



**DEPARTMENT OF ENERGY**

**10 CFR Part 429**

**[Docket No. EERE-2013-BT-NOC-0023]**

**RIN: 1904-AD12**

**Energy Conservation Program: Certification of Commercial Heating, Ventilation, and Air-conditioning (HVAC), Water Heating (WH), and Refrigeration (CRE) Equipment**

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

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The U.S. Department of Energy is proposing to revise and expand its existing regulations governing certifying compliance with the applicable energy conservation standards and the reporting of related ratings for commercial heating, ventilating, air-conditioning, water heating, and refrigeration equipment covered by EPCA.

**DATES:** DOE will accept comments, data, and information regarding this notice of proposed rulemaking (NOPR) no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. See section V, “Public Participation,” of this NOPR for details.

In compliance with the Paperwork Reduction Act, DOE is also seeking comment on a revised information collection. See the Paperwork Reduction Act section under Procedural Issues and Regulatory Review below. Please submit all comments relating to information collection requirements to DOE at the address listed in the **ADDRESSES** section on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Comments to OMB are most useful if submitted within 30 days of publication.

**ADDRESSES:** Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at <http://www.regulations.gov>. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE-2013-BT-NOC-0023, by any of the following methods:

- E-mail: to [ASRACworkgroup2013NOC0023@ee.doe.gov](mailto:ASRACworkgroup2013NOC0023@ee.doe.gov). Include EERE-2013-BT-NOC-0023 in the subject line of the message.
- Mail: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, Revisions to Energy Efficiency Enforcement Regulations, EERE-2013-BT-NOC-0023, 1000 Independence Avenue, SW., Washington, DC 20585-0121.  
Phone: (202) 586-2945. Please submit one signed paper original.
- Hand Delivery/Courier: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 6th Floor, 950 L'Enfant Plaza, SW., Washington, DC 20024.  
Phone: (202) 586-2945. Please submit one signed paper original.

Instructions: All submissions received must include the agency name and docket number or RIN for this rulemaking.

Docket: For access to the docket to read background documents, or comments received, go to the Federal eRulemaking Portal at <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:**

Ms. Ashley Armstrong, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE-2J, 1000 Independence Avenue, SW., Washington, DC 20585-0121. E-mail: [Ashley.Armstrong@ee.doe.gov](mailto:Ashley.Armstrong@ee.doe.gov). Phone: 202-586-6590; and Ms. Laura Barhydt, U.S. Department of Energy, Office of the General Counsel, Forrestal Building, GC-32, 1000 Independence Avenue, SW, Washington, DC 20585. E-mail: [Laura.Barhydt@hq.doe.gov](mailto:Laura.Barhydt@hq.doe.gov) Phone: 202-287-5772.

**SUPPLEMENTARY INFORMATION:**

- I. Authority and Background
- II. Discussion of Specific Revisions to DOE’s Certification Regulations
  - Engineered-to-Order Equipment
  - General Certification Information Applicable to All Basic Models of Commercial HVAC, WH, and Refrigeration Equipment
  - Equipment Specific Certification Information
- III. Procedural Issues and Regulatory Review
- IV. Public Participation
- V. Approval of the Office of the Secretary

**I. Authority and Background**

**Authority**

Title III of the Energy Policy and Conservation Act of 1975, as amended (“EPCA” or, in context, “the Act”) sets forth a variety of provisions designed to improve energy efficiency. Part A of Title III (42 U.S.C. 6291–6309) provides for the Energy Conservation Program for

Consumer Products Other Than Automobiles. The National Energy Conservation Policy Act (NECPA), Pub. L. 95-619, amended EPCA to establish an energy conservation program for certain industrial equipment. (42 U.S.C. 6311–6317)<sup>1</sup> The Department of Energy (“DOE”) is charged with implementing these provisions.

Under EPCA, this program consists essentially of four parts: (1) testing; (2) labeling; (3) Federal energy conservation standards; and (4) certification and enforcement procedures. The Federal Trade Commission (FTC) is primarily responsible for labeling of consumer products, while DOE implements the remainder of the program. The testing requirements consist of test procedures that manufacturers of covered products and equipment must use (1) as the basis for certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA, and (2) for making representations about the efficiency of those products and equipment. Similarly, DOE must use these test requirements to determine whether the products comply with any relevant standards promulgated under EPCA. For certain consumer products and commercial equipment, DOE’s existing testing regulations allow the use of an alternative efficiency determination method (AEDM) or an alternative rating method (ARM), in lieu of actual testing, to simulate the energy consumption or efficiency of certain basic models of covered products and equipment under DOE’s test procedure conditions.

In addition, sections 6299-6305, and 6316 of EPCA authorize DOE to enforce compliance with the energy and water conservation standards (all non-product specific

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<sup>1</sup> For editorial reasons, Parts B (consumer products) and C (commercial equipment) of Title III of EPCA were re-designated as parts A and A-1, respectively, in the United States Code.

references herein referring to energy use and consumption include water use and consumption; all references to energy efficiency include water efficiency) established for certain consumer products and industrial equipment. (42 U.S.C. 6299-6305 (consumer products), 6316 (industrial equipment)) DOE has promulgated enforcement regulations that include specific certification and compliance requirements. *See* 10 CFR part 429; 10 CFR part 431, subparts B, U, and V.

## **Background**

On March 7, 2011, DOE published a final rule in the Federal Register that, among other things, modified the requirements regarding manufacturer submission of compliance statements and certification reports to DOE (hereafter referred to as the March 2011 Final Rule). 76 FR 12422. This rule, among other things, imposed new or revised reporting requirements for some types of covered products and equipment, including a requirement that manufacturers submit annual reports to the Department certifying compliance of their basic models with applicable standards. *See* 76 FR at 12428–12429 for more information.

