SACC_{Full\_DD}$ are defined. Therefore, DOE concludes that no further clarification is needed to modify the text of 10 CFR 429.62(b)(3) as proposed in the September 2023 CCE NOPR. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the amendments pertaining to reporting $SACC_{Full}$ as proposed in the September 2023 CCE NOPR with the additional clarifying amendments discussed above.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align portable AC certification reporting requirements with the May 2023 Portable AC TP Final Rule requirements applicable to portable ACs manufactured on and after June 14, 2023. 88 FR 67458, 67486.

For variable-speed portable ACs tested in accordance with appendix CC as amended in the May 2023 Portable AC TP Final Rule, manufacturers currently report CEER, SACC, the duct configuration, presence of heating function, and primary condensate removal feature, and would additionally report full-load SACC if the amendments proposed in the September 2023 CCE NOPR are adopted. *Id.*

In the September 2023 CCE NOPR, DOE tentatively determined that these proposed amendments would not impose additional costs for manufacturers beyond those that were estimated in the January 2020 Portable ACs ECS Final Rule, which first established the reporting requirements. *Id.* DOE stated this was because manufacturers of portable ACs should already be collecting the information required for the current certification requirements and should have readily available the information that DOE proposed to collect as part of this rulemaking. *Id.* DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what was estimated in the January 2020 Portable ACs ECS Final Rule. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for portable ACs. In this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for portable AC manufacturers. Compliance with these reporting requirements is required 210 days after publication of this final rule.

Q. Compressors

DOE is amending the reporting requirements for compressors, which DOE defines as machines or apparatuses that convert different types of energy into the potential energy of gas pressure for displacement and compression of gaseous media to any higher pressure values above atmospheric pressure and have a pressure ratio at full-load operating pressure greater than 1.3. 10 CFR 431.342.

1. Reporting

Under the existing requirements in 10 CFR 429.63(b), a certification report must include the following public product-specific information for all compressors: (1) full-load package isentropic efficiency or part-load package isentropic efficiency, as applicable (dimensionless); (2) full-load actual volume flow rate (in cubic feet per minute); (3) compressor motor nominal horsepower (in horsepower); (4) full-load operating pressure (in pounds per square inch, gauge); (5) maximum full-flow operating pressure (in pounds per square inch, gauge); and (6) pressure ratio at full-load operating pressure (dimensionless). 10 CFR 429.63(b)(i)–(vi).

In addition, for any ancillary equipment that is installed for test, but is not part of the compressor package as distributed in commerce (per the requirements of 10 CFR part 431, subpart T, appendix A, section I(B)(4)), a certification report must include the following public product-specific information: (1) a general description of the ancillary equipment, based on the list provided in the first column of Table 1 of 10 CFR part 431, subpart T, appendix A, section I(B)(4); (2) the manufacturer of the ancillary equipment; (3) the brand of the ancillary equipment (if different from the manufacturer); (4) the model number of the ancillary equipment; (5) the serial number of the ancillary equipment (if applicable); (6) input voltage (if applicable); (7) number of phases (if applicable); (8) input frequency (if applicable); (9) size of any connections (if applicable); and (10) type of any connections (if applicable). 10 CFR 429.63(b)(vii)(A)–(G). A certification report must also include installation instructions for the ancillary equipment, accompanied by photos that clearly illustrate the ancillary equipment, as installed on compressor package, in a PDF. 10 CFR 429.63(b)(vii)(H).

In the September 2023 CCE NOPR, DOE noted that 10 CFR 429.12(a) states that basic models of covered products require annual filings on or before the dates provided in 10 CFR 429.12(d), but paragraph (d) does not specifically list an annual filing date for compressors. 88 FR 67458, 67486. In light of this omission, DOE proposed to explicitly specify in 10 CFR 429.12(d) that compressors should be recertified annually on or before September 1. *Id.* Because the energy conservation standards for compressors do not take effect until January 10, 2025, DOE noted that this annual reporting requirement would not be in effect until the applicable energy conservation standards are in effect. 88 FR 67458, 67486–67487. DOE requested comment on the proposed annual filing date of September 1 for compressors. 88 FR 67458, 67487.

During the NOPR public meeting, Kaeser Compressors asked if manufacturers have to upload certification reports for all equipment every year on the annual filing date even if the certification reports have not changed. (Kaeser Compressors, Public Meeting Transcript, No. 6 at pp. 49–50)

DOE responded during the NOPR public meeting noting that there is an annual certification requirement for all basic models that are currently in production and being distribution in commerce, as well as reporting of any models that have been discontinued. DOE noted that it was not necessary to retest products or equipment and the same rating that was reported when the model was first introduced into commerce may be used during the annual filing requirement. (DOE, Public Meeting Transcript, No. 6 at p. 50) For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting an annual filing date of September 1 for compressors.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed no changes to the reported information required for compressors when certifying compliance with the standards applicable to compressors manufactured on or after January 10, 2025. 88 FR 67458, 67487. DOE only proposed to specify the annual date by which manufacturers must submit annual certification filings to DOE after the applicable standards take effect. DOE tentatively determined that the proposed amendment would not impose additional costs for manufacturers because no amendments to the certification report contents were proposed in the September 2023 CCE NOPR. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared

to what compressor manufacturers would begin doing prior to the January 10, 2025 compliance date. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for compressors. In this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for compressor manufacturers. As discussed, DOE did not propose and is not adopting any changes to the reported information required for compressors when certifying compliance with the standards applicable to compressors manufactured on or after January 10, 2025. Therefore, compliance with the existing reporting requirements is required on and after January 10. 2025. Annual certification report filing, as established in this final rule, is required annually thereafter on September 1.

R. Dedicated-Purpose Pool Pump Motors

DOE is establishing reporting requirements for DPPPMs, which are electric motors that are single-phase or polyphase and are designed and/or marketed for use in dedicated-purpose pool pump (''DPPP'') applications, as defined in sections 1.2, 1.3, and 1.4 of UL 1004–10:2020. 10 CFR 431.483. In the final rule published on September 28, 2023 (''September 2023 DPPPM Final Rule''), DOE established energy conservation standards for DPPPMs. 88 FR 66966. Consistent with that final rule, DOE is establishing the reporting requirements.

1. Reporting

There are currently no reporting requirements for DPPPMs. The September 2023 DPPPM Final Rule established new energy conservation standards for DPPPMs. 88 FR 66966. Therefore, DOE is aligning the reporting requirements with the standards and adopting general certification requirements for DPPPMs.

At the time of the September 2023 CCE NOPR, DOE's proposed reporting requirements for DPPPMs were based on the DPPPMs energy conservation standards NOPR that published on June 21, 2022 (''June 2022 DPPPM NOPR''). 87 FR 37122. The following sections discuss DOE's proposals from the September 2023 CCE NOPR, which were informed by the June 2022 DPPPM NOPR and the September 2023 DPPPM Final Rule. DOE discusses these updates in the sections as follows.

a. Motor Total Horsepower, Full-Load Efficiency, and Design Requirements

In the June 2022 DPPPM NOPR, DOE proposed performance standards (*i.e.,* full load efficiency) and design requirements (*i.e.,* speed capability) based on DPPPM total horsepower (''THP''). 87 FR 37122, 37123–37124. DOE proposed that the standards, if adopted, would apply to all DPPPMs manufactured in, or imported into, the United States starting on the date 2 years (or 24 months) after the publication of the final rule for the proposed rulemaking. *Id.*

Further, for DPPPMs greater than or equal to 0.5 THP, DOE proposed that DPPPMs with freeze protection controls be shipped with the freeze protection feature disabled, or with the following default, user-adjustable settings: (a) the default dry-bulb air temperature setting shall be no greater than 40 °F; (b) the default run time setting shall be no greater than 1 hour (before the temperature is rechecked); and (c) the default motor speed in freeze protection mode shall not be more than half of the maximum operating speed. 87 FR 37122, 37124.

As such, in the September 2023 CCE NOPR, DOE proposed to update the reporting requirements to include product-specific information that would be required to certify compliance with any newly established energy conservation standards. 88 FR 67458, 67487. Accordingly, DOE proposed reporting the DPPPM THP, as the THP is required to determine whether the DPPPM would need to meet either a performance standard or design requirements. DOE proposed that the represented value of THP should be determined as required at 10 CFR 429.65(c)(1)(v). *Id.*

For DPPPMs less than 0.5 THP, DOE proposed reporting performance standard in terms of full load efficiency. DOE proposed using the test procedure in 10 CFR 431.484 to determine full-load efficiency, and to report the represented value of THP as required at 10 CFR 429.65(c)(1)(v). *Id.*

For DPPPMs greater than or equal to 0.5 THP, DOE proposed reporting the design requirements as follows:

(1) A statement confirming that the DPPPM is variable speed (as defined at 10 CFR 431.483); and

(2) A statement regarding whether freeze protection is shipped enabled or disabled; for DPPPMs distributed in commerce with freeze protection controls enabled, DOE proposes reporting the default dry-bulb air temperature setting (in °F), default run time setting (in minutes), maximum operating speed (in revolutions per minute, or rpm), and default motor speed in freeze protection mode (in revolutions per minute, or rpm). *Id.*

Regarding general certification requirements, DOE proposed that annual filing for DPPPM shall be submitted on or before September 1. Further, DOE also proposed that the requirements in 10 CFR 429.12 regarding certification apply to DPPPMs. *Id.* DOE requested comment on the proposed reporting requirements for DPPPMs. *Id.*

Since publication of the September 2023 CCE NOPR, DOE has published the September 2023 DPPPM Final Rule, which adopted the same requirements proposed in the June 2022 DPPPM NOPR with one modification, specifically, that DPPPMs with a motor total horsepower ≥0.5 THP and <1.15 THP would not be required to comply with energy conservation standards until September 28, 2027, in contrast to required compliance beginning September 29, 2025 for the other two equipment classes. 88 FR 66966.

DOE did not receive any comments regarding the proposed reporting requirement for DPPPMs. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR.

b. Rounding Requirements

In the September 2023 CCE NOPR, DOE proposed to specify rounding requirements for values required to determine compliance with the proposed energy conservation standards. 88 FR 67458, 67488. Specifically, DOE proposed that manufacturers round DPPPM THP to the nearest hundredth of THP, consistent with industry practice. *Id.* Further, DOE proposed that manufacturers round full load efficiency, expressed in percentage, to the nearest tenth of a percent. *Id.* DOE noted that this was consistent with how the full load efficiency of an electric motor is expressed at 10 CFR 431.25 and 10 CFR 431.446, and these electric motors share test methods with DPPPMs. *Id.* Finally, for DPPPM basic models with THPs greater than or equal to 0.5 THP and distributed in commerce with freeze protection controls enabled, DOE proposed to round the dry-bulb temperature setting (expressed in °F) run time setting (expressed in minutes), maximum operating speed (expressed in rpm), and default motor speed in freeze protection mode (expressed in rpm) to the nearest whole number. DOE noted that this was consistent with how dry-bulb temperature is expressed in 10 CFR

431.465(h)(1). *Id.* DOE requested comment on the proposed rounding requirements for DPPPMs. *Id.*

Since publication of the September 2023 CCE NOPR, DOE has published the September 2023 DPPPMs Final Rule, which adopted the same requirements as those proposed in the June 2022 DPPPM NOPR.

DOE did not receive any comments on the proposed rounding requirements for DPPPMs. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the rounding requirements for DPPPMs as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align DPPPM certification reporting requirements with the energy conservation standard requirements proposed in the June 2022 DPPPM NOPR for DPPPMs manufactured starting on the date 2 years (24 months) after the date of final rule publication of the energy conservation standard in the **Federal Register**. 88 FR 67458, 67488.

In the September 2023 CCE NOPR, DOE noted that the addition of the proposed reporting requirements for DPPPMs would newly require manufacturers to report performance characteristics of these motors. *Id.* For DPPPMs less than 0.5 THP, full-load efficiency would need to be reported in addition to THP, and for DPPPMs greater than or equal to 0.5 THP, freeze protection status and speed control capability would need to be reported in addition to THP. In the September 2023 CCE NOPR, DOE tentatively concluded that these proposed changes would impose additional cost to manufacturers and importers. *Id.* The estimated costs associated with these changes were described in further detail in section IV.C of the September 2023 CCE NOPR. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for DPPPMs. In this final rule, DOE makes a final determination that the certification reporting costs for DPPPMs are consistent with those estimated in the September 2023 CCE NOPR, updated to current values, and are discussed further in section IV.C of this document. Compliance with these reporting requirements is not required until the compliance date of the new standards.

S. Air Cleaners

DOE is establishing reporting requirements for air cleaners, which DOE defines as a product for improving indoor air quality, other than a central air conditioner, room air conditioner, portable air conditioner, dehumidifier, or furnace, that is an electrically powered, self-contained, mechanically encased assembly that contains means to remove, destroy, or deactivate particulates, VOCs, and/or microorganisms from the air. It excludes products that operate solely by means of ultraviolet light without a fan for air circulation. 10 CFR 430.2. In a direct final rule published on April 11, 2023 (''April 2023 Air Cleaners DFR''), DOE established new energy conservation standards for air cleaners. 88 FR 21752. Consistent with that direct final rule, DOE is establishing new reporting requirements for air cleaners.

1. Reporting

There are currently no reporting requirements for air cleaners. The April 2023 Air Cleaners DFR established new energy conservation standards for air cleaners. 88 FR 21752. In the April 2023 Air Cleaners DFR, DOE established energy conservation standards based on integrated energy factor (''IEF''), which is determined as the clean air delivery rate (''CADR'') [39] of an air cleaner expressed in terms of $PM_{2.5}$ [40] CADR divided by the annual energy consumption divided by the annual active mode hours. 88 FR 21752, 27153–21754. $PM_{2.5}$ CADR is calculated as the geometric mean of smoke CADR and dust CADR. 88 FR 21752, 21762.

Therefore, DOE is establishing reporting and general certification requirements for air cleaners. DOE discusses these updates in the following paragraphs.

In the September 2023 CCE NOPR, DOE proposed to establish reporting requirements for air cleaners at 10 CFR 429.68(b) to include product-specific information that would be required to certify compliance with the newly established energy conservation standards. 88 FR 67458, 67488. DOE proposed that parties must report the smoke CADR, dust CADR, and $PM_{2.5}$ CADR in cfm; annual energy consumption in kWh/yr; and IEF in $PM_{2.5}$ CADR per watt. *Id.* DOE proposed reporting requirements for smoke CADR and dust CADR because these values are used to determine $PM_{2.5}$ CADR. *Id.*

Additionally, in a test procedure final rule published on March 6, 2023 (March 2023 Air Cleaners TP Final Rule), DOE established requirements for determining pollen CADR and effective room size. 88 FR 14014, 14016. In the March 2023 Air Cleaners TP Final Rule, DOE noted that many air cleaners are marketed as providing pollen removal and the ENERGY STAR specification for air cleaners also requires reporting of pollen CADR. DOE stated that it is important that any representation related to an air cleaner's pollen CADR performance be made based on testing conducted in a repeatable and representative manner. 88 FR 14014, 14034. Accordingly, in the March 2023 Air Cleaners TP Final Rule, DOE referenced the AHAM AC–1–2020 standard to conduct a test to measure pollen CADR. 88 FR 14014, 14035. While DOE has not established any energy conservation standards for pollen, in the September 2023 CCE NOPR, DOE proposed to include a reporting requirement for pollen CADR to ensure that consumers have reliable information when making purchasing decisions. 88 FR 67458, 67488.

Additionally, in the March 2023 Air Cleaners TP Final Rule, DOE established a metric for effective room size because room size would strongly impact the capacity of the air cleaner that would be required to clean the air in the desired room. 88 FR 14014, 14036 and 14038. While DOE has not established any standards pertaining to room size, in the September 2023 CCE NOPR, DOE proposed to include a reporting requirement for effective room size, in square feet, to ensure consumers have reliable information when making purchasing decisions. 88 FR 67458, 67488.

Regarding general certification requirements, DOE proposed that the annual filing for air cleaners shall be submitted on or before December 1. *Id.* Further, DOE proposed that the requirements in 10 CFR 429.12 regarding certification apply to air cleaners. Finally, DOE proposed to add a new paragraph (i)(6) in 10 CFR 429.12 to note the compliance date for air cleaners is December 31, 2023. *Id.*

DOE requested comment on the proposed reporting requirements for air cleaners. *Id.*

[39] Section 3.14 of the industry standard AHAM AC–1–2020 defines CADR as the measure of the delivery of contaminant free air, within a defined particle size range, by an air cleaner, expressed in cubic feet per minute (''cfm''). CADR is the rate of contaminant reduction in the test chamber when the air cleaner is turned on, minus the rate of natural decay when the air cleaner is not running, multiplied by the volume of the test chamber as measured in cubic feet. Note: CADR values are always the measurement of an air cleaner performance as a complete system and have no linear relationship to the air movement per se or to the characteristics of any particle removal methodology.

[40] 10 CFR part 430, appendix FF defines $PM_{2.5}$ via reference to the industry standard AHAM AC–7–2022, which defines it as particulate matter that are nominally 2.5 micrometers (''μm'') in width or smaller.