In response to the initial deadline for certifying compliance imposed by the March 2011 Final Rule, certain manufacturers of particular types of commercial and industrial equipment (including manufacturers of commercial heating, ventilation, and air conditioning (HVAC) equipment, commercial water heating (WH) equipment, and commercial refrigeration equipment (CRE)) stated that, for a variety of reasons, they would be unable to meet that deadline. In response, DOE initially extended the deadline for certifications for commercial HVAC, WH, and refrigeration equipment in a final rule published June 30, 2011 (hereafter referred to as the June 2011 Final Rule). 76 FR 38287 (June 30, 2011). DOE subsequently extended the compliance

date for certification by an additional 12 months to December 31, 2013, for these types of equipment (December 2012 Final Rule) to allow, among other things, the Department to explore the negotiated rulemaking process for this equipment. 77 FR 72763.

In the summer of 2012, DOE had an independent convener evaluate the feasibility of developing certification requirements for commercial HVAC, WH, and refrigeration equipment (not including walk-in coolers and freezers) through consensus-based negotiations among affected parties. In October 2012, the convener issued his report after completing confidential interviews of forty (40) parties from a wide range of commercial HVAC, WH, and refrigeration equipment interests. The convener found the interviewed parties believed negotiated rulemaking was superior to notice and comment rulemaking for certification-related issues. Because of this, the convener found that a negotiated rulemaking would have a reasonable likelihood of achieving consensus based on the factors set forth in the Negotiated Rulemaking Act. The entire report is available at

[https://www1.eere.energy.gov/buildings/appliance\\_standards/pdfs/convening\\_report\\_hvac\\_cre\\_1.pdf](https://www1.eere.energy.gov/buildings/appliance_standards/pdfs/convening_report_hvac_cre_1.pdf).

On February 26, 2013, members of the Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) unanimously decided to form a working group to engage in a negotiated rulemaking effort on the certification of commercial HVAC equipment (10 CFR part 431, subparts D, E and F), WH equipment (10 CFR part 431, subpart G), and refrigeration equipment (10 CFR part 431, subpart C). A notice of intent to form the Commercial Certification Working Group was published in the Federal Register on March 12, 2013, to which DOE

received 35 nominations. 78 FR 15653. On April 16, 2013, the Department published a notice of open meeting that announced the first meeting and listed the 22 nominations that were selected to serve as members of the Working Group, in addition to two members from ASRAC, and one DOE representative. 78 FR 22431. The members of the Working Group were selected to ensure a broad and balanced array of stakeholder interests and expertise, and included efficiency advocates, manufacturers, a utility representative, and third party laboratory representatives.

As required, the Working Group submitted an interim report to ASRAC on June 26, 2013, summarizing the group's recommendations regarding AEDMs for commercial HVAC, WH, and refrigeration equipment. The interim report to ASRAC can be found at <http://www.regulations.gov/#!documentDetail;D=EERE-2013-BT-NOC-0023-0046>. ASRAC subsequently voted unanimously to approve the recommendations in the interim report for AEDMs. Subsequently, the Working Group submitted a final report on August 30, 2013, summarizing the Working Group's recommendations for model grouping, certification requirements and deadlines, and features to be excluded from certification, verification, and enforcement testing as long as specific conditions were met. ASRAC voted unanimously to approve the recommendations in the final report. DOE proposed to adopt the Working Group's recommendations, without modification, for AEDMs, basic model definitions, and the initial compliance date for certification in a notice published on October 22, 2013. 78 FR 62472. In this notice of proposed rulemaking, DOE is proposing to adopt without modification the remaining recommendations for certification requirements from the Working Group. DOE still intends to issue separate rulemaking or guidance documents regarding the treatment of specific features when testing.

## **II. Discussion of Specific Revisions to DOE's Certification Regulations**

The Commercial Certification Working Group held nine full meetings in Washington, DC, between April 30, 2013 and August 28, 2013. These meetings were attended by 57 interested parties, including members of the Working Group. Table II.1 lists the entities that attended the Commercial Certification Working Group meetings and their affiliation. The Working Group's recommendations regarding certification are presented in this notice of proposed rulemaking. A more detailed discussion of the recommendations can be found in the Commercial Certification Working Group meeting transcripts, which are located here:

<http://www.regulations.gov/#!docketDetail;D=EERE-2013-BT-NOC-0023>

**Table II.1: Interested Parties**

<b>Name</b>	<b>Acronym</b>	<b>Organization Type</b>
AAON, Inc.	AAON	Manufacturer
Air-Conditioning, Heating, and Refrigeration Institute	AHRI	Trade Association
Allied Air Enterprises	Allied Air	Manufacturer
American Council for an Energy-Efficient Economy	ACEEE	Energy Efficiency Advocacy Group
American Society of Heating, Refrigerating and Air-conditioning Engineers	ASHRAE	Trade Association
Bard Manufacturing Company Inc.	Bard	Manufacturer
Bosch Thermotechnology Corp.	Bosch	Manufacturer
Bradford White Corporation	Bradford White	Manufacturer
California Energy Commission	CEC	California State Government Agency
Cleaver-Brooks		Manufacturer
ClimateMaster Inc.	ClimateMaster	Manufacturer
Continental Refrigerator		Manufacturer
CSA Group	CSA	Third-party laboratory
Daikin McQuay		Manufacturer
EarthJustice		Energy Efficiency Advocacy Group
Edison Electric Institute	EEI	Energy Efficiency Advocacy Group
Emerson Climate Technologies	Emerson	Component Manufacturer
Estes Heating & Air Conditioning, Inc.	Estes	Distributor
General Electric Company	GE	Manufacturer
Goodman Global, Inc.	Goodman	Manufacturer
Heat Transfer Products	HTP	Manufacturer
Hillphoenix	Hillphoenix	Manufacturer
Hoshizaki America, Inc.	Hoshizaki	Manufacturer
Hussmann Corporation	Hussmann	Manufacturer
Intertek.	Intertek	Third-party laboratory
Johnson Controls Inc	JCI	Manufacturer
Lennox International, Inc.	Lennox	Manufacturer
Lochinvar, LLC	Lochinvar	Manufacturer
Mississippi College School of Law		Law School
McDermott Will & Emery		Law Firm
Mitsubishi Electric US, Inc.	MEUS	Manufacturer
National Comfort Products	NCP	Manufacturer
National Electric Manufacturers Association	NEMA	Trade Association
National Refrigeration and Air-Conditioning	National	Manufacturer
Norlake Inc	Norlake	Manufacturer
Northwest Energy Efficiency Alliance	NEEA	Energy Efficiency Advocacy Group
Natural Resources Canada	NRCan	Canadian Government Agency
Manitowoc Foodservice	Manitowoc	Manufacturer

P2S Engineering, Inc.	P2S	Consulting Firm
Pacific Gas and Electric Company	PG&E	Utility
PVI Industries Inc.	PVI	Manufacturer
Regal-Beloit Corporation	Regal-Beloit	Manufacturer
Rheem Manufacturing Company	Rheem	Manufacturer
Saudi Diyar Consultants	Diyar	Engineering Design Firm
Schneider Electric SA	Schneider Electric	Consulting Firm
San Francisco Department of the Environment	SF Environment	California State Government Agency
SJI Consultants Inc.	SJI	Consulting firm
Southern California Gas Company	SoCal Gas	Utility
Source Energy		Consulting Firm
Southern Store Fixtures		Manufacturer
Trane		Manufacturer
Traulsen	Traulsen	Manufacturer
True Manufacturing Co. Inc.	True Manufacturing	Manufacturer
Underwriters Laboratories LLC	UL	Third-party laboratory
United CoolAir Corporation	United CoolAir	Manufacturer
United Technologies Climate, Controls & Security and ITS Carrier	UTC/Carrier	Manufacturer
Zero Zone Inc.	Zero Zone	Manufacturer

### **Engineered-to-Order Equipment**

The Working Group recommended that a new concept, “engineered-to-order equipment,” be added to DOE’s certification regulations. The Working Group recommended that this concept be applied to a basic model that is not listed in any catalogs or marketing literature and is designed and built to customer requirements. An engineered-to-order basic model does not include any models offered as a “configure-to-order” or “menu-system” set of options<sup>2</sup>.

Additionally, the Working Group determined that a basic model may not be classified as engineered-to-order for more than one annual certification cycle, effectively meaning that the

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<sup>2</sup> The Working Group recommended the new concept to distinguish between models that are built to customer specifications from a list of options offered by the manufacturer (e.g., “configure-to-order”) and models that are built to customer specifications that are completely unique, require original engineering design work, and are not built from options the manufacturer offers for sale (i.e., “engineered-to-order”).

basic model cannot be classified as engineer-to-order for more than 24 months. If the manufacturer does not recertify the engineered-to-order product as a typical basic model by the second annual certification deadline then the manufacturer is effectively certifying that the model has been discontinued. In that case, DOE would automatically treat the basic model as discontinued.<sup>3</sup> DOE proposes to adopt the engineered- to-order concept by adding a definition of this term and the associated certification requirements and requests comment on this approach.

### **General Certification Information Applicable to All Basic Models of Commercial HVAC, WH, and Refrigeration Equipment**

The Working Group recommended that manufacturers submit the following general information to DOE in all certification reports.

- Product or equipment type;
- Product or equipment class;
- Manufacturer name and address;
- Private labeler name and address, if applicable;
- Brand name;
- Basic model number;
- Individual model numbers covered by the basic model;
- Customer-specified model numbers, if applicable;

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<sup>3</sup> In all other circumstances, the manufacturer must affirmatively certify that a basic model has been discontinued as required by 10 CFR 429.12(f). Because engineered-to-order basic models are, by design, unlikely to be distributed more than once, the manufacturer would not be required to submit a certification report discontinuing an engineered-to-order basic model.

- Status (new certification, discontinued, existing, etc.);
- Test sample size (“0” if an AEDM was used);
- U.S. Customs and Border Protection (CBP) importer ID number, if applicable;
- Whether the certification was based on test procedure waiver and the date of such waiver;
- Whether the certification was based on exception relief from the Office of Hearings and Appeals and the date of such relief; and
- AEDM name or identifier, if the test sample size is “0.”

The only items listed above that manufacturers are not currently required to provide DOE in accordance with 10 CFR 429.12 are customer-specified model numbers and the name of the AEDM used.

Additionally, the Working Group recommended that only the information specified below be publicly posted on DOE’s web site. Accordingly, DOE is proposing to revise 10 CFR 429.7(a) to include these items as “not exempt from public disclosure.”

- Product or equipment type;
- Product or equipment class
- Private labeler name
- Brand name
- Individual model numbers covered by the basic model
- Whether the certification was based on test procedure waiver and the date of such waiver;  
and

- Whether the certification was based on exception relief from the Office of Hearings and Appeals and the date of such relief

During the Working Group discussions, manufacturers of commercial refrigeration equipment inquired about what “equipment classes” there are for commercial refrigeration equipment. DOE provides templates for certification reports that provide the current list of equipment classes, which correspond to the classes described in the relevant regulatory text promulgating standards for each piece of equipment. See, e.g., the Product Description tab of the Commercial Refrigeration Equipment templates available at <https://www.regulations.doe.gov/ccms/templates> and 10 CFR 431.66. DOE reviews the current equipment classes each time it analyses amended standards for equipment, so the list of equipment classes may change if amended standards are adopted by the Department.