Carrier stated its support for DOE's proposal to require reporting of the product-specific information that would be required to certify compliance with the newly established energy conservation standards for air cleaners. (Carrier, No. 12 at p. 3) AHAM commented in support of the inclusion of smoke CADR, dust CADR, and $PM_{2.5}$ CADR for air cleaner certification because smoke CADR and dust CADR are used to calculate $PM_{2.5}$ CADR. AHAM also commented in support of the reporting requirements for annual energy consumption, integrated energy factor, and room size. (AHAM, No. 16 at p. 6) ASAP *et al.* stated their support for DOE's proposed reporting requirements for air cleaners pertaining to smoke CADR, dust CADR, and pollen CADR (if measured). ASAP *et al.* commented that smoke CADR, dust CADR, and pollen CADR are commonly used by manufacturers in marketing these products, and the ENERGY STAR specification for air cleaners has required the reporting of smoke CADR, dust CADR, and pollen CADR since 2011. For these reasons, ASAP *et al.* commented in support of the proposed CADR reporting requirements because ASAP *et al.* noted that such requirements would help ensure that CADR performance claims can be trusted metrics for use by consumers making purchasing decisions. (ASAP *et al.,* No. 14 at pp. 2–3) ASAP *et al.* commented in support of the room size reporting requirement for room air cleaners as the physical dimensions of a room influence the capacity of the air cleaner that would be needed to adequately clean the air in that space, which helps ensure that consumers have appropriate information to make informed purchasing decisions. (ASAP *et al.,* No. 14 at p. 3)

Carrier commented supporting the reporting requirements for pollen CADR and effective room size. (Carrier, No. 12 at p. 3) AHAM commented objecting to the reporting requirement for pollen CADR for air cleaners as part of DOE's information collection. (AHAM, Public Meeting Transcript, No. 6 at p. 52; AHAM, No. 9 at p. 2; AHAM, No. 16 at p. 6) AHAM stated that DOE does not regulate pollen CADR and pollen CADR has no relation to demonstrating compliance with the applicable standard and is therefore outside DOE's approved information collection under PRA. AHAM commented that it is not within the scope of DOE's authority to collect this data, and should manufacturers make pollen-related claims, inaccuracies of such claims fall within the purview of the Federal Trade Commission. (AHAM, No. 16 at p. 6) AHAM stated that collecting data not necessary to demonstrating compliance with energy conservation standard is outside of DOE's approved information collection under the PRA and that DOE is obligated by the PRA to demonstrate the practical utility of information collected. AHAM argued that pollen CADR does not have practical utility in the context of the currently applicable standards because the information is unnecessary to demonstrate compliance with those standards. (AHAM, No. 16 at pp. 6–7)

In response, DOE established a test procedure for pollen CADR to enable consistent and meaningful representations of metrics most desirable to consumers (88 FR 14014, 14034; 87 FR 63324, 63339). DOE recognizes that pollen CADR is not needed to determine compliance with air cleaner standards. While this metric may help inform consumers making purchasing decisions, DOE is not adopting the proposal from the September 2023 CCE NOPR that pollen CADR be reported to DOE.

During the NOPR public meeting, AHRI questioned if the air cleaners template would have secondary validation for $PM_{2.5}$ CADR based on the values entered for smoke CADR and dust CADR. AHRI noted that templates for some other product and equipment categories do not allow input values to be higher than the value calculated using the formula entered for validation. (AHRI, Public Meeting Transcript, No. 6 at pp. 54–55)

DOE appreciates AHRI's question regarding $PM_{2.5}$ CADR validation based on the values entered for smoke CADR and dust CADR. In this final rule, DOE is only adopting reporting requirements as described for air cleaners. DOE may consider additional validation checks on data submitted in the certification template to identify reporting errors.

ASAP *et al.* noted that the proposed regulatory language for air cleaners refers to ''room size'', while the test procedure specifies ''effective room size.'' ASAP *et al.* commented encouraging DOE to specify ''effective room size'' in the regulatory language and the draft certification template to be consistent with the language in the test procedure. (ASAP, *et al.,* No. 14 at p. 3)

DOE agrees that effective room size is the correct language to use and has updated the language in 10 CFR 429.68 to ensure consistency.

AHAM commented that there is a typographical error relating to 10 CFR 429.68(a)(2)(ii), in which the language ''equal to the high'' should instead have stated ''equal to the lower.'' (AHAM, No. 16 at p. 7; AHAM, Public Meeting Transcript, No. 6 at p. 55)

DOE agrees that the language in 10 CFR 429.68(a)(2)(ii) includes an error and is correcting the text as suggested by AHAM, consistent with the language used in other product-specific certification requirement sections in 10 CFR 429.

AHAM commented that the September 2023 CCE NOPR did not specify how air cleaners with uninstalled filters should be tested and certified under DOE's certification program. AHAM stated that DOE should add language to ensure consistency with AHAM AC–7–2022,[41] which DOE references, but AHAM noted it is with insufficient specificity. AHAM commented that DOE should incorporate language to harmonize with section 3.6.1 in AHAM AC–7–2022 stating that filters that accompany the product in its package must be installed for energy testing and certification. (AHAM, No. 16 at p. 7)

DOE notes that the air cleaners test procedure at 10 CFR 430, subpart B, appendix FF (''appendix FF'') incorporates by reference AHAM AC–7–2022, including section 3.6.1, which specifies that the filters accompanying the product in its package must be installed while conducting energy testing and replacement filters shall be used for the run-in period. As such, this requirement does not need to be specified in the certification reporting requirements since it is a testing provision, and it is adequately specified in the test procedure at appendix FF.

During the NOPR public meeting, AHAM referenced the tolerance on the rated values of CADR and effective room size during enforcement testing. AHAM noted that the CADR values are a reported value, but not a regulated value and the proposed certification requirements state that the mean of the measured CADR values must be reported without applying any tolerance to this value. (AHAM, Public Meeting Transcript, No. 6 at p. 53) In written comments, AHAM additionally commented that for assessment and enforcement testing of air cleaners, DOE should use rated CADR to calculate CADR so long as measured CADR results are within 10 percent of reported results; otherwise, DOE should use measured results. AHAM commented that the 10-percent tolerance value is consistent with AHAM's room air cleaner certification program and based on historical experience and past statistical studies where AHAM found

[41] Energy Test Method for Consumer Room Air Cleaners. AHAM AC–7–2022.

that smoke CADR or dust CADR with 10-percent tolerance was reflective of the within-test and between-product variation of both the air cleaner and its filter(s). AHAM additionally commented that the 10-percent tolerance value has been studied on CADR ranges that would historically have been within ANSI/AHAM AC–1 [42] and are now within AHAM AC–7–2022, and this tolerance will address the variation that occurs in the manufacture and testing of air cleaners. (AHAM, No. 16 at pp. 7–8)

While DOE recognizes that an enforcement provision pertaining to the allowable tolerance on CADR values may be appropriate, DOE has not provided stakeholders an opportunity to provide comment on such a tolerance requirement for smoke CADR and dust CADR; therefore, DOE is not including a CADR tolerance in this rulemaking. DOE may consider including a CADR enforcement tolerance in a future rulemaking.

During the NOPR public meeting, AHRI commented asking when the templates would be available for air cleaners, which has a compliance date starting December 31, 2023. AHRI also asked if there would be an enforcement grace period. (AHRI, Public Meeting Transcript, No. 6 at p. 56) AHAM commented that air cleaner manufacturers are in a precarious position because there is an established energy conservation standard for air cleaners, but the reporting requirements are not yet established. AHAM commented requesting a 180-day lead-in period for air cleaner manufacturers to comply with the certification and enforcement requirements finalized in this rulemaking. AHAM commented that the 180-day period should begin when a final reporting template is available from DOE and the reporting portal is established. AHAM commented encouraging DOE to make a reporting template available immediately upon publication of a final rule. (AHAM, No. 16 at p. 8)

Compliance with the air cleaners standards was required for air cleaners manufactured beginning December 31, 2023. However, DOE recognizes that manufacturers require some lead-in time to familiarize themselves with the new certification template and input relevant data. As a result, DOE is not requiring compliance with the air cleaners reporting requirements until 210 days after publication of this final rule, although manufacturers may choose to submit certification reports prior to that date.

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting these amendments as proposed in the September 2023 CCE NOPR, with a minor clarification to use the term ''effective room size''.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to align air cleaner certification reporting requirements with the energy conservation standard requirements established in the April 2023 Air Cleaners DFR, such that the reporting requirements are applicable to air cleaners manufactured on and after December 31, 2023. 88 FR 67458, 67488.

In the September 2023 CCE NOPR, DOE stated that the addition of the proposed reporting requirements for air cleaners would newly require manufacturers to report this information. DOE stated it tentatively concluded that these proposed reporting requirements would impose additional cost to manufacturers and importers. 88 FR 67458, 67458, 67489. The costs estimated in the September 2023 CCE NOPR associated with the proposed changes were described in further detail in section IV.C of that NOPR. *Id.*

DOE did not receive any comments on the certification and reporting costs associated with the proposed reporting requirements for air cleaners. In this final rule, DOE makes a final determination that the certification reporting costs for air cleaners are consistent with those estimated in the September 2023 CCE NOPR and are discussed in further detail in section IV.C of this document. Compliance with these reporting requirements is not required until 210 days after publication of this final rule.

T. Single Package Vertical Units

DOE is amending the reporting requirements for single package vertical air conditioners (''SPVACs'') and single package vertical heat pumps (''SPVHPs''), collectively referred to as ''single package vertical units'' (''SPVUs'').

DOE defines an SPVAC as air-cooled commercial package air conditioning and heating equipment that: (1) is factory-assembled as a single package that: (i) has major components that are arranged vertically; (ii) is an encased combination of cooling and optional heating components; and (iii) is intended for exterior mounting on, adjacent interior to, or through an outside wall; (2) is powered by a single-phase or three-phase current; (3) may contain one or more separate indoor grilles, outdoor louvers, various ventilation options, indoor free air discharges, ductwork, well plenum, or sleeves; and (4) has heating components that may include electrical resistance, steam, hot water, or gas, but may not include reverse cycle refrigeration as a heating means. 10 CFR 431.92. Additionally, DOE defines an SPVHP as a single package vertical air conditioner that: (1) uses reverse cycle refrigeration as its primary heat source; and (2) may include secondary supplemental heating by means of electrical resistance, steam, hot water, or gas. *Id.*

In a test procedure final rule published in the **Federal Register** on December 7, 2022 (''December 2022 SPVU TP final rule''), DOE added definitions for ''single-phase single package vertical air conditioner with cooling capacity less than 65,000 Btu/h'' and ''single-phase single package vertical heat pump with cooling capacity less than 65,000 Btu/h.'' 87 FR 75144, 75167–75168; 10 CFR 431.92. DOE defines this equipment as SPVACs and SPVHPs with a cooling capacity less than 65,000 Btu/h that are either: (1) weatherized, or (2) non-weatherized and have optional ventilation air provisions available with the ability to draw in and condition a minimum of 400 CFM of outdoor air, as determined in accordance with 10 CFR 429.134(x)(3), while the equipment is operating with the same drive kit and motor settings used to determine the certified efficiency rating of the equipment. *Id.*

The Federal test procedures are applicable to SPVUs with a cooling capacity less than 760,000 Btu/h. (42 U.S.C. 6311(8)(D)(ii)) In the December 2022 SPVU TP final rule, DOE incorporated by reference AHRI 390–2021 which maintains the existing efficiency metrics—energy efficiency ratio (''EER'') for cooling mode and coefficient of performance (''COP'') for heating mode—but it also added a seasonal efficiency metric that includes part-load cooling performance—integrated energy efficiency ratio (''IEER''). 87 FR 75144, 75167–75170 (Dec. 7, 2022). In an energy conservation standards NOPR published in the **Federal Register** on December 8, 2022 (''December 2022 SPVU ECS NOPR''), DOE proposed to amend the energy conservation standards for SPVUs to be based on the IEER metric for cooling efficiency (while retaining the COP metric for determining the heating efficiency of SPVHPs). 87 FR 75388, 75421. Consistent with the December 2022 SPVU TP Final Rule and the December 2022 SPVU ECS NOPR, DOE

[42] Method for Measuring Performance of Portable Household Electric Room Air Cleaners.

is amending the reporting requirements for SPVUs that would be utilized with energy conservation standards denominated in terms of IEER, should DOE adopt such standards.

1. Reporting

Under the existing requirements for SPVACs and SPVHPs in 10 CFR 429.43(b)(2)(v) and 10 CFR 429.43(b)(2)(vi), respectively, manufacturers must report the following information for SPVACs and SPVHPs: the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)) and the rated cooling capacity in British thermal units per hour (Btu/h). For SPVHPs, manufacturers must additionally report COP.

These requirements provide for certifying compliance with the applicable standards for SPVUs manufactured on and after September 23, 2019 for units with cooling capacity <65,000 Btu/h, on and after October 9, 2015 for units ≥65,000 Btu/h and <135,000 Btu/h, and on and after October 9, 2016 for units ≥135,000 Btu/h and <240,000 Btu/h. These energy conservation standards for SPVUs are codified in DOE's regulations at 10 CFR 431.97(d)(3). DOE is updating these requirements and aligning the reporting requirements with the amended energy conservation standards proposed in the December 2022 SPVU ECS NOPR. DOE discusses these updates in the sections as follows.

a. Revising Certification Reporting Requirements at 10 CFR 429.43(b)(2)(v) and 10 CFR 429.43(b)(2)(vi) When Certifying SPVUs of All Rated Capacities With IEER Standards

SPVU manufacturers are currently required to certify compliance with EER and, for SPVHPs, COP standards, in addition to the other reported items mentioned previously. In the September 2023 CCE NOPR, DOE proposed certification requirements when certifying compliance of SPVUs of all rated capacities with IEER standards, should such standards be adopted. 88 FR 67458, 67489. Specifically, DOE proposed to include the following at 10 CFR 429.43(b)(2)(v)(B) and (b)(2)(vi)(B) when certifying compliance with an IEER standard: the integrated energy efficiency ratio (IEER in British thermal units per Watt-hour (Btu/Wh)), the rated cooling capacity in British thermal units per hour (Btu/h), and the rated airflow in standard cubic feet per minute (SCFM). *Id.* Additionally, DOE proposed to include a requirement to certify the coefficient of performance (COP) for SPVHPs at 10 CFR 429.43(b)(2)(vi)(B). *Id.* DOE also proposed to move the existing text in 10 CFR 429.43(b)(2)(v) and 10 CFR 429.43(b)(2)(vi) to 10 CFR 429.43(b)(2)(v)(A) and 10 CFR 429.43(b)(2)(vi)(A), respectively. DOE requested comments on its proposed certification requirements for SPVUs of all rated capacities when certifying compliance with IEER standards. *Id.*

AHRI commented that the ''Action'' field was inadvertently omitted from the draft template and stated that this field is standard for DOE templates and needs to be included in the final version. (AHRI, No. 18 at p. 12) During the NOPR public meeting, AHRI stated that the current template for SPVUs does not have a distinction between weatherized or non-weatherized equipment and added that the certification templates should be published closer to the final rule that actually adopt the changes. (AHRI, Public Meeting Transcript, No. 6 at pp. 62–63) However, in its written comment, AHRI stated that it understands the proposed additional certification requirements for SPVUs are necessary based on the definitions adopted in the test procedure final rule (AHRI, No. 18 at p. 12)

ASAP *et al.* commented by providing the following suggested editorial changes to the regulatory text proposed in the September 2023 CCE NOPR at 10 CFR 429.43(b)(2)(v)(B) and 10 CFR 429.43(b)(2)(vi)(B): removing the word ''rate'' from ''airflow rate of outdoor ventilation air.'' (ASAP *et al.,* No. 14 at p. 4)

Regarding the proposed regulatory text at 10 CFR 429.43(b)(4)(vii)(B), ASAP *et al.* commented that the draft certification template for SPVACs did not include a field to report the compressor break-in period duration. (ASAP *et al.,* No. 14 at p. 5)

With regards to AHRI's comment that the ''Action'' field was inadvertently omitted from the draft template, DOE notes that the ''Action'' column will be included in the final template that is posted for use. With regards to AHRI's comment that there was no distinction in the template for weatherized or non-weatherized, DOE notes that this was included in the draft certification template column headers published along with the September 2023 CCE NOPR in the docket for this rulemaking and that AHRI did not comment on any issues concerning the distinction for weatherized and non-weatherized in its written comment. In reference to ASAP *et al.'s* comment that the template did not include a field to report the break-in period, DOE notes that the proposed requirements would include the compressor break-in period in the supplemental testing instructions.

Finally, with respect to ASAP *et al.'s* recommendation to remove the word ''rate'' from DOE's proposed language in 10 CFR 429.43, DOE notes that the term ''airflow rate'' is used throughout AHRI 390–2021, which is the industry test procedure incorporated by reference by DOE for SPVUs. As a result, to prevent confusion and to maintain consistency with the prevailing industry test standard, DOE is maintaining the language as proposed.