As stated above, DOE is proposing that commercial HVAC, WH and refrigeration equipment manufacturers provide customer-specified model numbers and the name of the AEDM used in addition to the other current reporting requirements found within 10 CFR 429.12(b). The Working Group used the term “customer-specified model number” to describe an individual model number that is specified by a customer in lieu of the manufacturer’s normal model numbering system. This “customer-specified model number” often includes the customer’s name or brand name, and thus may reveal confidential business information about company relationships. Therefore, in the proposed regulatory text, DOE is proposing to call this “customer-specified model number” a “private model number” to differentiate it from a manufacturer’s individual model number, which is considered public information.

The Working Group also recommended significant changes to the AEDM provisions applicable to commercial HVAC, WH and refrigeration equipment. DOE addressed those recommendations in a separate rulemaking. See 78 FR 79579 (Dec. 31, 2013). As part of those recommendations, the Working Group developed the concept of having multiple, unique AEDMs. Because certain verification provisions are tied to which basic models are part of an AEDM, the Working Group recommended that manufacturers use a name or other identifier to designate which basic models were rated using which AEDM. The Working Group recommended that a manufacturer include that AEDM name/identifier as part of the certification of a basic model that was rated using the AEDM. DOE is proposing to require the AEDM name or identifier as part of the certification of a basic model where the basic model was rated using an AEDM.

The Working Group also recommended that certification reports for these types of equipment identify whether the basic model was engineered-to-order. The Working Group further recommended that DOE modify the language regarding sample size in 429.12(b)(8) to indicate that models certified with performance data based upon an AEDM should indicate the sample size is “0”. DOE proposes to adopt these modifications and requests comment on the proposed changes to the certification requirements applicable to all of these equipment types.

DOE requires manufacturers to certify to DOE, prior to distribution in commerce, the compliance of each basic model subject to an applicable energy conservation standard set forth in 10 CFR 430 or 10 CFR 431 before distribution in commerce. The Working Group made

several recommendations regarding when manufacturers should be required to submit a certification report to DOE based on the specific circumstances regarding manufacturing of commercial HVAC, WH, and refrigeration equipment. For domestically manufactured, engineered-to-order products, the Working Group recommended that DOE consider distribution in commerce to begin on the date on which the basic model is shipped. For all other domestic products, it recommended that DOE consider distribution in commerce to begin on the date on which a manufacturer is first willing to accept an order. For engineered-to-order products built outside of the U.S., the Working Group recommended that DOE consider distribution in commerce to begin on the date on which the basic model is imported. For all other foreign manufactured products, it recommended that DOE consider distribution in commerce to begin on either the date on which a basic model is imported for sale or the date on which a manufacturer is willing to accept an order, whichever is first. DOE is proposing to adopt these interpretations for the limited purposes of determining by what date certification reports must be submitted to the Department for commercial HVAC, WH and refrigeration equipment.

### **Equipment Specific Certification Information**

DOE proposed in its October 2013 notice regarding the Working Group's recommendations for AEDMs that commercial HVAC, WH, and refrigeration equipment manufacturers may elect to have a manufacturer's representative on-site to witness test set-up before verification testing of up to 10 percent of the manufacturer's certified basic models rated with an AEDM. A manufacturer would indicate its selection of basic models in its certification

report(s). DOE has included this certification requirement in this proposal in the product-specific certification sections.

The Working Group outlined information specific to the commercial HVAC, WH, and refrigeration equipment that should be certified to DOE, listed in Table II.2, Table II.3, Table II.4, and Table II.5. In addition to the product-specific information, the Working Group recommended that manufacturers be permitted to submit a document in PDF format with additional testing instructions that are required to test the equipment according to the applicable DOE test procedure. For instance, the PDF with additional instructions may include the refrigerant charging instructions for a given basic model. As indicated in Table II.4 and II.5, the Working Group determined that the PDF with testing instructions should be optional for some types of equipment but mandatory for others due to the complexities with testing certain basic models and the unique nature associated with certain basic models of custom equipment. For those pieces of HVAC equipment that require submission of additional testing instructions, the Working Group further provided a list of specific information that must be included in those instructions as detailed in Table II.4. DOE proposes to adopt these certification requirements and requests comment on the specific proposals for each equipment type.

For commercial HVAC and refrigeration equipment, the Working Group recommended that certain features should not be subject to testing and, thus, should not be considered in determining the efficiency of a basic model. Models with these special features would only be excluded from testing and certification if the manufacturer offers an otherwise identical model without the feature(s) in the basic model. The Working Group recommended that a manufacturer

identify in the PDF portion of a certification report whether a basic model includes any of these special features. That is, if the manufacturer does not offer an “otherwise identical” model without the feature – and thus the certification is based on testing *with* the feature – the manufacturer must specify in the PDF portion of the certification report which “special” features are included in the basic model’s rating.

**Table II.2: CRE Certification Report Requirements**

<b>Equipment Type</b>	<b>Certification Report Must Include:</b>	<b>Supplemental PDF information:</b>
<ul style="list-style-type: none"> <li>-Self-contained commercial refrigerators and freezer with solid doors</li> <li>-Self-contained commercial refrigerators and freezers with transparent doors</li> <li>- Self-contained commercial refrigerator-freezers with solid doors</li> <li>-Remote condensing commercial refrigerators, freezers, and refrigerator-freezers</li> <li>-Self-contained commercial refrigerators, freezers, and refrigerator-freezers without doors</li> <li>-Commercial ice-cream freezers</li> <li>-Commercial refrigeration equipment with two or more compartments</li> <li>-Service over the counter refrigerators and freezers</li> </ul>	<ul style="list-style-type: none"> <li>-Daily energy consumption (kWh/day)</li> <li>-Chilled or frozen compartment volume (ft<sup>3</sup>), adjusted volume (ft<sup>3</sup>), or Total display area (ft<sup>2</sup>), as applicable</li> <li>-Operating temperature (i.e., the lowest product application temperature)</li> </ul>	<ul style="list-style-type: none"> <li>-Additional testing instructions required</li> <li>-If applicable, must specify which, if any, excluded features are included in basic model.</li> </ul>

**Table II.3: HVAC Certification Report Requirements**

<b>Equipment Type</b>	<b>Certification Reports Must Include:</b>
Commercial Warm Air Furnaces	<ul style="list-style-type: none"> <li>-Thermal efficiency (%)</li> <li>-Maximum rated input capacity (Btu/h)</li> </ul>
Commercial Packaged Boilers	-Combustion efficiency (%) or thermal efficiency (%) as required in 431.87

	-Maximum rated input capacity (Btu/h)
Commercial package air-Cooled, Split and Packaged ACs and HPs less than 65,000 Btu/h cooling capacity (3-Phase)	-Seasonal energy efficiency ratio (Btu/Wh) -Heating seasonal performance factor (Btu/Wh) if applicable -Rated cooling capacity (Btu/h)
Commercial package air-cooled, ACs and HPs greater than or equal to 65,000 Btu/h cooling capacity and evaporatively-cooled, and water cooled ACs and HPs	-Energy efficiency ratio (Btu/Wh) -Coefficient of performance, if applicable -Rated cooling capacity (Btu/h) -Heating type (electric, gas, hydronic, none)
Packaged Terminal ACs	-Energy efficiency ratio (Btu/Wh) -Rated cooling capacity (Btu/h) -Wall sleeve dimensions (in)
Packaged Terminal HPs	-Energy efficiency ratio (Btu/Wh) -Coefficient of performance -Rated cooling capacity (Btu/h) -Wall sleeve dimensions (in)
Single Package Vertical ACs	-Energy efficiency ratio (Btu/Wh) -Rated cooling capacity (Btu/h)
Single Package Vertical HPs	-Energy efficiency ratio (Btu/Wh) -Coefficient of performance -Rated cooling capacity (Btu/h)
Variable Refrigerant Flow Multi-Split ACs and HPs with less than 65,000 Btu/h rated cooling capacity	-Seasonal energy efficiency ratio (Btu/Wh) -Heating seasonal performance factor (Btu/Wh) if applicable -Rated cooling capacity (Btu/h)
Variable Refrigerant Flow Multi-Split AC and HPs with 65,000 Btu/h rated cooling capacity or more	-Energy efficiency ratio (Btu/Wh) -Coefficient of performance, if applicable -Rated cooling capacity (Btu/h) -Heating type (electric, gas, hydronic, none)
Water Source Variable Refrigerant Flow HPs (all rated cooling capacities)	-Energy efficiency ratio (Btu/Wh) -Coefficient of performance -Rated cooling capacity (Btu/h) -Heating type (electric, gas, hydronic, none)
Computer Room ACs	-Net sensible cooling capacity (Btu/h) -Net cooling capacity (Btu/h) -Configuration (upflow/downflow) -Economizer presence (Yes or No) -Condenser medium (air, water, or glycol-cooled) -Sensible coefficient of performance -Rated airflow (SCFM)
Water Source HPs (other than variable refrigerant flow)	-Energy efficiency ratio (Btu/Wh) -Coefficient of performance -Rated cooling capacity (Btu/h) -Heating type (electric, gas, hydronic, none)

**Table II.4: HVAC Requirements for PDF Supplement to Certification Report**

Equipment Type	PDF Supplement to Certification Report
Commercial Warm Air Furnaces	Additional testing instructions optional
Commercial Packaged Boilers	Additional testing instructions optional
Air-Cooled, Split and Packaged ACs and HPs less than 65,000 Btu/h Cooling Capacity (3-Phase)	Additional testing instructions are required and must include: -Nominal cooling capacity (Btu/h)

	<ul style="list-style-type: none"> <li>-Rated heating capacity (Btu/h), if applicable</li> <li>-Rated airflow (SCFM) for each fan coil</li> <li>-Rated static pressure (inches of water)</li> <li>-Refrigeration charging instructions (e.g., refrigerant charge, superheat, and/or subcooling temperatures)</li> <li>- Frequency or control set points for variable speed components (e.g., compressors, VFDs)</li> <li>-Required dip switch/control setting for step or variable components</li> <li>-Statement whether model will operate at test conditions without manufacturer programming</li> <li>-</li> <li>Supplemental information must also include: <ul style="list-style-type: none"> <li>-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 used to determine the certified rating</li> <li>-Which, if any, special features were included in rating the basic model</li> </ul> </li> </ul>
<p>Commercial package air-cooled ACs and HPs with 65,000 Btu/h Cooling Capacity or More, Evaporatively-Cooled ACs and HPs, and Water-Cooled ACs and HPs</p>	<p>Additional testing instructions are required and must include:</p> <ul style="list-style-type: none"> <li>-Nominal cooling capacity</li> <li>-Rated heating capacity, if applicable</li> <li>-Rated airflow (SCFM) for each fan coil</li> <li>-Water flow rate (gpm) for water-cooled units only</li> <li>-Rated static pressure</li> <li>- Refrigeration charging instructions (e.g., refrigerant charge, superheat, and/or subcooling temperatures)</li> <li>- Frequency or control set points for variable speed components (e.g., compressors, VFDs, etc.)</li> <li>-Required dip switch/control setting for step or variable components</li> <li>-Statement whether model will operate at test conditions without manufacturer programming</li> <li>Supplemental information must also include: <ul style="list-style-type: none"> <li>-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 used to determine the certified rating</li> <li>-Which, if any, special features were included in rating the basic model</li> </ul> </li> </ul>
<p>PTACs and PTHPs</p>	<p>Additional testing instructions optional</p>
<p>SPVUs</p>	<p>Additional testing instructions optional;</p>