Therefore, for the reasons discussed, DOE is adopting this amendment as proposed in the September 2023 CCE NOPR.

b. Additional Certification Reporting Requirements for SPVUs With a Cooling Capacity <65,000 Btu/h

As discussed previously, DOE added definitions at 10 CFR 431.92 for single-phase SPVACs and SPVHPs with a cooling capacity less than 65,000 Btu/h. For non-weatherized equipment, the definition requires these SPVUs to have the capability to draw in and condition up to 400 CFM of outdoor air. The method for determining this outdoor ventilation airflow rate is provided at 10 CFR 429.134(x)(3). In the September 2023 CCE NOPR, DOE proposed to require single-phase SPVAC and SPVHP with cooling capacity less than 65,000 Btu/h to report whether the unit is weatherized or non-weatherized, and if non-weatherized, the amount of outdoor air it is capable of drawing in and conditioning while the equipment is operating with the same drive kit and motor settings used to determine its certified efficiency rating. 88 FR 67458, 67489. DOE noted that these requirements would apply when certifying compliance with energy conservation standards denominated in terms of IEER, should DOE adopt such standards. *Id.* at 88 FR 67489–67490. DOE requested comment on these proposed additional reporting requirements for SPVUs. *Id.*

AHRI commented that it did not oppose DOE's proposed certification requirements for SPVUs of all rated capacities when certifying compliance with IEER standards. (AHRI, No. 18 at p. 12)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting this amendment as proposed in the September 2023 CCE NOPR.

c. Updating Supplemental Testing Instructions for SPVACs and SPVHPs

Manufacturers of SPVUs are currently required to submit Supplemental Testing Instructions (''STIs'') regarding: additional test instructions if applicable;

if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; and which, if any, special features were included in rating the basic model. 10 CFR 429.43(b)(4)(vi) and (b)(4)(vii). In the September 2023 CCE NOPR, DOE proposed to further specify the information manufacturers must report in their STIs that would enable the independent testing of the relevant equipment to the updated test procedure in terms of IEER, including requirements to report compressor break-in period and outdoor air-side attachments, and aligning with corresponding requirements for CUACs, where appropriate. 88 FR 67458, 67490.

In all, DOE proposed to maintain the current requirements of 10 CFR 429.43(b)(4)(vi) and (b)(4)(vii), but move them to 10 CFR 429.43(b)(4)(vi)(A) and (b)(4)(vii)(A) respectively for EER certification. *Id.* DOE proposed to add new provisions for SPVACs and SPVHPs in 10 CFR 429.43(b)(4)(vi)(B) and (b)(4)(vii)(B) for IEER certification to require: Compressor break-in period duration; rated indoor airflow in standard cubic feet per minute (''SCFM''); frequency or control set points, including the required dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); rated indoor airflow in SCFM for each part-load point used in the IEER calculation and any special instructions required to obtain operation at each part-load point, such as frequency or control set points including dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); a statement whether the model will operate at test conditions without manufacturer programming; any additional testing instructions, if applicable; and if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; outdoor air-side attachments used for testing, or any additional applicable testing instructions, are also required. *Id.* Additionally, for SPVHPs, DOE proposed to add a requirement in 10 CFR 429.43(b)(4)(vii)(B) for the rated airflow in SCFM in heating mode if the unit is designed to operate with different airflow rates for cooling and heating mode. *Id.*

In the September 2023 CCE NOPR DOE noted that the proposed certification requirements provide further direction to the existing requirements and would not result in significant additional burden for manufacturers. *Id.* DOE stated that where it identified specific test-related information, the relevant information is already collected by or available to the manufacturer, and that as such, reporting that information to DOE would result in minimal additional burden. *Id.* DOE requested comment on these proposed requirements. *Id.*

AHRI commented in support of DOE's proposed supplemental testing instructions requirements for SPVUs when certifying compliance with IEER standards, should such standards be adopted. (AHRI, No. 18 at p. 12)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting this requirement as proposed in the September 2023 CCE NOPR.

d. AEDM Tolerance for IEER

DOE's existing testing regulations allow the use of an AEDM, in lieu of testing, to simulate the efficiency of SPVUs. 10 CFR 429.43(a). For models certified with an AEDM, results from DOE verification tests are subject to certain tolerances when compared to certified ratings. Currently, DOE specifies a 5-percent tolerance for SPVUs verification tests for both EER and COP, identical to the current tolerance specified for these single-point metrics for other categories of commercial air conditioners and heat pumps. *See* table 2 to paragraph (c)(5)(vi)(B) at 10 CFR 429.70. For integrated seasonal metrics (*i.e.,* IEER) for other categories of commercial air conditioners and heat pumps, DOE specifies a 10-percent tolerance. *See Id.* In alignment with such tolerances, in the September 2023 CCE NOPR, DOE proposed to specify a 10-percent tolerance for IEER for SPVUs in Table 2 to paragraph (c)(5)(vi)(B) at 10 CFR 429.70. 88 FR 67458, 67490. DOE requested comment on this proposed IEER AEDM tolerance for SPVUs. *Id.*

AHRI commented in support of DOE's proposal to specify a tolerance of 10 percent for SPVU verification tests for IEER. (AHRI, No. 18 at p. 12)

For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting this requirement for AEDM tolerances for SPVUs as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 NOPR, DOE proposed to align SPVU certification reporting requirements with the amended energy conservation standards proposed in the December 2022 SPVU ECS NOPR. 88 FR 67458, 67490.

DOE stated that it tentatively determined these proposed amendments would not impose additional costs for manufacturers, because manufacturers of SPVUs are already submitting certification reports to DOE and should have readily available the information that DOE is proposing to collect as part of this rulemaking. DOE stated that it did not believe the revised reporting requirements will cause any appreciable change in reporting burden or hours as compared to what SPVU manufacturers are currently doing. *Id.*

AHRI restated its opposition to what it perceives as the reclassification of SPVUs as CAC/HPs due to the financial impact to manufacturers since this equipment had been tested, rated, marketed, sold, and installed as SPVUs. AHRI commented that manufacturers did not have testing to a different standard readily available and proposed amendments would impose additional costs for manufacturers. AHRI commented this reclassification of SPVUs as CAC/HPs would appreciably change reporting burden or hours as compared to what SPVU manufacturers are currently doing. (AHRI, No. 18 at pp. 12–13)

As discussed in the December 2022 SPVU Test Procedure Final Rule, the new definitions do not reclassify any products; DOE concluded that any products not meeting the SPVU definitions should have been properly classified as consumer products. (*See* 87 FR 75144, 75147–75152 for more details.) Consequently, DOE disagrees with AHRI's characterization of this situation, and the Department again concludes that the proposals from the September 2023 NOPR would not alter burden for manufacturers of SPVUs and do not reclassify any models.

Therefore, in this final rule, DOE makes a final determination that these amendments would not cause any measurable change in reporting burden or hours for SPVU manufacturers. Compliance with these amended reporting requirements is not required until the compliance date of amended energy conservation standards denominated in terms of IEER, if adopted.

U. Ceiling Fan Light Kits

DOE is amending the reporting requirements for CFLKs, which DOE defines as equipment designed to provide light from a ceiling fan that can be (1) integral, such that the equipment is attached to the ceiling fan prior to the time of retail sale; or (2) attachable, such that at the time of retail sale the equipment is not physically attached to the ceiling fan, but may be included inside the ceiling fan at the time of sale or sold separately for subsequent attachment to the fan. 10 CFR 430.2.

1. Reporting

In 10 CFR 429.33(b)(2)(ii)(A) and (b)(3)(ii)(B), DOE specifies information that must be included in the certification report for each basic model of CFLK manufactured on or after January 21, 2020. These paragraphs specify these requirements ''for each basic model of lamp and/or each basic model of non-consumer-replaceable SSL packaged with the ceiling fan light kit.'' On April 10, 2023, DOE published a final rule amending CFLK test procedures (''April 2023 CFLK TP Final Rule''). 88 FR 21061. In the April 2023 CFLK TP Final Rule, to clarify terminology used in the test procedure, DOE replaced the terms ''other SSL products'' and ''integrated SSL circuitry'' with, respectively, ''consumer-replaceable SSL'' and ''non-consumer-replaceable SSL'' in the CFLK test procedure appendix, 10 CFR 429.33, 10 CFR 430.23(x), and 10 CFR 430.32(s)(6). 88 FR 21061, 21067–21068. Because 10 CFR 429.33(b)(2)(ii)(A) and (b)(3)(ii)(B) only specified ''integrated SSL circuitry'' and omitted ''other SSL products,'' the April 2023 CFLK TP Final Rule only replaced ''integrated SSL circuitry'' with ''non-consumer-replaceable SSL'' and did not include ''consumer replaceable SSL,'' the replacement term for ''other SSL products.'' 88 FR 21061, 21072. Hence, CFLKs packaged with consumer-replaceable SSL are inadvertently omitted from this language. In the September 2023 CCE NOPR, DOE proposed to modify this language to include them and read as follows, ''for each basic model of lamp, each basic model of consumer-replaceable SSL, and/or each basic model of non-consumer-replaceable SSL packaged with the ceiling fan light kit.'' 88 FR 67458, 67491. DOE stated that this proposed modification to 10 CFR 429.33(b)(2)(ii)(A) and (b)(3)(ii)(B) would ensure that all types of CFLKs are explicitly included in certification requirements. *Id.* DOE requested comment on this proposed modification. *Id.*

ALA commented that it appreciates DOE's attempt to eliminate confusion created by terminology and definition changes that were finalized in the April 2023 CFLK TP Final Rule. ALA stated it also appreciates that DOE did not change the certification requirements for CFLKs. (ALA, No. 7 at p. 2)

For the reasons discussed in the prior paragraphs and in the September 2023 CCE NOPR, in this final rule DOE is adopting the corrections to 10 CFR 429.33(b)(2)(ii)(A) and (b)(3)(ii)(B) for CFLKs as proposed in the September 2023 CCE NOPR.

2. Reporting Costs and Impacts

In the September 2023 CCE NOPR, DOE proposed to correct the existing certification reporting requirements for CFLKs manufactured on or after January 21, 2020. 88 FR 67458, 67491.

In the September 2023 CCE NOPR, DOE tentatively determined that these proposed amendments would not impose additional costs for manufacturers because manufacturers of CFLKs are already submitting certification reports to DOE and should have readily available the information that DOE was proposing to collect as part of this rulemaking. 88 FR 67458, 67491. DOE stated that it did not believe the revised reporting requirements would cause any appreciable change in reporting burden or hours as compared to what CFLK manufacturers are currently doing today. *Id.*

AHRI and ALA commented that any changes to a certification template can impact manufacturer burden by increasing administrative work and affecting timing as it relates to certifying and reporting to DOE. (AHRI, Public Meeting Transcript, No. 6 at p. 66; ALA, Public Meeting Transcript, No. 6 at pp. 64–65; ALA, No. 7 at p.1) AHRI further stated that small changes, including changing the text and template number, impact timing. (AHRI, Public Meeting Transcript, No. 6 at pp. 65–66) ALA agreed with DOE that as long as no change is made to the current certification template, there will be no additional costs incurred by manufacturers. (ALA, No. 7 at p.2)

DOE is not planning to issue a revised template version based on the amendments to CFLK certification requirements being adopted in this final rule. Given that DOE is not revising the template, DOE maintains it findings from the September 2023 NOPR that the amendments to CFLK reporting requirements being adopted will not impose additional costs for manufacturers, nor will they cause any appreciable change in reporting burden or hours as compared to what CFLK manufacturers are currently doing today.

V. General Service Lamps

DOE defines a ''general service lamp'' as a lamp that has an American National Standards Institute (''ANSI'') base; is able to operate at a voltage of 12 volts or 24 volts, at or between 100 to 130 volts, at or between 220 to 240 volts, or of 277 volts for integrated lamps, or is able to operate at any voltage for non-integrated lamps; has an initial lumen output of greater than or equal to 310 lumens (or 232 lumens for modified spectrum general service incandescent lamps) and less than or equal to 3,300 lumens; is not a light fixture; is not an LED downlight retrofit kit; is used in general lighting applications; and is not one of the 26 lamp types exempted from the definition. (*See* 10 CFR 430.2 for the full definition.)

On May 9, 2022, DOE published in the **Federal Register** a final rule codifying the 45 lm/W backstop requirement for GSLs that Congress prescribed in amendments to EPCA (''May 2022 GSL Backstop Rule''). 89 FR 27439. In that rule, DOE explained it would issue a separate enforcement policy informed by the comments received in response to the rulemaking. *Id.* at 89 FR 27452. DOE issued a phased-in enforcement policy [43] for the GSL backstop requirement. For manufacturers (including importers) and private labelers, the policy set forth: (1) a period of enforcement leniency from the effective date of the final rule that codified the backstop through August 31, 2022; (2) a period of progressive enforcement consisting of warning notices and then reduced penalties from September 1, 2022 through December 31, 2022, and (3) end of enforcement flexibilities January 1, 2023. For distributors and retailers, this timeline was adjusted by seven months, beginning with warning notices in January 2023, progressing to reduced penalties two months later, and culminating in full enforcement in July 2023. On October 14, 2022, DOE issued a guidance document [44] stating that manufacturers and importers are not currently required to certify compliance to the GSL backstop requirement and that DOE may address the certification requirements for the backstop in a separate, future rulemaking. DOE had previously established reporting

[43] See *https://www.energy.gov/sites/default/files/2022-04/GSL_EnforcementPolicy_4_25_22.pdf.*

[44] See *https://www1.eere.energy.gov/buildings/appliance_standards/pdfs/GSL_Cert_Guidance_Final.pdf.*

requirements for GSLs at 10 CFR 429.57 in a test procedure final rule published in the **Federal Register** on October 20, 2016. 81 FR 72493, 72503.

Because DOE has reached the full enforcement phase of the previous enforcement policy as described in the previous paragraph, in this final rule, DOE is clarifying that manufacturers and importers must certify compliance to the backstop requirement for GSLs. As stated, certification and reporting requirements for GSLs can be found at 10 CFR 429.57. DOE is not establishing or amending any regulations regarding GSLs in this final rule, but is clarifying the applicability of the existing regulations in the context of the previous enforcement policy and guidance document. Because the enforcement policy and guidance document are no longer applicable, DOE is rescinding these documents concurrent with this final rule.

Similar to the reporting requirements for other products and equipment established in this final rule, DOE is allowing manufacturers a 210-day transition period after publication of this final rule before certification reports must be submitted to DOE. As stated, the certification and reporting requirements for GSLs currently exist in 10 CFR 429.57. DOE will use enforcement discretion for the 210-day transition period to allow GSL manufacturers time to comply with the existing requirements. Sellers (who are not ''manufacturers'' under EPCA) will not be required to certify compliance to the backstop requirement for GSLs, but must ensure that GSLs available for sale comply with the energy conservation standards specified at 10 CFR 430.32(dd).

W. Additional Corrections

10 CFR 429.12(i) includes the compliance dates for certain products. Specifically, the instructions state that for any product subject to an applicable energy conservation standard for which the compliance date has not yet occurred, the manufacturer must submit a certification report no later than the compliance date for the applicable energy conservation standard. However, for the covered products currently listed in 10 CFR 429.12(i), the compliance dates for initial certification have already occurred. Accordingly, in the September 2023 CCE NOPR, DOE proposed to remove the covered products and associated compliance dates in 10 CFR 429.12(i)(1)–(5). 88 FR 67458, 67491. DOE also proposed to add three new paragraphs at 10 CFR 429.12(i)(1)–(3) for air cleaners, DPPPMs, and DX–DOASes. *Id.* DOE noted that initial certification would be required by December 31, 2023 for air cleaners and May 1, 2024 for DX–DOASes, and 24 months after date of publication of a final rule amending DPPPM standards for DPPPMs. *Id.*

DOE did not receive any comments on the proposed amendments to 10 CFR 429.12(i). However, DOE notes that since publication of the September 2023 CCE NOPR, DOE published the September 2023 DPPPM Final Rule which established a compliance date of September 29, 2025 for DPPPMs <0.5 THP and for DPPPMs ≥1.15 THP and ≤5 THP and a compliance date of September 28, 2027 for DPPPMs ≥0.5 THP and <1.15 THP. Accordingly, in this final rule, DOE is adopting the initial certification date of September 29, 2025 for DPPPMs <0.5 THP and for DPPPMs ≥1.15 THP and ≤5 THP and the initial certification date of September 28, 2027 for DPPPMs ≥0.5 THP and <1.15 THP, consistent with the September 2023 DPPPM Final Rule.

Additionally, DOE notes that the December 31, 2023, initial certification date for air cleaners that was proposed in the September 2023 CCE NOPR has now passed. As this subparagraph includes initial certification dates for products subject to an applicable energy conservation standard for which the compliance date has not yet occurred and the compliance date for air cleaners has now occurred, including this initial certification date as proposed could potentially cause confusion. Therefore, DOE is not including the initial certification date for air cleaners in 10 CFR 429.12(i) as proposed in the September 2023 CCE NOPR. As stated in section III.S.2 of this notice, initial certification with the newly adopted certification requirements for air cleaners is not required until 210 days after publication of this final rule.

The initial certification date for DX–DOASes is being finalized as proposed in the September 2023 CCE NOPR.