	<p>Supplemental information must include:</p> <ul style="list-style-type: none"> <li>-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 used to determine the certified rating</li> <li>-Which, if any, special features were included in rating the basic model.</li> </ul>
<p>Variable Refrigerant Flow Multi-Split ACs and HPs less than 65,000 Btu/h Cooling Capacity</p>	<p>Additional testing instructions are required and must include:</p> <ul style="list-style-type: none"> <li>-Nominal cooling capacity (Btu/h)</li> <li>-Rated heating capacity (Btu/h), if applicable</li> <li>- Outdoor unit(s) and indoor units identified in the tested combination</li> <li>-Components needed for heat recovery, if applicable</li> <li>-Rated airflow (SCFM) for each indoor unit</li> <li>-Water flow rate (gpm) for water-cooled units only</li> <li>-Rated static pressure (inches of water)</li> <li>-Compressor frequency set points</li> <li>-Required dip switch/control setting for step or variable components</li> <li>-Statement whether model will operate at test conditions without manufacturer programming</li> </ul> <p>Supplemental information must include:</p> <ul style="list-style-type: none"> <li>-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 used to determine the certified rating</li> <li>-Which, if any, special features were included in rating the basic model</li> </ul> <p>In addition to information provided with a certification report, upon request by DOE, manufacturer must provide a layout of the system set-up for testing including charging instructions consistent with installation manual.</p>
<p>Variable Refrigerant Flow Multi-Split ACs and HPs with 65,000 Btu/h Cooling Capacity or More</p>	<p>Additional testing instructions are required and must include:</p> <ul style="list-style-type: none"> <li>-Nominal cooling capacity (Btu/h)</li> <li>-Rated heating capacity (Btu/h), if applicable</li> <li>-Outdoor unit(s) and indoor units identified in the tested combination</li> <li>-Components needed for heat recovery, if applicable</li> <li>-Rated airflow (SCFM) for each indoor unit</li> <li>-Water flow rate (gpm) for water-cooled units only</li> <li>-Rated static pressure (inches of water)</li> <li>- Frequency or control set points for variable speed components (e.g.,</li> </ul>

	<p>compressors, VFDs, etc.)</p> <ul style="list-style-type: none"> <li>-Required dip switch/control setting for step or variable components</li> <li>-Statement whether model will operate at test conditions without manufacturer programming</li> </ul> <p>Supplemental information must include:</p> <ul style="list-style-type: none"> <li>-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 used to determine the certified rating;</li> <li>-Which, if any, special features were included in rating the basic model</li> </ul> <p>In addition to information provided with a certification report, upon request by DOE, manufacturer must provide a layout of the system set-up for testing including charging instructions consistent with installation manual.</p>
<p>Water Source Variable Refrigerant Flow HPs</p>	<p>Additional testing instructions are required and must include:</p> <ul style="list-style-type: none"> <li>-Nominal cooling capacity (Btu/h)</li> <li>-Rated heating capacity (Btu/h)</li> <li>-Rated airflow (SCFM) for each indoor unit</li> <li>-Water flow rate (gpm)</li> <li>-Rated static pressure (inches of water)</li> <li>- Refrigeration charging instructions (e.g., refrigerant charge, superheat, and/or subcooling temperatures)</li> <li>-Frequency set points for variable speed components (e.g., compressors, VFDs), including the required dip switch/control setting for step or variable components</li> <li>-Statement whether model will operate at test conditions without manufacturer programming</li> </ul> <p>Supplemental information must include:</p> <ul style="list-style-type: none"> <li>-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 used to determine the certified rating-Which, if any, special features were included in rating the basic model</li> </ul> <p>In addition to information provided with a certification report, upon request by DOE, manufacturer must provide a layout of the system set-up for testing including charging instructions consistent with installation manual.</p>
<p>Computer Room ACs</p>	<p>Additional testing instructions optional</p> <p>Supplemental information must include:</p>

	-Which, if any, special features were included in rating the basic model
Water Source HPs	<p>Additional testing instructions are required and must include:</p> <ul style="list-style-type: none"> <li>-Nominal cooling capacity (Btu/h),</li> <li>-Rated heating capacity (Btu/h), if applicable,</li> <li>-Rated airflow (SCFM),</li> <li>-Water flow rate (gpm),</li> <li>-Rated static pressure (inches of water),</li> <li>- Refrigeration charging instructions (e.g., refrigerant charge, superheat, and/or subcooling temperatures),</li> <li>-Frequency set points for variable speed components (e.g., compressors, VFDs, etc.), including the required dip switch/control setting for step or variable components</li> <li>-Statement whether model will operate at test conditions without manufacturer programming,</li> </ul> <p>Supplemental information must include:</p> <ul style="list-style-type: none"> <li>-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 used to determine the certified rating; and</li> <li>-Which, if any, special features were included in rating the basic model.</li> </ul>

**Table II.5: WH Certification Report Requirements**

<b>Equipment Type</b>	<b>Certification Report Must Include:</b>	<b>Additional testing instructions:</b>
Commercial Electric Storage Water Heaters	<ul style="list-style-type: none"> <li>-Maximum standby loss (%/h)</li> <li>-Measured storage volume (gal)</li> </ul>	Optional
Commercial gas-fired and oil-fired storage water heaters	<ul style="list-style-type: none"> <li>-Thermal efficiency (%)</li> <li>-Maximum standby loss (Btu/h)</li> <li>-Rated storage volume (gal)</li> <li>-Nameplate input rate (Btu/h)</li> </ul>	Optional
Commercial water heaters and hot water supply boilers (storage capacity > 140 gal)	<ul style="list-style-type: none"> <li>- Thermal efficiency (%)</li> <li>-Statement whether storage volume is greater than 140 gal (Yes/No)</li> <li>-Statement whether tank surface area is insulated with at least R-12.5 (Yes/No)</li> <li>-Statement whether uses standing pilot light (Yes/No)</li> <li>-For gas or oil-fired water heater, statement whether has a fire damper or</li> </ul>	Optional

	fan assisted combustion (Yes/No) - If “no” to any of the above, must also report standby loss (Btu/h) and measured storage volume (gal)	
Commercial gas-fired and oil-fired instantaneous water heaters less than 10 gallons and gas-fired and oil-fired hot water supply boilers less than 10 gallons	-Thermal efficiency (%) -Rated storage volume (gal)	Optional
Commercial gas-fired and oil-fired instantaneous water heaters greater than or equal to 10 gallons and gas-fired and oil-fired hot water supply boilers greater than or equal to 10 gallons	-Thermal efficiency (%) -Maximum standby loss (Btu/h) -Rated storage volume (gal) -Nameplate input rate (Btu/h)	Optional
Commercial unfired hot water storage tanks	-Thermal insulation (R-value) -Stored water volume (gal)	Optional

Current certification provisions for commercial packaged boilers and commercial warm air furnaces are located in section 429.43. DOE is proposing to move these provisions to sections 429.41 and 429.60, respectively. (Section 429.41, which is currently reserved for electric motors, would be moved to another available section.) This change would reflect that commercial packaged boilers and commercial warm air furnaces are types of equipment for which the regulations are typically amended through separate rulemakings and are located in different subparts of 10 CFR part 431 (subpart D for commercial warm air furnaces and subpart E for commercial packaged boilers) than commercial air conditioning and heat pump equipment (subpart F). DOE is not proposing any changes to the sampling provisions for these products; the modification would only make the structure of part 429 better reflect the structure of the part 431. DOE notes that section 429.43 would continue to provide the certification requirements for the equipment in 10 CFR part 431, subpart F (commercial air conditioners and heat pumps).

In a notice of proposed rulemaking published November 4, 2013, DOE proposed changes to the residential and commercial water heater test procedures. 78 FR 66201. DOE notes that changes to the certification requirements proposed in this rule may be needed, depending on the outcome of that rulemaking. Any changes would be considered in a separate rulemaking.

### **III. Procedural Issues and Regulatory Review**

#### **Review Under Executive Order 12866**

Today's regulatory action is not a "significant regulatory action" under section 3(f) of Executive Order 12866, Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993).

Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB).

#### **Review Under the Regulatory Flexibility Act**

The Regulatory Flexibility Act (5 U.S.C. 601, et seq.) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment, 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 rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website (<http://energy.gov/gc/office-general-counsel>). DOE has prepared the

following IRFA for the products that are the subject of this rulemaking.

For manufacturers of HVAC, WH, and refrigeration equipment, the Small Business Administration (SBA) has set a size threshold, which defines those entities classified as “small businesses” for the purposes of the statute. DOE used the SBA’s small business size standards to determine whether any small entities would be subject to the requirements of the rule. 65 FR 30848 (May 15, 2000), as amended at 65 FR 53533, 53544 (Sept. 5, 2000) and codified at 13 CFR part 121. The size standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at <http://www.sba.gov/category/navigation-structure/contracting/contracting-officials/small-business-size-standards>. Manufacturing of HVAC and commercial refrigeration equipment is classified under NAICS 333415, “Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing.” The SBA sets a threshold of 750 employees or less for an entity to be considered as a small business for this category. Manufacturing of WH equipment is classified under NAICS 333319, “Other Commercial and Service Industry Machinery Manufacturing,” for which SBA also sets a size threshold of 500 employees or fewer for being considered a small business.

1. Description and Estimated Number of Small Entities Regulated

To estimate the number of companies that could be small business manufacturers of equipment covered by this rulemaking, DOE conducted a market survey using publicly available information. DOE’s research involved industry trade association membership directories (including AHRI), information from previous rulemakings, product directories (AHRI

Directory,<sup>4</sup> the California Energy Commission Appliance Efficiency Database<sup>5</sup>), individual company websites, and market research tools (e.g., Dunn and Bradstreet reports<sup>6</sup> and Hoovers reports<sup>7</sup>). DOE used information from these sources to create a list of companies that potentially manufacture commercial HVAC, WH, and refrigeration equipment covered by this rulemaking. DOE screened out companies that do not offer equipment covered by this rulemaking, do not meet the definition of a “small business,” or are foreign owned and operated. Based on these efforts, DOE estimates that there are 5 small business manufacturers of all commercial HVAC equipment, 32 small business manufacturers of commercial refrigeration equipment, and 9 small business manufacturers of commercial WH equipment.

## 2. Description and Estimate of Compliance Requirements

DOE entered into negotiations with commercial HVAC, water heating, and refrigeration equipment manufacturers regarding the types of information to submit when certifying their equipment and when that certification must be made to the Department. The outcomes of the negotiation resulted in slight changes to the information that DOE is proposing to collect for commercial HVAC, WH, and refrigeration equipment. The most notable of these proposals is that DOE has proposed that manufacturers of commercial refrigeration equipment and some types of commercial HVAC equipment must submit a PDF with specific testing instructions to be used by the Department during verification and enforcement testing. Manufacturers of water

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<sup>4</sup> See [www.ahridirectory.org/ahriDirectory/pages/home.aspx](http://www.ahridirectory.org/ahriDirectory/pages/home.aspx).

<sup>5</sup> See <http://www.energy.ca.gov/appliances/>

<sup>6</sup> "D&B | Business Information | Get Credit Reports | 888 480-6007.". Dun & Bradstreet (Available at: [www.dnb.com/](http://www.dnb.com/)) (Last accessed October 10, 2011). See [www.dnb.com/](http://www.dnb.com/).