DOE provides definitions related to the energy efficiency program for certain commercial and industrial equipment in 10 CFR 431.2. In this section, DOE has identified updates needed in two definitions. The definition for ''covered equipment'' lists covered equipment and notes where the covered equipment term is defined within 10 CFR. The term ''Commercial heating, ventilating, and air conditioning, and water heating product (HVAC & WH product)'' is included in this list and refers to this term as defined in 10 CFR 431.172. However, this term is defined in 10 CFR 431.2, rather than 10 CFR 431.172. As such, in the September 2023 CCE NOPR, DOE proposed to update the definition for ''covered equipment'' to update the reference to the definition for ''commercial heating, ventilating, and air conditioning, and water heating product'' in 10 CFR 431.2. 88 FR 67458, 67491.

Additionally, the definition of ''covered equipment'' in 10 CFR 431.2 is intended to reference each equipment type covered within 10 CFR part 431. The current definition does not include all covered equipment types. Therefore, in the September 2023 CCE NOPR, DOE proposed to add these equipment types and their corresponding definition section references within the definition of covered equipment in 10 CFR 431.2. *Id.* Specifically, DOE proposes to add references to: fan or blower, as defined in 10 CFR 431.172; compressor, as defined in 10 CFR 431.342; small electric motor, as defined in 10 CFR 431.442; pump, as defined in 10 CFR 431.462; and dedicated purpose pool pump motor, as defined in 10 CFR 431.483. *Id.*

DOE did not receive any comments on its proposal to amend the definition for ''covered equipment'' in 10 CFR 431.2. For the reasons discussed in the preceding paragraphs and the September 2023 CCE NOPR, DOE is adopting the amended definition of ''covered equipment'' in 10 CFR 431.2 as discussed in the September 2023 CCE NOPR.

X. Revised Certification Templates

DOE notes that the Department strives to finalize certification templates as expeditiously as possible, in order to provide certifiers sufficient time to prepare for the compliance dates of any upcoming amended energy conservation standards. The specific templates that must be used for certifying compliance of covered products and equipment to DOE are available for download at *www.regulations.doe.gov/ccms/templates*.

Y. Effective and Compliance Dates

The effective date for the adopted reporting requirement amendments will be 75 days after publication of this final rule in the **Federal Register**. Submission of the data specified by the amended reporting provisions will be required for the applicable certification reports that are required to be submitted under 10 CFR 429.12 beginning 210 days following publication of this final rule in the **Federal Register**, when certifying compliance with the next annual certification report filing date to occur on or after 210 days following publication of this final rule in the **Federal Register**, or upon the compliance date of any associated

energy conservation standards, as outlined for each product or equipment type in each applicable subsection of section III of this document. However, certification reports may be submitted in accordance with these amended requirements prior to the compliance date if the manufacturer elects to do so.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866, 13563, and 14094

Executive Order (''E.O.'') 12866, ''Regulatory Planning and Review,'' as supplemented and reaffirmed by E.O. 13563, ''Improving Regulation and Regulatory Review,'' 76 FR 3821 (Jan. 21, 2011) and amended by E.O. 14094, ''Modernizing Regulatory Review,'' 88 FR 21879 (April 11, 2023), requires agencies, to the extent permitted by law, to (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public. DOE emphasizes as well that E.O. 13563 requires agencies to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. In its guidance, the Office of Information and Regulatory Affairs (''OIRA'') in the Office of Management and Budget (''OMB'') has emphasized that such techniques may include identifying changing future compliance costs that might result from technological innovation or anticipated behavioral changes. For the reasons stated in the preamble, this final regulatory action is consistent with these principles.

Section 6(a) of E.O. 12866 also requires agencies to submit ''significant regulatory actions'' to OIRA for review. OIRA has determined that this final regulatory action does not constitute a ''significant regulatory action'' under section 3(f) of E.O. 12866. Accordingly, this action was not submitted to OIRA for review under E.O. 12866.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of a final regulatory flexibility analysis (FRFA) for any final rule where the agency was first required by law to publish a proposed rule for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking,'' 67 FR 53461 (August 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 website: *www.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.

DOE has concluded that the removal of outdated reporting requirements and the addition of new reporting requirements adopted in this final rule will not impose additional costs for manufacturers of CAC/HPs, DWs, RCWs, dehumidifiers, EPSs, battery chargers, CRACs, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, SPVUs, and CFLKs for the reasons discussed in section III of this document. For these products and equipment, DOE has determined that the amendments will not impose additional costs for manufacturers because manufacturers are already submitting certification reports to DOE and should have readily available the information that DOE is requiring as part of this rulemaking. For GSLs, DOE is not changing reporting requirements and only specifying compliance with existing ones. Consequently, for these types of covered products and equipment, the changes in this final rule are not expected to have a significant economic impact on related entities regardless of size.

For electric pool heaters, no certification is currently required. This final rule is adding reporting requirements to align with the amended energy conservation standards finalized in the May 2023 Pool Heaters Final Rule, which established new and amended energy conservation standards for electric pool heaters. 88 FR 34624. Therefore, electric pool heater manufacturers will incur additional paperwork costs. Consumer pool heaters are classified under NAICS code 333414, ''heating equipment (except warm air furnaces) manufacturing.'' The SBA sets a threshold of 500 employees or fewer for an entity to be considered as a small business for this category. DOE used publicly available information to identify potential small manufacturers. DOE's research involved industry trade association membership directories (*e.g.,* AHRI), information from previous rulemakings, individual company websites, and market research tools (*e.g.,* D&B Hoovers reports) to create a list of companies that manufacture consumer pool heaters. DOE also asked stakeholders and industry representatives if they were aware of any additional small manufacturers during manufacturer interviews. DOE reviewed publicly available data and contacted various companies on its complete list of manufacturers to determine whether they met the SBA's definition of a small business manufacturer. DOE screened out companies that do not offer products impacted by this rulemaking, do not meet the definition of a ''small business,'' or are foreign-owned and operated. DOE identified 21 companies manufacturing consumer pool heaters covered by this proposed rulemaking. Of these manufacturers, DOE identified six as domestic small businesses. None of these six businesses manufacture gas fired pool heaters. Five manufacture electric heat pump pool heaters and one manufactures electric resistance pool heaters. DOE estimates that the increased certification burden would result in 35 hours per manufacturer to develop the required certification reports. Therefore, based on a fully burdened labor rate of $73 per hour, the estimated total annual cost to manufacturers would be $2,555 per manufacturer.[45] Using available public information, DOE estimated the average

[45] Supporting Statement for Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recording keeping for Consumer Products and Commercial Equipment Subject to Energy or Water Conservation Standards. Available at *omb.report/omb/1910-1400.*

annual revenue of the six small businesses. Among the small businesses, the lowest estimated annual revenue was approximately $259,000—therefore, this additional certification cost of $2,555 per manufacturer represents less than 1 percent of the identified manufacturer's annual revenue.

Additionally, for DX–DOASes, no certification is currently required. This final rule is adding reporting requirements to align with the new energy conservation standards. 10 CFR 431.97(g). Therefore, DX–DOASes manufacturers will incur additional paperwork costs as well. DX–DOASes are classified under NAICS code 333415,[46] ''Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing.'' The SBA sets a threshold of 1,250 employees or fewer for an entity to be considered as a small business for this category. In reviewing the DX–DOAS market, DOE used company websites, marketing research tools, product catalogues, and other public information to identify companies that manufacture DX–DOASes. DOE screened out companies that do not meet the definition of ''small business'' or are foreign-owned and operated. DOE used subscription-based business information tools to determine headcount, revenue, and geographic presence of the small businesses. DOE identified twelve companies manufacturing DX–DOASes covered by this rulemaking. Of these manufacturers, DOE identified one as a domestic small business. DOE estimates that the increased certification burden would result in 35 hours per manufacturer to develop the required certification reports. Therefore, based on a fully burdened labor rate of $73 per hour, the estimated total annual cost to manufacturers would be $2,555 per manufacturer.[47] DOE understands the annual revenue of the small business that manufactures DX–DOASes to be approximately $66 million. 87 FR 5560, 5584. Therefore, this additional certification cost of $2,555 per manufacturer represents significantly less than 1 percent of the identified manufacturer's annual revenue.

This document also adopts certification reporting requirements for commercial electric instantaneous water heaters, which align with the previously inadvertently omitted energy conservation standards put in place by EPCA and adopted in the October 2023 CWH Final Rule. 88 FR 69686. As a result, commercial electric instantaneous water heater manufacturers will incur additional paperwork costs. CWHs are classified under NAICS code 333310,[48] ''Commercial and Service Industry Machinery Manufacturing.'' In 13 CFR 121.201, the SBA sets a threshold of 1,000 employees or fewer for an entity to be considered as a small business for this category. DOE's analysis relied on publicly available databases to identify potential small businesses that manufacture equipment covered in this rulemaking. DOE utilized the California Energy Commission's MAEDbS,[49] DOE's ENERGY STAR Database,[50] and DOE's CCD [51] in identifying manufacturers. DOE's research identified nine original equipment manufacturers (''OEMs'') of commercial electric instantaneous water heaters being sold in the U.S. market. Of these nine companies, DOE identified three as domestic small businesses. The small businesses do not currently certify any other CWHs to DOE's Compliance Certification Management System (''CCMS''). DOE estimates that the increased certification burden would result in 35 hours per manufacturer to develop the required certification reports. Therefore, based on a fully burdened labor rate of $73 per hour, the estimated total annual cost to manufacturers would be $2,555 per manufacturer.[52] Using available public information, DOE estimated the annual revenue for all three small businesses that manufacture commercial electric instantaneous water heaters. The small business with the least annual revenue has an annual revenue of approximately $10,400,000. Therefore, this additional certification cost of $2,555 per manufacturer represents significantly less than 1 percent of each identified manufacturer's annual revenue.

For DPPPMs, no certification is currently required. This final rule is adding reporting requirements to align with the energy conservation standards adopted in the September 2023 DPPPM Final Rule. 88 FR 66966. Therefore, DPPPM manufacturers will incur additional paperwork costs. DPPPMs are classified under NAICS code 335312, ''Motor and Generator Manufacturing.'' The SBA sets a threshold of 1,250 employees or fewer for an entity to be considered as a small business in this category. DOE screened out companies that do not offer products impacted by this rulemaking, do not meet the definition of a ''small business,'' or are foreign-owned and operated. DOE identified five companies manufacturing DPPPMs for the domestic market. Of those, DOE determined that one company met the SBA definition of a small business. DOE estimates that the increased certification burden would result in 35 hours per manufacturer to develop the required certification reports annually. Therefore, based on a fully burdened labor rate of $73 per hour, the estimated total annual cost to manufacturers would be $2,555 per manufacturer.[53] DOE was able to identify an annual revenue estimate of approximately $28.2 million for the small business.[54] Therefore, this additional certification cost of $2,555 per manufacturer represents significantly less than 1 percent of the identified manufacturer's annual revenue.

This final rule also adds reporting requirements to align with the energy conservation standards established in the April 2023 Air Cleaners DFR, which developed new energy conservation standards for air cleaners. Therefore, air cleaner manufacturers will incur additional paperwork costs. Air cleaners are classified under NAICS code 335210, ''Small Electrical Appliance Manufacturing.'' The SBA sets a threshold of 1,500 employees or fewer for an entity to be considered as a small business for this category. DOE conducted a market survey to identify

[46] The business size standards are listed by NAICS code and industry description and are available at *www.sba.gov/document/support-table-size-standards* (last Accessed July 29th, 2021).

[47] Supporting Statement for Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recording keeping for Consumer Products and Commercial Equipment Subject to Energy or Water Conservation Standards. Available at *omb.report/omb/1910-1400.*

[48] The business size standards are listed by NAICS code and industry description and are available at *www.sba.gov/document/support-table-size-standards* (last accessed March 7, 2023).

[49] MAEDbS can be accessed at *https://www.energy.ca.gov/programs-and-topics/programs/appliance-efficiency-program-outreach-and-education/modernized* (last accessed July 15, 2021).

[50] ENERGY STAR-certified products can be found in the ENERGY STAR database accessed at *www.energystar.gov/productfinder/product/certified-commercial-water-heaters/results* (last accessed July 15, 2021).

[51] Certified equipment in the CCD are listed by product class and can be accessed at *www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A** (last accessed July 15, 2021).

[52] Supporting Statement for Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recording keeping for Consumer Products and Commercial Equipment Subject to Energy or Water Conservation Standards. Available at *omb.report/omb/1910-1400.*

[53] Supporting Statement for Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recording keeping for Consumer Products and Commercial Equipment Subject to Energy or Water Conservation Standards. Available at *omb.report/omb/1910-1400.*

[54] The small business's annual revenue estimate is taken from D&B Hoovers (*app.avention.com*).

potential small manufacturers of air cleaners. DOE began its assessment by reviewing Association of Home Appliance Manufacturers' (AHAM's) database [55] of air cleaners, models in ENERGY STAR V.2.0,[56] California Air Resources Board,[57] and individual company websites. DOE then consulted publicly available data, such as manufacturer websites, manufacturer specifications and product literature, and import/export logs *(e.g.,* bills of lading from Panjiva) [58], to identify OEMs of air cleaners. DOE further relied on public data and subscription-based market research tools *(e.g.,* Dun & Bradstreet reports) [59] to determine company, location, headcount, and annual revenue. DOE screened out companies that do not offer products covered by this proposed rulemaking, do not meet the SBA's definition of a ''small business,'' or are foreign-owned and operated. DOE initially identified 43 OEMs that sell air cleaners in the United States. Of the 43 OEMs identified, DOE tentatively determined four companies qualify as small businesses and are not foreign-owned and operated. DOE estimates that the increased certification burden would result in 35 hours per manufacturer to develop the required certification reports. Therefore, based on a fully burdened labor rate of $73 per hour, the estimated total annual cost to manufacturers would be $2,555 per manufacturer.[60] Using available public information, DOE estimated the annual revenue for all four small businesses that manufacture air cleaners. The small business with the least annual revenue has an annual revenue of approximately $1.3 million. Therefore, this additional certification cost of $2,555 per manufacturer represents significantly less than 1 percent of each identified manufacturer's annual revenue.

DOE reviewed this final rule under provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. On the basis of the forgoing, DOE concludes that the impacts of the amendments to DOE's certification regulations adopted in this final rule will not have a ''significant economic impact on a substantial number of small entities,'' and the preparation of a FRFA is not warranted. DOE has submitted a 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 CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs,[61] compressors, DPPPMs, air cleaners, SPVUs, CFLKs, and GSLs must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, CFLKs, and GSLs. (*See* generally 10 CFR part 429.) The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the PRA. This requirement has been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 35 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.

1. Description of the Requirements

DOE is establishing or amending the reporting requirements for CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, and CFLKs. For GSLs, DOE is not changing reporting requirements and only specifying compliance with existing ones. DOE has sent a revised information collection approval to OMB under the existing Control Number 1910–1400. The revisions will just reflect the changes finalized in this rulemaking as an amendment to the existing information collection.

2. Method of Collection

DOE is requiring that respondents submit electronic forms using DOE's online CCMS. DOE's CCMS is publicly accessible at *www.regulations.doe.gov/ccms/,* and includes instructions for users, registration forms, and the product-specific reporting templates required for use when submitting information to CCMS.

3. Data

The following are DOE estimates of the total annual reporting and recordkeeping burden imposed on manufacturers of CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, and CFLKs subject to the new or amended certification reporting requirements adopted in this final rule. These estimates take into account the time necessary to develop any additional testing documentation, maintain any additional documentation supporting the development of the certified rating for each basic model, complete any additional certification, and submit any additional required documents to DOE electronically.

DOE has determined that these amendments will not impose additional costs for manufacturers of CAC/HPs, DWs, RCWs, dehumidifiers, EPSs, battery chargers, CRACs, three-phase, less than 65,000 Btu/h ACUACs and

[55] Association of Home Appliance Manufacturers. ''Find a Certified Room Air Cleaner.'' Available at *ahamverifide.org/directory-of-air-cleaners/* (last accessed Jan. 24, 2022).

[56] Available at *data.energystar.gov/Active-Specifications/ENERGY-STAR-Certified-Room-Air-Cleaners/jmck-i55n/data* (last accessed May 31, 2022).

[57] The California Air Resources Board. ''List of CARB-Certified Air Cleaning Devices.'' Available at *ww2.arb.ca.gov/list-carb-certified-air-cleaning-devices* (last accessed May 31, 2022).

[58] S&P Global. Panjiva Market Intelligence is available at *panjiva.com/import-export/United-States* (last accessed May 5, 2022).

[59] The Dun & Bradstreet Hoovers login is available at *app.dnbhoovers.com.*

[60] Supporting Statement for Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recording keeping for Consumer Products and Commercial Equipment Subject to Energy or Water Conservation Standards. Available at *omb.report/omb/1910-1400.*

[61] The certification reporting requirements for portable ACs were established in the January 2020 Portable ACs ECS Final Rule. However, the energy conversation standard for portable ACs does not go into effect until January 2025, until which time manufacturers may optionally submit certification reports to DOE.

ACUHPs, three-phase, less than 65,000 Btu/h VRF, electric storage CWHs, ACIMs, walk-ins, commercial and industrial pumps, compressors, SPVUs, and CFLKs because manufacturers of these products or equipment are already submitting certification reports to DOE and should have readily available the information that DOE is requiring as part of this rulemaking. For GSLs, because DOE is not changing reporting requirements and only specifying compliance with existing ones, manufacturers should have readily available the information that DOE is requiring. Additionally, for portable ACs, manufacturers may optionally submit certification reports to DOE and the costs associated with certification requirements for portable ACs were already accounted for in the January 2020 Portable ACs ECS Final Rule.

DOE's amendments for the reporting requirements for pool heaters will require new certification reporting for electric pool heater manufacturers and importers. DOE estimates there are 18 manufacturers of electric pool heaters that would have to submit annual certification reports to DOE for those products based on the adopted reporting requirements. Of these 18 manufacturers, four make both gas-fired and electric pool heaters. Therefore, 14 do not currently certify gas-fired pool heaters and would be required to begin submitting certification reports for electric pool heaters. The following section estimates the burden for these 14 electric pool heater manufacturers.

OMB Control Number: 1910–1400.

Form Number: DOE F 220.13.

Type of Review: Regular submission.

Affected Public: Domestic manufacturers and importers of electric pool heaters covered by this rulemaking.

Estimated Number of Respondents: 14.

Estimated Time per Response: Certification reports, 35 hours.

Estimated Total Annual Burden Hours: 490.

Estimated Total Annual Cost to the Manufacturers: $35,770 in recordkeeping/reporting costs.

DOE's addition of reporting requirements for direct expansion-dedicated outdoor air systems will require new certification reporting for direct expansion-dedicated outdoor air systems. DOE estimates there are 12 manufacturers of direct expansion-dedicated outdoor air systems that would have to submit annual certification reports to DOE for those products based on the adopted reporting requirements. The following section estimates the burden for these 12 direct expansion-dedicated outdoor air system manufacturers.

OMB Control Number: 1910–1400.

Form Number: DOE F 220.96.

Type of Review: Regular submission.

Affected Public: Domestic manufacturers and importers of direct expansion-dedicated outdoor air systems covered by this rulemaking.

Estimated Number of Respondents: 12.

Estimated Time per Response: Certification reports, 35 hours.

Estimated Total Annual Burden Hours: 420.

Estimated Total Annual Cost to the Manufacturers: $30,660 in recordkeeping/reporting costs.

DOE's addition of reporting requirements for commercial electric instantaneous water heaters will require new certification reporting for commercial electric instantaneous water heaters. DOE estimates there are nine manufacturers of commercial electric instantaneous water heaters that would have to submit annual certification reports to DOE for those products based on the adopted reporting requirements. The following section estimates the burden for these nine commercial electric instantaneous water heater manufacturers.

OMB Control Number: 1910–1400.

Form Number: DOE F 220.43.

Type of Review: Regular submission.

Affected Public: Domestic manufacturers and importers of commercial electric instantaneous water heater manufacturers covered by this rulemaking.

Estimated Number of Respondents: 9.

Estimated Time per Response: Certification reports, 35 hours.

Estimated Total Annual Burden Hours: 315.

Estimated Total Annual Cost to the Manufacturers: $22,995 in recordkeeping/reporting costs.

DOE's addition of reporting requirements for dedicated-purpose pool pump motors will require new certification reporting for dedicated-purpose pool pump manufacturers and importers. DOE estimates there are five manufacturers of dedicated-purpose pool pump motors that would have to submit annual certification reports to DOE for those products based on the adopted reporting requirements. The following section estimates the burden for these five dedicated-purpose pool pump motor manufacturers.

OMB Control Number: 1910–1400.

Form Number: DOE F 220.97.

Type of Review: Regular submission.

Affected Public: Domestic manufacturers and importers of dedicated-purpose pool pump motors covered by this rulemaking.

Estimated Number of Respondents: 5.

Estimated Time per Response: Certification reports, 35 hours.

Estimated Total Annual Burden Hours: 175.

Estimated Total Annual Cost to the Manufacturers: $12,775 in recordkeeping/reporting costs.

DOE's addition of reporting requirements for air cleaners will require new certification reporting for air cleaner manufacturers and importers. DOE estimates that there are 43 manufacturers of air cleaners that would have to submit annual certification reports to DOE for those products based on the adopted reporting requirements. The following section estimates the burden for these 43 air cleaner manufacturers.

OMB Control Number: 1910–1400.

Form Number: DOE F 220.100.

Type of Review: Regular submission.

Affected Public: Domestic manufacturers and importers of air cleaners covered by this rulemaking.

Estimated Number of Respondents: 43.

Estimated Time per Response: Certification reports, 35 hours.

Estimated Total Annual Burden Hours: 1,505.

Estimated Total Annual Cost to the Manufacturers: $109,865 in recordkeeping/reporting costs.

4. Conclusion

DOE has concluded that the removal of outdated reporting requirements and the addition of reporting requirements as adopted in this final rule will not impose additional costs for CAC/HPs, DWs, RCWs, dehumidifiers, EPSs, battery chargers, CRACs, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, electric storage CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, SPVUs, and CFLKs (*see* sections III.B.2, III.C.2, III.D.2, III.F.2, III.G.2, III.H.2, III.I.2, III.K.2, III.L.2, III.M.2, III.N.2, III.O.2, III.P.2, III.Q.2, III.T.2, and III.U.2 of this document for a more complete discussion). For GSLs, DOE is not changing reporting requirements and only specifying compliance with existing ones (*See* section III.V of this document for a more complete discussion). Furthermore, DOE has concluded that there are 14 pool heater manufacturers, 12 DX–DOAS manufacturers, nine CWH manufacturers, five DPPPM manufacturers, and 43 air cleaner manufacturers that will have to submit new annual certification reports to DOE for those products. For all other manufacturers of covered products or

equipment described in this final rule, the public reporting burden for certification remains unchanged.

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 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 establishes amended certification, reporting, and labeling requirements for CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, and CFLKs. For GSLs, DOE does not change reporting requirements and only specifies compliance with existing ones. 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 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, DOE has determined that adopting amended certification, reporting, and labeling requirements for consumer products and industrial equipment is consistent with activities identified in 10 CFR part 1021, appendix A to subpart D, A5 and A6. 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 (August 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 *www.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). Pursuant to OMB Memorandum M–19–15, Improving Implementation of the Information Quality Act (April 24, 2019), DOE published updated guidelines which are available at *www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20Guidelines%20Dec%202019.pdf.* 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 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 FTC concerning the impact of the commercial or industry standards on competition.

The modifications to the certification reporting and labeling requirements for CAC/HPs, DWs, RCWs, pool heaters, dehumidifiers, EPSs, battery chargers, CRACs, DX–DOASes, three-phase, less than 65,000 Btu/h ACUACs and ACUHPs, three-phase, less than 65,000 Btu/h VRF, CWHs, ACIMs, walk-ins, commercial and industrial pumps, portable ACs, compressors, DPPPMs, air cleaners, SPVUs, and CFLKs adopted in this final rule do not incorporate testing methods contained in any commercial standards. For GSLs, in this final rule, DOE is not changing reporting requirements and only specifying compliance with existing reporting requirements.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this final rule prior to its effective date. The report will state that it has been determined that the final rule does not fall within the scope of 5 U.S.C. 804(2).

N. Description of Materials Incorporated by Reference

DOE is removing the existing incorporation by reference of industry standard ANSI/AHAM DW–1–2010 from 10 CFR 429.4 and 429.19. No other changes are being made to materials incorporated by reference.

V. 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

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Small businesses.

10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation test procedures, and Reporting and recordkeeping requirements.

Signing Authority

This document of the Department of Energy was signed on September 19, 2024, by Jeffrey Marootian, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on September 20, 2024.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

For the reasons stated in the preamble, DOE amends parts 429 and 431 of chapter II of title 10, 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; 28 U.S.C. 2461 note.

§ 429.4 [Amended]

■ 2. Amend § 429.4 by removing paragraph (b)(1) and redesignating paragraphs (b)(2) and (3) as paragraphs (b)(1) and (2), respectively.

■ 3. Amend § 429.12 by revising paragraphs (b)(12) and (13), (d), and (i) to read as follows:

§ 429.12 General requirements applicable to certification reports.

* * * * *

(b) * * *

(12) If the test sample size is listed as ''0'' to indicate the certification is based upon the use of an alternate way of determining measures of energy conservation, identify the method used for determining measures of energy conservation (such as ''AEDM,'' or linear interpolation). Manufacturers of commercial packaged boilers,

commercial water heating equipment, commercial refrigeration equipment, commercial HVAC equipment, central air conditioners and central air conditioning heat pumps, and walk-in coolers and walk-in freezers must provide the manufacturer's designation (name or other identifier) of the AEDM used; and

(13) Product specific information listed in §§ 429.14 through 429.68.

* * * * *

(d) *Annual filing.* All data required by paragraphs (a) through (c) of this section shall be submitted to DOE annually, on or before the following dates:

TABLE 1 TO PARAGRAPH (d)

Product category	Deadline for data submission
Portable air conditioners	February 1.
Fluorescent lamp ballasts; Compact fluorescent lamps; General service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps; Candelabra base incandescent lamps and intermediate base incandescent lamps; Ceiling fans; Ceiling fan light kits; Showerheads; Faucets; Water closets; and Urinals.	March 1.
Water heaters; Consumer furnaces; Pool heaters; Commercial water heating equipment; Commercial packaged boilers; Commercial warm air furnaces; Commercial unit heaters; and Furnace fans.	May 1.
Dishwashers; Commercial pre-rinse spray valves; Illuminated exit signs; Traffic signal modules and pedestrian modules; and Distribution transformers.	June 1.
Room air conditioners; Central air conditioners and central air conditioning heat pumps; Commercial heating, ventilating, air conditioning (HVAC) equipment (excluding air-cooled, three-phase, small commercial package air conditioning and heating equipment with a cooling capacity of less than 65,000 British thermal units per hour and air-cooled, three-phase, variable refrigerant flow multi-split air conditioners and heat pumps with less than 65,000 British thermal units per hour cooling capacity); and Air-cooled, three-phase, small commercial package air conditioning and heating equipment with a cooling capacity of less than 65,000 British thermal units per hour and air-cooled, three-phase, variable refrigerant flow multi-split air conditioners and heat pumps with a cooling capacity of less than 65,000 British thermal units per hour.	July 1.
Consumer refrigerators, refrigerator-freezers, and freezers; Commercial refrigerators, freezers, and refrigerator-freezers; Automatic commercial ice makers; Refrigerated bottled or canned beverage vending machines; Walk-in coolers and walk-in freezers; and Consumer miscellaneous refrigeration products.	August 1.
Torchieres; Dehumidifiers; Metal halide lamp ballasts and fixtures; External power supplies; Pumps; Dedicated-purpose pool pump motors; Compressors; and Battery chargers.	September 1.
Residential clothes washers; Residential clothes dryers; Direct heating equipment; Cooking products; and Commercial clothes washers.	October 1.
Air Cleaners	December 1.

* * * * *

(i) *Compliance dates.* For any product subject to an applicable energy conservation standard for which the compliance date has not yet occurred, a certification report must be submitted not later than the compliance date for the applicable energy conservation standard. The covered products enumerated below are subject to the stated compliance dates for initial certification:

(1) Dedicated-purpose pool pump motors <0.5 total horsepower (THP) and dedicated-purpose pool pump motors ≥1.15 THP and ≤5 THP, September 29, 2025.

(2) Dedicated-purpose pool pump motors ≥0.5 THP and <1.15 THP, September 28, 2027.

(3) Direct expansion-dedicated outdoor air systems, May 1, 2024.

■ 4. Amend § 429.16 by:

■ a. Revising paragraphs (b)(3)(i)(B), (b)(3)(ii)(B), (b)(3)(iii)(A)(*2*), and (e)(2)(v);

■ b. Adding paragraph (e)(2)(vi); and

■ c. Revising paragraph (e)(4)(iv).

The revisions and addition read as follows:

§ 429.16 Central air conditioners and central air conditioning heat pumps.

* * * * *

(b) * * *

(3) * * *

(i) * * *

(B) The upper 90 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.90}(\frac{s}{\sqrt{n}})$$

And $\bar{x}$ is the sample mean; *s* is the sample standard deviation; *n* is the number of samples; and $t_{0.90}$ is the Student's t-Distribution Values for a 90 percent one-tailed confidence interval with n − 1 degrees of freedom (from appendix A to this subpart). Round represented values of off-mode power consumption to the nearest watt.

(ii) * * *

(B) The lower 90 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.90}(\frac{s}{\sqrt{n}})$$

And $\bar{x}$ is the sample mean; *s* is the sample standard deviation; *n* is the number of samples; and $t_{0.90}$ is the Student's t-Distribution Values for a 90 percent one-tailed confidence interval with n − 1 degrees of freedom (from appendix A to this subpart). Round represented values of EER, SEER, HSPF, EER2, SEER2, and HSPF2 to the nearest 0.05.

(iii) * * *

(A) * * *

(*2*) The lower 90 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.90}(\frac{s}{\sqrt{n}})$$

And $\bar{x}$ is the sample mean; *s* is the sample standard deviation; *n* is the number of samples; and $t_{0.90}$ is the Student's t-Distribution Values for a 90 percent one-tailed confidence interval with n − 1 degrees of freedom (from appendix A to this subpart).

* * * * *

(e) * * *

(2) * * *

(v) For all split systems including outdoor units with no match, the refrigerant; and

(vi) For variable-speed coil only systems; whether the represented value is based on a non-communicating or communicating control system.

* * * * *

(4) * * *

(iv) For blower coil systems, the airflow-control settings associated with full load cooling operation; the airflow-control settings or alternative instructions for setting fan speed to the speed upon which the rating is based; and whether the system varies blower speeds with outdoor air conditions;

* * * * *

■ 5. Amend § 429.19 by revising paragraphs (b)(2) and (3) and adding paragraph (c) to read as follows:

§ 429.19 Dishwashers.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The estimated annual energy use in kilowatt hours per year (kWh/yr), the water consumption in gallons per cycle, and the capacity in number of place settings.

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional product-specific information—

(i) The presence of a soil sensor, and if yes, the number of cycles required to reach calibration;

(ii) The water inlet temperature used for testing in degrees Fahrenheit (°F);

(iii) The cycle selected for the energy test and whether that cycle is soil-sensing if testing is performed using appendix C1 to subpart B of part 430 of this chapter and the cycles selected for the sensor heavy response, sensor medium response, and sensor light response and whether these cycles are soil-sensing if testing is performed using appendix C2 to subpart B of part 430 of this chapter;

(iv) The options selected for the energy test if testing is performed using appendix C1 to subpart B of part 430 of this chapter and the options selected for the sensor heavy response, sensor medium response, and sensor light response if testing is performed using appendix C2 to subpart B of part 430 of this chapter;

(v) The average cleaning index for the sensor heavy response, sensor medium response, and sensor light response cycles if testing is performed using appendix C2 to subpart B of part 430 of this chapter (*see* section 5.1 of appendix C2 for the calculation of per-cycle cleaning index for each test cycle);

(vi) Indication of whether Cascade Complete Powder or Cascade with the Grease Fighting Power of Dawn was used as the detergent formulation. When certifying dishwashers, other than water re-use dishwashers, according to appendix C1 to subpart B of part 430 of this chapter:

(A) Before July 17, 2023, Cascade Complete Powder detergent may be used as the basis for certification in conjunction with the detergent dosing methods specified in either section 2.5.2.1.1 or section 2.5.2.1.2 of appendix C1. Cascade with the Grease Fighting Power of Dawn detergent may be used as the basis for certification only in conjunction with the detergent dosing specified in section 2.5.2.1.1 of appendix C1.

(B) Beginning July 17, 2023, Cascade Complete Powder detergent may be used as the basis for certification of newly certified basic models only in conjunction with the detergent dosing method specified in section 2.5.2.1.2 of appendix C1. Cascade with the Grease Fighting Power of Dawn detergent may be used as the basis for certification only in conjunction with the detergent dosing specified in section 2.5.2.1.1 of appendix C1. Manufacturers may maintain existing basic model certifications made prior to July 17, 2023, consistent with the provisions of paragraph (b)(3)(vi)(A) of this section.

(vii) The presence of a built-in water softening system, and if yes, the energy use in kilowatt hours and the water use in gallons required for each regeneration of the water softening system, the number of regeneration cycles per year, and data and calculations used to derive these values;

(viii) Whether the product is a water re-use system dishwasher, and if yes, the energy use in kilowatt hours and water use in gallons required for a drain out event, the energy use in kilowatt hours and water use in gallons required for a clean out event, the number of drain out events per year, the number of clean out events per year, the water fill volume to calculate detergent dosage in gallons, and data and calculations used to derive these values, as applicable; and

(ix) The presence of a built-in reservoir, and if yes, the manufacturer-stated reservoir capacity in gallons, the prewash fill water volume in gallons and the main wash fill water volume in gallons if testing is performed using appendix C1 to subpart B of part 430 of this chapter, and the reservoir water consumption in gallons per cycle.

(c) *Reported values.* Values reported pursuant to this subsection must be rounded as follows:

(1) The represented value of estimated annual energy use to the nearest kilowatt hour per year.

(2) The represented value of water consumption to the nearest 0.1 gallon per cycle.

■ 6. Amend § 429.20 by revising paragraphs (b) and (c) to read as follows:

§ 429.20 Residential clothes washers.

* * * * *

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to residential clothes washers; and

(2) Pursuant to § 429.12(b)(13), a certification report shall contain the following public product-specific information:

(i) For residential clothes washers tested in accordance with appendix J to subpart B of part 430 of this chapter: the energy efficiency ratio (EER) in pounds per kilowatt hour per cycle (lb/kWh/cycle), the water efficiency ratio (WER) in pounds per gallon per cycle (lb/gal/cycle), the clothes container capacity in cubic feet (cu ft), the corrected remaining moisture content (RMC) expressed as a percentage, the type of control system (automatic or semi-automatic), and the type of loading (top-loading or front-loading).

(ii) For residential clothes washers tested in accordance with appendix J2 to subpart B of part 430 of this chapter: the integrated modified energy factor (IMEF) in cu ft/kWh/cycle, the integrated water factor (IWF) in gal/cycle/cu ft, the clothes container capacity in cu ft, the corrected RMC expressed as a percentage, and the type of loading (top-loading or front-loading).

(3) Pursuant to 10 CFR 429.12(b)(13), a certification report must include the following additional product-specific information: a list of all cycle selections comprising the complete energy test cycle for each basic model and the test cloth lot number used for certification testing.

(c) *Reported values.* Values reported pursuant to this subsection must be rounded as follows:

(1) MEF and IMEF to the nearest 0.01 cu ft/kWh/cycle;

(2) WF and IWF to the nearest 0.1 gal/cycle/cu ft;

(3) EER to the nearest 0.01 lb/kWh/cycle;

(4) WER to the nearest 0.01 lb/gal/cycle;

(5) RMC to the nearest 0.1 percentage point; and

(6) Clothes container capacity to the nearest 0.1 cu ft.

■ 7. Amend § 429.24 by:

■ a. Revising paragraph (a)(2) introductory text;

■ b. Adding paragraphs (a)(3) and (4);

■ c. Revising paragraph (b)(2); and

■ d. Adding paragraph (c).

The revisions and additions read as follows:

§ 429.24 Pool heaters.

(a) * * *

(2) For each basic model of pool heater, randomly select and test a

sample of sufficient size to ensure that any represented value of the thermal efficiency or integrated thermal efficiency, as applicable, or other measure of energy consumption of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

* * * * *

(3) When certifying integrated thermal efficiency, the represented value for input capacity of a gas-fired pool heater basic model reported in accordance with paragraph (b)(2) of this section must be the mean of the input capacities measured for each tested unit of the basic model, as determined in accordance with the test procedure in appendix P of subpart B of part 430 of this chapter.

(4) When certifying integrated thermal efficiency, the represented value of active electrical power of an electric pool heater basic model reported in accordance with paragraph (b)(2) of this section must be the mean of the electrical power measured for each tested unit of the basic model, as determined in accordance with the test procedure in appendix P of subpart B of part 430 of this chapter.

(b) * * *

(2) Pursuant to § 429.12(b)(13), include in each certification report the following public product-specific information:

(i) For gas-fired pool heaters: the input capacity in British thermal units per hour (Btu/h) and either the thermal efficiency as a percentage (%) (when certifying compliance with the energy conservation standards specified at § 430.32(k)(1) of this chapter) or the integrated thermal efficiency as a percentage (%) (when certifying compliance with the energy conservation standards specified at § 430.32(k)(2) of this chapter), as applicable.

(ii) For electric pool heaters (when certifying compliance with the energy conservation standards specified at § 430.32(k)(2) of this chapter): the integrated thermal efficiency in percent (%) and the active electrical power in British thermal units per hour (Btu/h).

(c) *Reported values.* Round reported values pursuant to this subsection as follows:

(1) Integrated thermal efficiency for gas-fired pool heaters to the nearest tenth of one percent;

(2) Integrated thermal efficiency for electric pool heaters to the nearest one percent;

(3) Input capacity of a gas-fired pool heater to the nearest 1,000 Btu/h; and

(4) Active electrical power of an electric pool heater to the nearest 100 Btu/h.

■ 8. Amend § 429.33 by revising paragraphs (b)(2)(ii)(A) and (b)(3)(ii)(B) to read as follows.

§ 429.33 Ceiling fan light kits.

* * * * *

(b) * * *

(2) * * *

(ii) * * *

(A) For each basic model of lamp, each basic model of consumer-replaceable SSL, and/or each basic model of non-consumer-replaceable SSL packaged with the ceiling fan light kit, the brand, basic model number, test sample size, kind of lamp (*i.e.,* general service fluorescent lamp (GSFL); fluorescent lamp with a pin base that is not a GSFL; compact fluorescent lamp (CFL) with a medium screw base; CFL with a base that is not medium screw base [*e.g.,* candelabra base]; other fluorescent lamp [not GSFL or CFL]; general service incandescent lamp (GSIL); candelabra base incandescent lamp; intermediate base incandescent lamp; incandescent reflector lamp; other incandescent lamp [not GSIL, IRL, candelabra base or intermediate base incandescent lamp]; integrated LED lamp; non-consumer-replaceable SSL; consumer-replaceable SSL [not integrated LED lamps] and other SSL lamps that have an ANSI standard base and are not integrated LED lamps; other lamp not specified), lumen output in lumens (lm), and efficacy in lumens per watt (lm/W).

* * * * *

(3) * * *

(ii) * * *

(B) For each basic model of lamp, each basic model of consumer-replaceable SSL, and/or each basic model of non-consumer-replaceable SSL packaged with the ceiling fan light kit, a declaration that, where applicable, the lamp basic model was tested by a laboratory accredited as required under § 430.25 of this chapter; and

* * * * *

§ 429.36 [Amended]

■ 9. Amend § 429.36 by:

■ a. Removing paragraph (b)(2)(i);

■ b. Redesignating paragraph (b)(2)(ii) as (b)(2)(i); and

■ c. Adding a reserved paragraph (b)(2)(ii).

■ 10. Amend § 429.37 by revising paragraphs (b)(2) and (3) and (c) to read as follows:

§ 429.37 External power supplies.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) *External power supplies:* The average active mode efficiency as a percentage (%), no-load mode power consumption in watts (W), nameplate output power in watts (W), nameplate output voltage in volts (V), the effective wire gauge in American wire gauge (AWG) and length in feet (ft) of the recommended or included output cord, and, if missing from the nameplate, the output current in amperes (A) of the basic model or the output current in amperes (A) of the highest- and lowest-voltage models within the external power supply design family.

(ii) *Switch-selectable single-voltage external power supplies:* The average active mode efficiency as a percentage (%) value, no-load mode power consumption in watts (W) using the lowest and highest selectable output voltages, the lowest and highest selectable output voltages in volts (V), nameplate output power in watts (W), the effective wire gauge in American wire gauge (AWG) and length in feet (ft) of the recommended or included output cord, and, if missing from the nameplate, the output current in amperes (A).

(iii) *Adaptive single-voltage external power supplies:* The average active-mode efficiency as a percentage (%) at the highest and lowest nameplate output voltages, no-load mode power consumption in watts (W), nameplate output power in watts (W) at the lowest and highest nameplate output voltages, the lowest and highest nameplate output voltages in volts (V), the effective wire gauge in American wire gauge (AWG) and length in feet (ft) of the recommended or included output cord, and, if missing from the nameplate, the output current in amperes (A) at the highest and lowest nameplate output voltages.

(iv) *External power supplies that are exempt from no-load mode requirements under § 430.32(w)(5) of this chapter:* A statement that the product is designed to be connected to a security or life safety alarm or surveillance system component, the average active-mode efficiency as a percentage (%), the nameplate output power in watts (W), the nameplate output voltage in volts (V), the effective wire gauge in American wire gauge (AWG) and length in feet (ft) of the recommended or included output cord, and, if missing from the nameplate, the certification report must also include the output current in amperes (A) of the

basic model or the output current in amperes (A) of the highest- and lowest-voltage models within the external power supply design family.

(3) Pursuant to § 429.12(b)(13), a certification report for external power supplies that are exempt from the energy conservation standards at § 430.32(w)(1)(ii) of this chapter pursuant to § 430.32(w)(2) of this chapter must include the following additional information if, in aggregate, the total number of exempt EPSs sold as spare and service parts by the certifier exceeds 1,000 units across all models: The total number of units of exempt external power supplies sold during the most recent 12-calendar-month period ending on July 31, starting with the annual report due on September 1, 2017. The certification report must also include the exact timeframe (*e.g.,* from August 2016 to July 2017) of this most recent 12-calendar-month period.

(c) *Exempt external power supplies.* (1) For external power supplies that are exempt from energy conservation standards pursuant to § 430.32(w)(2) of this chapter and are not required to be certified pursuant to § 429.12(a) as compliant with an applicable standard, the importer or domestic manufacturer must, no later than September 1, 2017, and annually by each September 1st thereafter, submit a report providing the following information if, in aggregate, the total number of exempt EPSs sold as spare and service parts by the importer or manufacturer exceeds 1,000 units across all models:

(i) The importer or domestic manufacturer's name and address;

(ii) The brand name;

(iii) The number of units sold during the most recent 12-calendar-month period ending on July 31; and

(iv) The exact timeframe (*e.g.,* from August 2016 to July 2017) of this most recent 12-calendar-month period.

(2) The report must be submitted to DOE in accordance with the submission procedures set forth in § 429.12(h).

■ 11. Amend § 429.39 by:

■ a. Revising paragraphs (a)(1), (a)(2)(ii) introductory text, and (a)(2)(iii) introductory text;

■ b. Adding paragraphs (a)(2)(v) and (vi);

■ c. Revising paragraphs (b)(2) and (3); and

■ d. Adding paragraphs (b)(5) and (6).

The revisions and additions read as follows:

§ 429.39 Battery chargers.

(a) * * *

(1) *Represented values* include:

(i) For all battery chargers other than uninterruptible power supplies (UPSs) tested under appendix Y to subpart B of part 430 of this chapter: The unit energy consumption (UEC) in kilowatt-hours per year (kWh/yr), battery discharge energy (E_{batt}) in watt hours (Wh), 24-hour energy consumption (E_{24}) in watt hours (Wh), maintenance mode power (P_m) in watts (W), standby mode power (P_{sb}) in watts (W), off mode power (P_{off}) in watts (W), and duration of the charge and maintenance mode test (t_{cd}) in hours (hrs);

(ii) For all wired and fixed-location wireless battery chargers other than uninterruptible power supplies (UPSs) tested under appendix Y1 to subpart B of part 430 of this chapter: Battery discharge energy (E_{batt}) in watt hours (Wh), active charge energy (E_a) in watt hours (Wh), maintenance mode power (P_m) in watts (W), no-battery mode power (P_{nb}) in watts (W), standby mode power (P_{sb}) in watts (W), off mode power (P_{off}) in watts (W), and duration of the charge and maintenance mode test (t_{cd}) in hours (hrs);

(iii) For all open-placement wireless battery chargers other than uninterruptible power supplies (UPSs) tested under appendix Y1 to subpart B of part 430 of this chapter: no-battery mode power (P_{nb}) in watts (W);

(iv) For UPSs: average load adjusted efficiency (Eff_{avg}).

(2) * * *

(ii) For each basic model of battery chargers other than UPSs tested under appendix Y to subpart B of part 430 of this chapter, a sample of sufficient size must be randomly selected and tested to ensure that the represented value of UEC is greater than or equal to the higher of:

* * * * *

(iii) For each basic model of battery chargers other than UPSs tested under appendix Y to subpart B of part 430 of this chapter, using the sample from paragraph (a)(2)(ii) of this section, calculate the represented values of each metric (*i.e.,* maintenance mode power (P_m), standby power (P_{sb}), off mode power (P_{off}), battery discharge energy (E_{batt}), 24-hour energy consumption (E_{24}), and duration of the charge and maintenance mode test (t_{cd})), where the represented value of the metric is:

* * * * *

(v) For each basic model of battery chargers other than UPSs tested under appendix Y1 to subpart B of part 430 of this chapter, a sample of sufficient size must be randomly selected and tested to ensure that the represented value of E_a for all wired and fixed-location wireless chargers (or the represented value of P_{nb} for all open-placement wireless chargers) is greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the E_a (or $P_{nb,}$ when applicable) of the ith sample; or,

(B) The upper 97.5-percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{0.975}\left(\frac{s}{\sqrt{n}}\right)$$

and, $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.975}$ is the Student's t-Distribution Values for a 97.5-percent one-tailed confidence interval with n-1 degrees of freedom (from appendix A to this subpart).

(vi) For each basic model of battery chargers other than UPSs tested under appendix Y1 to subpart B of part 430 of this chapter, using the sample from paragraph (a)(2)(v) of this section, calculate the applicable represented values of each metric (*i.e.,* maintenance mode power (P_m), no-battery mode power (P_{nb}), standby power (P_{sb}), off mode power (P_{off}), battery discharge energy (E_{batt}), and duration of the charge and maintenance mode test (t_{cd})), where the represented value of the metric is:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the measured value of the ith sample for the metric.

(b) * * *

(2) Pursuant to § 429.12(b)(13), when tested under appendix Y to subpart B of part 430 of this chapter, a certification report must include the following product-specific information for all battery chargers other than UPSs: The nameplate battery voltage of the test battery in volts (V), the nameplate battery charge capacity of the test battery in ampere-hours (Ah), and the nameplate battery energy capacity of the test battery in watt-hours (Wh). A certification report must also include the represented values, as determined in paragraph (a) of this section for the maintenance mode power (P_m), standby mode power (P_{sb}), off mode power (P_{off}), battery discharge energy (E_{batt}), 24-hour energy consumption (E_{24}), duration of the charge and maintenance mode test (t_{cd}), and unit energy consumption (UEC).

(3) Pursuant to § 429.12(b)(13), when tested under appendix Y to subpart B of

part 430 of this chapter, a certification report must include the following product-specific information for all battery chargers other than UPSs: The manufacturer and model of the test battery, and the manufacturer and model, when applicable, of the external power supply.

* * * * *

(5) Pursuant to § 429.12(b)(13), when tested under appendix Y1 to subpart B of part 430 of this chapter, a certification report must include the following product-specific information for all wired and fixed-location wireless battery chargers other than UPSs: The manufacturer and model of the test battery, the manufacturer and model, when applicable, of the external power supply, the nameplate battery voltage of the test battery in volts (V), the nameplate battery charge capacity of the test battery in ampere-hours (Ah), and the nameplate battery energy capacity of the test battery in watt-hours (Wh). A certification report must also include the represented values, as determined in paragraph (a) of this section for the maintenance mode power (P_m), no-battery mode power (P_{nb}), standby mode power (P_{sb}), off mode power (P_{off}), battery discharge energy (E_{batt}), 24-hour energy consumption (E_{24}), active charge energy (E_a), and duration of the charge and maintenance mode test (t_{cd}).

(6) Pursuant to § 429.12(b)(13), when tested under appendix Y1 to subpart B of part 430 of this chapter, a certification report must include the following product-specific information for all open-placement wireless battery chargers other than UPSs: The manufacturer and model, when applicable, of the external power supply. A certification report must also include the represented values, as determined in paragraph (a) of this section for the no-battery mode power (P_{nb}).

■ 12. Amend § 429.43 by:

■ a. Revising the section heading and paragraphs (b)(2)(v), (vi), and (ix);

■ b. Adding paragraphs (b)(2)(xi) and (b)(3)(iii);

■ c. Revising paragraphs (b)(4)(vi) through (viii); and

■ d. Adding paragraphs (b)(4)(x) and (b)(6).

The revisions and additions read as follows:

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

* * * * *

(b) * * *

(2) * * *

(v) Single package vertical air conditioners:

(A) When certifying compliance with an EER standard: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), and the rated cooling capacity in British thermal units per hour (Btu/h).

(B) When certifying compliance with an IEER standard: the integrated energy efficiency ratio (IEER in British thermal units per Watt-hour (Btu/Wh)), the rated cooling capacity in British thermal units per hour (Btu/h), and the rated airflow in standard cubic feet per minute (SCFM). For units with rated cooling capacity <65,000 Btu/h: whether the unit is weatherized or non-weatherized; and if non-weatherized, the airflow rate of outdoor ventilation air which is drawn in and conditioned as determined in accordance with § 429.134(x)(3), while the equipment is operating with the same drive kit and motor settings used to determine the certified efficiency rating of the equipment.

(vi) Single package vertical heat pumps:

(A) When certifying compliance with an EER standard: the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), and the coefficient of performance (COP), and the rated cooling capacity in British thermal units per hour (Btu/h).

(B) When certifying compliance with an IEER standard: the integrated energy efficiency ratio (IEER in British thermal units per Watt-hour (Btu/Wh)), and the coefficient of performance (COP), the rated cooling capacity in British thermal units per hour (Btu/h), and the rated airflow in standard cubic feet per minute (SCFM). For units with cooling capacity <65,000 Btu/h: whether the unit is weatherized or non-weatherized; and if non-weatherized, the airflow rate of outdoor ventilation air which is drawn in and conditioned as determined in accordance with § 429.134(x)(3), while the equipment is operating with the same drive kit and motor settings used to determine the certified efficiency rating of the equipment.

* * * * *

(ix) Computer room air-conditioners:

(A) When certifying compliance with a SCOP standard: The net sensible cooling capacity in British thermal units per hour (Btu/h), the net cooling capacity in British thermal units per hour (Btu/h), the configuration (upflow/downflow), economizer presence (yes or no), condenser medium (air, water, or glycol-cooled), sensible coefficient of performance (SCOP), and rated airflow in standard cubic feet per minute (SCFM).

(B) When certifying compliance with an NSenCOP standard: The net sensible cooling capacity in British thermal units per hour (Btu/h), the net total cooling capacity in British thermal units per hour (Btu/h), whether the basic model is split system or single-package, the configuration (downflow, upflow ducted, upflow non-ducted, horizontal flow, ceiling-mounted ducted, ceiling-mounted non-ducted), fluid economizer presence (yes or no), condenser heat rejection medium (air, water, or glycol-cooled), net sensible coefficient of performance (NSenCOP), rated airflow in standard cubic feet per minute (SCFM), and the refrigerant used to determine the represented values.

* * * * *

(xi) Direct-expansion dedicated outdoor air systems:

(A) When certifying compliance with an ISMRE2 standard: the integrated seasonal moisture removal efficiency 2 (ISMRE2 in lbs. of moisture per kilowatt-hour (lb/kWh)), the rated moisture removal capacity at Standard Rating Condition A according to appendix B to subpart F of part 431 of this chapter (MRC in lbs of moisture per hour (lb/h)), and the rated supply airflow rate for 100 percent outdoor air applications (Q_{SA} in standard cubic feet per minute).

(B) When certifying compliance with an ISCOP2 standard: the integrated seasonal coefficient of performance 2 (ISCOP2 in Watts of heating per Watts of power input (W/W)).

(C) The configuration of the basic model number (*i.e.,* ''single-package'' or ''split system'') shall also be provided.

(3) * * *

(iii) For direct-expansion dedicated outdoor air systems with ventilation energy recovery systems, method of determination of the exhaust air transfer ratio (EATR), sensible effectiveness, and latent effectiveness of the ventilation energy recovery system (name and version of certified performance modeling software or if the device was directly tested). The test method (*i.e.,* Option 1 or Option 2) for units rated based on testing and motor control settings (including rotational speed) for energy recovery wheels shall also be provided.

(4) * * *

(vi) Single package vertical air-conditioners:

(A) When certifying compliance with an EER standard: Any additional testing instructions, if applicable; if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of

the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; and which, if any, special features were included in rating the basic model.

(B) When certifying compliance with an IEER standard: Compressor break-in period duration; rated indoor airflow in standard cubic feet per minute (SCFM); frequency or control set points including the required dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); rated indoor airflow in SCFM for each part-load point used in the IEER calculation and any special instructions required to obtain operation at each part-load point, such as frequency or control set points including dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); a statement whether the model will operate at test conditions without manufacturer programming; outdoor air-side attachments used for testing; any additional testing instructions, if applicable; and if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; any additional applicable testing instructions, are also required.

(vii) Single package vertical heat pumps:

(A) *When certifying compliance with an EER standard:* Any additional testing instructions, if applicable; if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; and which, if any, special features were included in rating the basic model.

(B) *When certifying compliance with an IEER standard:* The rated heating capacity in British thermal units per hour (Btu/h); compressor break-in period duration; rated indoor airflow in standard cubic feet per minute (SCFM) (in cooling mode); rated airflow in SCFM in heating mode if the unit is designed to operate with different airflow rates for cooling and heating mode; frequency or control set points including the required dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); rated indoor airflow in SCFM for each part-load point used in the IEER calculation and any special instructions required to obtain operation at each part-load point, such as frequency or control set points including dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); a statement whether the model will operate at test conditions without manufacturer programming; outdoor air-side attachments used for testing; any additional testing instructions, if applicable; and if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; or any additional applicable testing instructions, are also required.

(viii) *Computer room air-conditioners:*

(A) *When certifying compliance with a SCOP standard:* Any additional testing instructions, if applicable; and which, if any, special features were included in rating the basic model.

(B) *When certifying compliance with a NSenCOP standard:* Compressor break-in period duration; frequency or control set points including the required dip switch/control settings for step or variable-speed components (*e.g.,* compressors, VFDs); a statement whether the model will operate at test conditions without manufacturer programming; any additional testing instructions, if applicable; if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating.

* * * * *

(x) *Direct-expansion dedicated outdoor air systems:*

(A) *For units without ventilation energy recovery systems:* water flow rate in gallons per minute (gpm) for water-cooled and water-source units; rated ESP in inches of water column for the supply air stream; frequency or control set points for variable-speed components (*e.g.,* compressors, VFDs); required dip switch/control settings for step or variable-speed components (*e.g.,* reheat or head pressure control valves); a statement whether the model will operate at test conditions without manufacturer programming; if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; and any additional testing instructions specified in appendix B to subpart F of part 431 of this chapter, if applicable (*e.g.,* supply air dry-bulb temperatures for ISMRE2 tests, equipment settings for airflow, installation priority for split-system units, defrost control settings for air-source heat pump units, break-in period, or condenser head pressure controls.

(B) *For units with ventilation energy recovery systems,* the requirements in paragraph (b)(4)(x)(A) of this section apply, in addition to: rated ESP in inches of water column for the return air stream; exhaust air transfer ratio at the rated supply airflow rate and a neutral pressure difference between return and supply airflow (EATR as a percent value); sensible and latent effectiveness of the ventilation energy recovery system at 75 percent of the nominal supply airflow and zero pressure differential in accordance with the DOE test procedure in appendix B to subpart F of part 431 of this chapter; sensible and latent effectiveness of the ventilation energy recovery system at 100 percent of the nominal supply airflow and zero pressure differential in accordance with the DOE test procedure in appendix B to subpart F of part 431 of this chapter; and any additional testing instructions, if applicable (*e.g.,* deactivation of VERS or VERS bypass in accordance with appendix B to subpart F of part 431 of this chapter).

* * * * *

(6) *Basic and individual model numbers.* The basic model number and individual model number(s) required to be reported under § 429.12(b)(6) must consist of the following:

(i) *For computer room air-conditioners:*

TABLE 8 TO PARAGRAPH (b)(6)(i)

Single-package or split system?	Basic model No.	Individual model No(s).	
		1	2
Single-Package	Number unique to the basic model	Package	N/A.
Split System	Number unique to the basic model	Indoor Unit	Outdoor Unit.

(ii) *For direct-expansion dedicated outdoor air systems:*

TABLE 9 TO PARAGRAPH (b)(6)(ii)

Equipment configuration	Basic model No.	Individual model No(s).	
		1	2
Single-Package	Number unique to the basic model	Package	N/A.
Split System	Number unique to the basic model	Outdoor Unit	Indoor Unit.

* * * * *

■ 13. Amend § 429.44 by revising paragraph (c)(2) to read as follows:

§ 429.44 Commercial water heating equipment.

* * * * *

(c) * * *

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public equipment-specific information:

(i) *Commercial electric storage water heaters with measured storage volume less than or equal to 140 gallons:* The standby loss in percent per hour (%/h); whether the rated input rate is greater than 12kW (Yes/No); whether the ratio of input rate per gallon of stored water is less than 4,000 Btu/h/gallon (Yes/No); and the measured storage volume in gallons (gal).

(ii) *Commercial gas-fired and oil-fired storage water heaters with rated storage volume less than or equal to 140 gallons:* The thermal efficiency in percent (%), the standby loss in British thermal units per hour (Btu/h), the rated storage volume in gallons (gal), and the rated input in British thermal units per hour (Btu/h).

(iii) *Commercial water heaters and hot water supply boilers with storage capacity greater than 140 gallons:*

(A) *For gas-fired and oil-fired units:* The thermal efficiency in percent (%); whether the rated storage volume is greater than 140 gallons (Yes/No); whether the tank surface area is insulated with at least R–12.5 (Yes/No); whether a standing pilot light is used (Yes/No); whether the basic model has a fire damper or fan-assisted combustion (Yes/No); and, if applicable, pursuant to § 431.110 of this chapter, the standby loss in British thermal units per hour (Btu/h); the rated storage volume in gallons (gal); and the rated input in British thermal units per hour (Btu/h).

(B) *For electric units:* whether the rated storage volume is greater than 140 gallons (Yes/No); whether the tank surface area is insulated with at least R–12.5 (Yes/No); whether the rated input is greater than 12kW (Yes/No); whether the ratio of input rate per gallon of stored water is less than 4,000 Btu/h (Yes/No); and, if applicable, pursuant to § 431.110 of this chapter, the standby loss in percent per hour (%/h); and the measured storage volume in gallons (gal).

(iv) *Commercial gas-fired and oil-fired instantaneous water heaters with rated storage volume greater than or equal to 10 gallons and gas-fired and oil-fired hot water supply boilers with rated storage volume greater than or equal to 10 gallons:* The thermal efficiency in percent (%); the standby loss in British thermal units per hour (Btu/h); the rated storage volume in gallons (gal); the rated input in British thermal units per hour (Btu/h); whether the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons (Yes/No). For equipment that does not meet the definition of storage-type instantaneous water heaters (as set forth in 10 CFR 431.102), in addition to the requirements discussed previously in this paragraph (c)(2)(iv), the following must also be included in the certification report: whether the measured storage volume is determined using weight-based test in accordance with § 431.106 of this chapter or the calculation-based method in accordance with § 429.72; whether the water heater will initiate main burner operation based on a temperature-controlled call for heating that is internal to the water heater (Yes/No); whether the water heater is equipped with an integral pump purge functionality (Yes/No); if the water heater is equipped with integral pump purge, the default duration of the pump off delay (minutes).

(v) *Commercial gas-fired and oil-fired instantaneous water heaters with rated storage volume less than 10 gallons and gas-fired and oil-fired hot water supply boilers with rated storage volume less than 10 gallons:* The thermal efficiency in percent (%); the rated storage volume in gallons (gal), the rated input in British thermal units per hour (Btu/h); and whether the measured storage volume is determined using weight-based test in accordance with § 431.106 of this chapter or the calculation-based method in accordance with § 429.72.

(vi) *Commercial electric instantaneous water heaters with measured storage volume greater than or equal to 10 gallons (excluding storage-type instantaneous water heaters with storage capacity greater than 140 gallons):* The thermal efficiency in percent (%); the standby loss in percent per hour (%/h); whether the rated input is greater than 12kW (Yes/No); whether the ratio of input rate per gallon of stored water is not less than 4,000 Btu/h (Yes/No);the measured storage volume in gallons (gal); and whether the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons (Yes/No). For equipment that does not meet the definition of ''storage-type instantaneous water heater'' (as set forth in § 431.102 of this chapter), the following must also be included in the certification report: whether the measured storage volume is determined using a weight-based test in accordance with § 431.106 of this chapter or the calculation-based method in accordance with § 429.72; whether the water heater

will initiate heating element operation based on a temperature-controlled call for heating that is internal to the water heater (Yes/No); whether the water heater is equipped with an integral pump purge functionality (Yes/No); and if the water heater is equipped with integral pump purge, the default duration of the pump off delay (minutes).

(vii) *Commercial electric instantaneous water heaters with measured storage volume less than 10 gallons:* The thermal efficiency in percent (%); whether the rated input is greater than 12kW (Yes/No); whether the ratio of input rate per gallon of stored water is not less than 4,000 Btu/h (Yes/No); the measured storage volume in gallons (gal); and whether the measured storage volume is determined using a weight-based test in accordance with § 431.106 of this chapter or the calculation-based method in accordance with § 429.72.

(viii) *Commercial unfired hot water storage tanks:* The thermal insulation (*i.e.,* R-value) and stored volume in gallons (gal).

* * * * *

■ 14. Amend § 429.45 by revising paragraphs (a)(2)(ii) and (b)(2) and adding paragraph (b)(3) to read as follows:

§ 429.45 Automatic commercial ice makers.

(a) * * *

(2) * * *

(ii) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} - t_{0.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the Student's t-Distribution Values for a 95 percent one-tailed confidence interval with n-1 degrees of freedom (from appendix A to this subpart).

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The energy use in kilowatt hours per 100 pounds of ice (kWh/100 lb), the condenser water use in gallons per 100 pounds of ice (gal/100 lb), the harvest rate in lb/24 h, the type of cooling, and the equipment type.

(3) For reporting, round harvest rate to the nearest 1 lb/24 h for harvest rates above 50 lb/24 h; round condenser water use to the nearest 1 gal/100 lb; and round energy use to the nearest 0.01 kWh/100 lb.

■ 15. Amend § 429.53 by revising paragraph (b) to read as follows:

§ 429.53 Walk-in coolers and walk-in freezers.

* * * * *

(b) *Certification reports.* (1) The requirements of § 429.12 apply to manufacturers of walk-in cooler and walk-in freezer panels, doors, and refrigeration systems, and;

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public product-specific information:

(i) For display and non-display doors:

(A) The door type;

(B) R-value of the door insulation (as applicable);

(C) A declaration that the manufacturer has incorporated the applicable design requirements;

(D) For transparent reach-in display doors and windows, the glass type of the doors and windows (*e.g.,* double-pane with heat reflective treatment, triple-pane glass with gas fill);

(E) Power draw of the anti-sweat heater in watts per square foot of door opening;

(F) Door energy consumption in kilowatt-hours per day;

(G) Rated surface area in square feet; and

(H) For doors with anti-sweat heater controls, the range of temperature conditions (in degrees Fahrenheit) and/or relative humidity conditions (in percent, %) at which the anti-sweat heater turns on.

(ii) For panels: The R-value of the insulation.

(iii) For refrigeration systems:

(A) The installed motor's functional purpose (*i.e.,* evaporator fan motor or condenser fan motor), its rated horsepower, and a declaration that the manufacturer has incorporated the applicable walk-in-specific design requirements into the motor;

(B) The refrigeration system AWEF and net capacity in BTU/h;

(C) The configuration tested for certification (*e.g.,* condensing unit only, unit cooler only, single-packaged dedicated system matched-pair, attached split-system, or detachable single-packaged system);

(D) Whether an indoor dedicated condensing unit is also certified as an outdoor dedicated condensing unit and, if so, the basic model number for the outdoor dedicated condensing unit; and

(E) Whether the certified basic model meets the definition of a CO_2 unit cooler.

(3) Pursuant to § 429.12(b)(13), a certification report must include the following non-public product-specific information in addition to the information listed in paragraph (b)(2) of this section:

(i) *For display and non-display doors:*

(A) The rated power of each light, heater wire, and/or other electricity consuming device associated with each basic model of display and non-display door; and whether such device(s) has a timer, control system, or other demand-based control reducing the device's power consumption; and

(B) The conduction load through the door in Btu/h.

(ii) *For refrigeration systems:*

(A) Whether the dedicated condensing system using flooded head pressure controls; and

(B) The compressor break-in period, if used.

(4) Pursuant to § 429.12(b)(13), a certification report must include supplemental information submitted in PDF format. The equipment-specific supplemental information must be consistent with the equipment's installation or operating instructions; include any additional testing and testing set up instructions (*e.g.,* charging instructions) for the basic model; identify all special features that were included in rating the basic model; and include all other information (*e.g.,* any specific settings or controls) necessary to operate the basic model under the required conditions specified by the relevant test procedure. A manufacturer may also include with a certification report other supplementary items in PDF format (*e.g.,* operating manuals and/or installation instructions) for DOE to consider when performing testing under appendix C and appendix C1 to subpart R of part 431.

■ 16. Amend § 429.59 by revising paragraphs (b)(2)(i) through (iii) to read as follows.

§ 429.59 Pumps.

* * * * *

(b) * * *

(2) * * *

(i) For a pump subject to the test methods prescribed in section III of appendix A to subpart Y of part 431 of this chapter: PEI_{CL}; pump total head in feet (ft.) at BEP and nominal speed; volume per unit time (flow rate) in gallons per minute (gpm) at BEP and nominal speed; the nominal speed of rotation in revolutions per minute (rpm); calculated driver power input at each load point *i* (P_i^{in}), corrected to nominal speed, in horsepower (hp); full impeller diameter in inches (in.); and for RSV and ST pumps, the number of stages tested.

(ii) For a pump subject to the test methods prescribed in section IV or V

of appendix A to subpart Y of part 431 of this chapter: PEI_{CL}; pump total head in feet (ft.) at BEP and nominal speed; volume per unit time (flow rate) in gallons per minute (gpm) at BEP and nominal speed; the nominal speed of rotation in revolutions per minute (rpm); driver power input at each load point i (P_i^{in}), corrected to nominal speed, in horsepower (hp); full impeller diameter in inches (in.); whether the PEI_{CL} is calculated or tested; and for RSV and ST pumps, number of stages tested.

(iii) For a pump subject to the test methods prescribed in section VI or VII of appendix A to subpart Y of part 431 of this chapter: PEI_{VL}; pump total head in feet (ft.) at BEP and nominal speed; volume per unit time (flow rate) in gallons per minute (gpm) at BEP and nominal speed; the nominal speed of rotation in revolutions per minute (rpm); driver power input (measured as the input power to the driver and controls) at each load point i (P_i^{in}), corrected to nominal speed, in horsepower (hp); full impeller diameter in inches (in.); whether the PEI_{VL} is calculated or tested; and for RSV and ST pumps, the number of stages tested.

* * * * *

■ 17. Amend § 429.62 by revising paragraphs (a)(5) and (b)(2) and adding paragraph (b)(3) to read as follows:

§ 429.62 Portable air conditioners.

(a) * * *

(5) The represented value of combined energy efficiency ratio (CEER) or annualized energy efficiency ratio of a basic model must be rounded to the nearest 0.1 British thermal units per Watt-hour (Btu/Wh).

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The CEER in Btu/Wh, the seasonally adjusted cooling capacity in British thermal units per hour (Btu/h), the duct configuration used for testing (single-duct or dual-duct), the ability to operate in both duct configurations (yes or no), presence of heating function, and primary condensate removal feature (auto-evaporation, gravity drain, removable internal collection bucket, or condensate pump).

(3) Pursuant to § 429.12(b)(13), a certification report shall include the following additional public product-specific information: whether the basic model is variable-speed (yes or no), and if yes; the full-load seasonally adjusted cooling capacity ($SACC_{\_Full}$), in British thermal units per hour (Btu/h).

■ 18. Amend § 429.65 by adding paragraphs (e) and (f) to read as follows:

§ 429.65 Dedicated-purpose pool pump motors.

* * * * *

(e) *Certification reports for dedicated purpose pool pump motors.* (1) The requirements of § 429.12 apply to dedicated-purpose pool pump motors.

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public, product-specific information for each basic model:

(i) The dedicated-purpose pool pump motor total horsepower as described in paragraph (c)(1)(v) of this section;

(ii) For all basic models with total horsepower less than 0.5 THP, the full-load efficiency in percent (%) as described in this section; and

(iii) For all basic models with total horsepower greater than or equal to 0.5 THP: a statement confirming that the motor is a variable speed control dedicated purpose pool pump motor, as defined at § 431.483 of this chapter; and a statement regarding whether freeze protection is shipped enabled or disabled; for dedicated-purpose pool pump motors distributed in commerce with freeze protection controls enabled: The default dry-bulb air temperature setting (in °F), default run time setting (in minutes), maximum operating speed (in revolutions per minute, or rpm), and default motor speed in freeze protection mode (in revolutions per minute, or rpm).

(f) *Rounding requirements.* (1) Round dedicated-purpose-pool pump motor total horsepower to the nearest hundredth of a THP;

(2) Round full-load efficiency to the nearest tenth of a percent; and

(3) For dedicated-purpose pool pump motor basic models with total horsepower greater than or equal to 0.5 THP and distributed in commerce with freeze protection controls enabled, round the dry-bulb temperature setting, run time setting, maximum operating speed, and default motor speed in freeze protection mode to the nearest whole number.

■ 19. Amend § 429.67 by revising paragraphs (c)(2)(ii)(A)(*2*), (f)(2), and (f)(3)(i) and (ii) and adding paragraph (f)(4) to read as follows:

§ 429.67 Air-cooled, three-phase, small commercial package air conditioning and heating equipment with a cooling capacity of less than 65,000 British thermal units per hour and air-cooled, three-phase, variable refrigerant flow multi-split air conditioners and heat pumps with a cooling capacity of less than 65,000 British thermal units per hour.

* * * * *

(c) * * *

(2) * * *

(ii) * * *

(A) * * *

(*2*) The lower 90 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.90}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.90}$ is the Student's t-Distribution Values for a 90 percent one-tailed confidence interval with $n-1$ degrees of freedom (from appendix A to this subpart).

* * * * *

(f) * * *

(2) Pursuant to § 429.12(b)(13), for each individual model (for single-package systems) or individual combination (for split-systems, including outdoor units with no match and ''tested combinations'' for multi-split, multi-circuit, and multi-head mini-split systems), a certification report must include the following public equipment-specific information:

(i) Commercial package air conditioning equipment that is air-cooled with a cooling capacity of less than 65,000 Btu/h (3-Phase):

(A) When certifying compliance with a SEER standard: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/Wh)), and the rated cooling capacity in British thermal units per hour (Btu/h).

(B) When certifying compliance with a SEER2 standard: the seasonal energy efficiency ratio 2 (SEER2 in British thermal units per Watt-hour (Btu/Wh)) and the rated cooling capacity in British thermal units per hour (Btu/h).

(ii) Commercial package heating equipment that is air-cooled with a cooling capacity of less than 65,000 Btu/h (3-Phase):

(A) When certifying compliance with an HSPF standard: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/Wh)), the heating seasonal performance factor (HSPF in British thermal units per Watt-hour (Btu/Wh)), and the rated cooling capacity in British thermal units per hour (Btu/h).

(B) When certifying compliance with an HSPF2 standard: the seasonal energy efficiency ratio 2 (SEER2 in British thermal units per Watt-hour (Btu/Wh)), the heating seasonal performance factor 2 (HSPF2 in British thermal units per Watt-hour (Btu/Wh)) and the rated cooling capacity in British thermal units per hour (Btu/h).

(iii) Air-cooled, three-phase, variable refrigerant flow multi-split air conditioners with a cooling capacity of less than 65,000 Btu/h:

(A) When certifying compliance with a SEER standard: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/Wh)), and the rated cooling capacity in British thermal units per hour (Btu/h).

(B) When certifying compliance with a SEER2 standard: the seasonal energy efficiency ratio 2 (SEER2 in British thermal units per Watt-hour (Btu/Wh)) and the rated cooling capacity in British thermal units per hour (Btu/h).

(iv) Air-cooled, three-phase, variable refrigerant flow multi-split heat pumps with a cooling capacity of less than 65,000 Btu/h:

(A) When certifying compliance with an HSPF standard: The seasonal energy efficiency ratio (SEER in British thermal units per Watt-hour (Btu/Wh)), the heating seasonal performance factor (HSPF in British thermal units per Watt-hour (Btu/Wh)), and the rated cooling capacity in British thermal units per hour (Btu/h).

(B) When certifying compliance with an HSPF2 standard: the seasonal energy efficiency ratio 2 (SEER2 in British thermal units per Watt-hour (Btu/Wh)), the heating seasonal performance factor 2 (HSPF2 in British thermal units per Watt-hour (Btu/Wh)) and the rated cooling capacity in British thermal units per hour (Btu/h).

(3) * * *

(i) Air cooled commercial package air conditioning equipment with a cooling capacity of less than 65,000 Btu/h (3-phase): The nominal cooling capacity in British thermal units per hour (Btu/h); rated airflow in standard cubic feet per minute (SCFM) for each fan coil; rated external static pressure in inches of water; refrigeration charging instructions (*e.g.,* refrigerant charge, superheat and/or subcooling temperatures); frequency or control set points for variable speed components (*e.g.,* compressors, VFDs); required dip switch/control settings for step or variable components; a statement whether the model will operate at test conditions without manufacturer programming; any additional testing instructions, if applicable; if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; and which, if any, special features were included in rating the basic model. Additionally, when certifying compliance with a SEER2 standard, the supplemental information must also include: for models of outdoor units with no match, the following characteristics of the indoor coil: the face area, the coil depth in the direction of airflow, the fin density (fins per inch), the fin material, the fin style, the tube diameter, the tube material, and the numbers of tubes high and deep.

(ii) *Commercial package heating equipment that is air-cooled with a cooling capacity of less than 65,000 Btu/h (3-phase):* The nominal cooling capacity in British thermal units per hour (Btu/h); rated heating capacity in British thermal units per hour (Btu/h); rated airflow in standard cubic feet per minute (SCFM) for each fan coil; rated external static pressure in inches of water; refrigeration charging instructions (*e.g.,* refrigerant charge, superheat and/or subcooling temperatures); frequency or control set points for variable speed components (*e.g.,* compressors, VFDs); required dip switch/control settings for step or variable components; a statement whether the model will operate at test conditions without manufacturer programming; any additional testing instructions, if applicable; if a variety of motors/drive kits are offered for sale as options in the basic model to account for varying installation requirements, the model number and specifications of the motor (to include efficiency, horsepower, open/closed, and number of poles) and the drive kit, including settings, associated with that specific motor that were used to determine the certified rating; and which, if any, special features were included in rating the basic model. Additionally, when certifying compliance with an HSPF2 standard, the supplemental information must also include: for models of outdoor units with no match, the following characteristics of the indoor coil: the face area, the coil depth in the direction of airflow, the fin density (fins per inch), the fin material, the fin style, the tube diameter, the tube material, and the numbers of tubes high and deep.

* * * * *

(4) The basic model number and individual model number(s) required to be reported under § 429.12(b)(6) must consist of the following:

TABLE 2 TO PARAGRAPH (f)(4)

Equipment type	Basic model number	Individual model number(s)		
		1	2	3
Single-Package (including Space-Constrained).	Number unique to the basic model.	Package	N/A	N/A.
Single-Split System (including Space-Constrained and SDHV).	Number unique to the basic model.	Outdoor Unit.	Indoor Unit	If applicable—Air Mover (could be same as indoor unit if fan is part of indoor unit model number).
Multi-Split, Multi-Circuit, and Multi-Head Mini-Split System (including Space-Constrained and SDHV).	Number unique to the basic model.	Outdoor Unit.	When certifying a basic model based on tested combination(s): * * *. When certifying an individual combination: Each indoor units paired with the outdoor unit.	If applicable—When certifying a basic model based on tested combination(s): * * *. When certifying an individual combination: Each air movers paired with the outdoor unit.
Outdoor Unit with No Match	Number unique to the basic model.	Outdoor Unit.	N/A	N/A.

■ 20. Amend § 429.68 by revising paragraph (a)(2)(ii) introductory text and adding paragraph (b) to read as follows:

§ 429.68 Air cleaners.

(a) * * *

(2) * * *

(ii) Any represented value of the integrated energy factor or other measure of energy consumption of a

basic mode for which consumers would favor higher values shall be less than or equal to the lower of:

* * * * *

(b) *Certification reports.* (1) The requirements of § 429.12 are applicable to air cleaners; and

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information:

(i) Smoke clean air delivery rate (CADR) in cubic feet per minute (cfm);

(ii) Dust CADR in cfm;

(iii) $PM_{2.5}$ CADR in cfm;

(iv) Annual energy consumption in kilowatt hours per year (kWh/yr);

(v) Integrated energy factor in $PM_{2.5}$ CADR per watt; and

(vi) Effective room size in square feet.

■ 21. Amend § 429.70 by revising table 2 to paragraph (c)(5)(vi)(B) to read as follows:

§ 429.70 Alternative methods for determining energy efficiency and energy use.

* * * * *

(c) * * *

(5) * * *

(vi) * * *

(B) * * *

TABLE 2 TO PARAGRAPH (c)(5)(vi)(B)

Equipment	Metric	Applicable tolerance
Commercial Packaged Boilers	Combustion Efficiency	5% (0.05)
	Thermal Efficiency	5% (0.05)
Commercial Water Heaters or Hot Water Supply Boilers	Thermal Efficiency	5% (0.05)
	Standby Loss	10% (0.1)
Unfired Storage Tanks	R-Value	10% (0.1)
Air-Cooled, Split and Packaged ACs and HPs Greater Than or Equal to 65,000 Btu/h Cooling Capacity and Less Than 760,000 Btu/h Cooling Capacity.	Energy Efficiency Ratio	5% (0.05)
	Energy Efficiency Ratio 2	5% (0.05)
	Coefficient of Performance	5% (0.05)
	Coefficient of Performance 2	5% (0.05)
	Integrated Energy Efficiency Ratio	10% (0.1)
	Integrated Ventilation, Economizing, and Cooling	10% (0.1)
	Integrated Ventilation and Heating Efficiency	10% (0.1)
Water-Cooled, Split and Packaged ACs and HPs, All Cooling Capacities.	Energy Efficiency Ratio	5% (0.05)
	Energy Efficiency Ratio 2	5% (0.05)
	Integrated Energy Efficiency Ratio	10% (0.1)
	Integrated Ventilation, Economizing, and Cooling	10% (0.1)
Evaporatively-Cooled, Split and Packaged ACs and HPs, All Capacities.	Energy Efficiency Ratio	5% (0.05)
	Energy Efficiency Ratio 2	5% (0.05)
	Integrated Energy Efficiency Ratio	10% (0.1)
	Integrated Ventilation, Economizing, and Cooling	10% (0.1)
Water-Source HPs, All Capacities	Energy Efficiency Ratio	5% (0.05)
	Coefficient of Performance	5% (0.05)
	Integrated Energy Efficiency Ratio	10% (0.1)
Single Package Vertical ACs and HPs	Energy Efficiency Ratio	5% (0.05)
	Coefficient of Performance	5% (0.05)
	Integrated Energy Efficiency Ratio	10% (0.1)
Packaged Terminal ACs and HPs	Energy Efficiency Ratio	5% (0.05)
	Coefficient of Performance	5% (0.05)
Variable Refrigerant Flow ACs and HPs (Excluding Air-Cooled, Three-phase with Less Than 65,000 Btu/h Cooling Capacity).	Energy Efficiency Ratio	5% (0.05)
	Coefficient of Performance	5% (0.05)
	Integrated Energy Efficiency Ratio	10% (0.1)
Computer Room Air Conditioners	Sensible Coefficient of Performance	5% (0.05)
	Net Sensible Coefficient of Performance	5% (0.05)
Direct Expansion-Dedicated Outdoor Air Systems	Integrated Seasonal Coefficient of Performance 2	10% (0.1)
	Integrated Seasonal Moisture Removal Efficiency 2	10% (0.1)
Commercial Warm-Air Furnaces	Thermal Efficiency	5% (0.05)
Commercial Refrigeration Equipment	Daily Energy Consumption	5% (0.05)

* * * * *

■ 22. Amend § 429.72 by revising paragraph (e) to read as follows:

§ 429.72 Alternative methods for determining non-energy ratings.

* * * * *

(e) *Commercial instantaneous water heaters (other than storage-type instantaneous water heaters) and hot water supply boilers.* The storage volume of a commercial instantaneous water heater (other than storage-type instantaneous water heaters) or a hot water supply boiler basic model may be determined by performing a calculation of the stored water volume based upon design drawings (including computer-aided design (CAD) models) or physical dimensions of the basic model. Any value of storage volume of a basic model reported to DOE in a certification of compliance in accordance with § 429.44(c)(2)(iv) through (vii) must be calculated using the design drawings or physical dimensions or measured as per the applicable provisions in the test procedures in § 431.106 of this chapter. Calculations to determine storage volume must include all water contained within the water heater from the inlet connection(s) to the outlet connection(s). The storage volume of water contained in the water heater must then be computed in gallons.

* * * * *

■ 23. Amend § 429.134 by adding paragraph (q)(5) to read as follows:

§ 429.134 Product-specific enforcement provisions.

* * * * *

(q) * * *

(5) *Break-in period for refrigeration systems.* DOE will perform a compressor break-in period during assessment or

enforcement testing using a duration specified by the manufacturer, not to exceed 20 hours, only if a break-in period duration is provided in the certification report.

* * * * *

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

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

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 25. Amend § 431.2 by revising the definition of ''Covered equipment'' to read as follows:

§ 431.2 Definitions.

* * * * *

Covered equipment means any commercial heating, ventilating, and air conditioning, and water heating product (HVAC & WH product), as defined in § 431.2; electric motor, as defined in § 431.12; commercial refrigerator, freezer, or refrigerator-freezer, as defined in § 431.62; automatic commercial ice maker, as defined in § 431.132; commercial clothes washer, as defined in § 431.152; fan or blower, as defined in § 431.172; distribution transformer, as defined in § 431.192; illuminated exit sign, as defined in § 431.202; traffic signal module or pedestrian module, as defined in § 431.222; unit heater, as defined in § 431.242; commercial prerinse spray valve, as defined in § 431.262; mercury vapor lamp ballast, as defined in § 431.282; refrigerated bottled or canned beverage vending machine, as defined in § 431.292; walk-in cooler and walk-in freezer, as defined in § 431.302; metal halide ballast and metal halide lamp fixture, as defined in § 431.322; compressor, as defined in § 431.342; small electric motor, as defined in § 431.442; pump, as defined in § 431.462; and dedicated purpose pool pump motor, as defined in § 431.483.

* * * * *

■ 26. Amend § 431.305 by revising paragraphs (a)(1) and (b)(1) to read as follows:

§ 431.305 Walk-in cooler and walk-in freezer labeling requirements.

(a) * * *

(1) *Required information.* The permanent nameplate of a walk-in cooler or walk-in freezer panel for which standards are prescribed in § 431.306 must be marked clearly with the following information:

(i) The panel brand or manufacturer;

(ii) The date of manufacture; and

(iii) One of the following statements, as appropriate:

(A) ''This panel is designed and certified for use in walk-in cooler applications.''

(B) ''This panel is designed and certified for use in walk-in freezer applications.''

(C) ''This panel is designed and certified for use in walk-in cooler and walk-in freezer applications.''

* * * * *

(b) * * *

(1) *Required information.* The permanent nameplate of a walk-in cooler or walk-in freezer door for which standards are prescribed in § 431.306 must be marked clearly with the following information:

(i) The door brand or manufacturer;

(ii) For non-display doors manufactured with foam insulation, the date of manufacture; and

(iii) One of the following statements, as appropriate:

(A) ''This door is designed and certified for use in walk-in cooler applications.''

(B) ''This door is designed and certified for use in walk-in freezer applications.''

(C) ''This door is designed and certified for use in walk-in cooler and walk-in freezer applications.''

* * * * *

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