<sup>7</sup> "Hoovers | Company Information | Industry Information | Lists." D&B (2013) (Available at: See <http://www.hoovers.com/>) (Last accessed December 12, 2012).

heating equipment and some types of commercial HVAC equipment would have the option of submitting a PDF with additional testing instructions at the manufacturer's discretion. The proposals reflect the direct results of the negotiations, without modification. By permitting manufacturers to submit PDFs with additional testing instructions, individual manufacturers will have a mechanism to provide the Department with additional information necessary for testing each basic model.

In general, DOE is proposing to require manufacturers to submit a certification report indicating that all basic models distributed in commerce in the U.S. comply with the applicable standards using DOE's testing procedures, as well as the necessary product specific certification data describing the efficiency and characteristics of the basic model. The certification reports would be submitted for each basic model, either when the requirements go into effect (for models already in distribution), or when the manufacturer begins distribution of a particular basic model, and annually thereafter. Reports must be updated when a new model is introduced or a change affecting energy efficiency or use is made to an existing model resulting in a change in the certified rating.

DOE currently requires manufacturers or their party representatives to prepare and submit certification reports using DOE's electronic Web-based tool, the Compliance and Certification Management System (CCMS), which is the only mechanism for submitting certification reports to DOE. CCMS currently has product specific templates that manufacturers must use when submitting certification data to DOE. See <http://www.regulations.doe.gov/ccms>. This proposed rule would not change the electronic submission requirement for commercial

HVAC, WH, and refrigeration equipment. DOE believes the availability of electronic filing through the CCMS system reduces reporting burdens, streamlines the process, and provides the Department with needed information in a standardized, more accessible form. This electronic filing system also ensures that records are recorded in a permanent, systematic way.

3. Duplication, Overlap, and Conflict with Other Rules and Regulations

DOE is not aware of any rules or regulations that duplicate, overlap, or conflict with the rule being considered today.

#### 4. Significant Alternatives to the Rule

This section considers alternatives to the proposals in today's certification, compliance, and enforcement rulemaking. DOE has tried to minimize the reporting burden as much as possible by: (1) accepting electronic submissions; (2) providing preformatted templates that lay out the certification and compliance requirements for each product; and (3) allowing manufacturers to group individual models into basic models for the purposes of certification to reduce the number of discrete models reported to the Department. DOE also notes that the Working Group included representatives of small businesses and that this proposal reflects the recommendations of that Working Group. DOE has also made efforts to address the concerns of small businesses by expanding the ability of manufacturers to use alternative efficiency determination methods (AEDMs) in lieu of testing equipment. Further, DOE is proposing the certification provisions set forth in this rulemaking as negotiated by the Working Group for all manufacturers of covered products and covered equipment that would be affected by this proposal. DOE seeks input from businesses that would be affected by this rulemaking and will consider comments received in the development of any final rule.

#### **Review Under the Paperwork Reduction Act**

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, et seq.), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. This proposal would mandate that manufacturers and importers of covered commercial HVAC, WH, and refrigeration equipment would need to certify to the Department that the products they are distributing in commerce in the U.S. comply with the applicable energy conservation standards.

In compliance with the PRA, DOE is seeking comment on this proposed expansion of the existing information collection. As noted earlier in the preamble, DOE negotiated these certification requirements with interested parties in an effort to minimize the burden of the reporting requirements, while providing DOE with important information about equipment being sold.

Agency: U.S. Department of Energy (DOE).

OMB Control Number: OMB No. 1910-1400.

Information Collection Request Title: Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recordkeeping for Consumer Products and Commercial/Industrial Equipment subject to Energy or Water Conservation Standards.

Type of Request: Revision and Expansion of an Existing Collection.

Requested Expiration Date of Approval: Three years from the date of approval.

Purpose: Manufacturers of the covered products addressed in today's NOPR will be required to certify to DOE that their equipment comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their equipment according to the applicable DOE test procedures for the given equipment type, including any amendments adopted for those test procedures, or use AEDMs to develop the certified ratings of the basic models. The collection-of-information requirement for the certification proposals is subject to review and approval by OMB under the Paperwork Reduction Act (PRA).

Once compliance with the certification requirements is required, DOE is proposing to require that manufacturers certify: (1) new basic models before distribution in commerce; (2)

existing basic models, whose certified rating remains valid, annually; (3) existing basic models, whose designs have been altered resulting in a change in rating that is more consumptive or less efficient, at the time the design change is made; and (4) previously certified basic models that have been discontinued annually. Respondents may submit reports to the Department at any time during the year using DOE's online system.

The outcomes of the negotiation resulted in slight changes to the information that DOE is proposing to collect for commercial HVAC, WH, and refrigeration equipment. The most notable of these changes is that DOE is proposing that manufacturers of commercial refrigeration equipment and some types of commercial heating, ventilation, and air conditioning (HVAC) equipment must submit a PDF with specific testing instructions to be used by the Department during verification and enforcement testing. Manufacturers of commercial water heating equipment and some types of commercial HVAC equipment have the option of submitting a PDF with additional testing instructions at the manufacturer's discretion. The proposals reflect the direct results of the negotiations, without modification.

DOE estimated that it will take each respondent approximately 30 hours total per company per year to comply with the certification requirements based on 20 hours of technician/technical work and 10 hours clerical work to submit the CCMS templates. For the purposes of estimating burden, DOE assumed that each respondent will submit approximately 10 CCMS templates during the course of the year, which is encompassed by the 30 hours total per company per year estimate. DOE recognizes that a respondent may submit a minimum of 1

report per year, whereas other respondents may submit one weekly. DOE estimates the burden for this rule as follows:

- (1) Annual Estimated Number of Respondents: 100;
- (2) Annual Estimated Number of Total Responses: 1,000;
- (3) Annual Estimated Number of Burden Hours: 30,000 (14 hours for certification reports, compliance statements, and recordkeeping; 16 hours for testing pdfs);
- (4) Annual Estimated Reporting and Recordkeeping Cost Burden: \$300,000.

Comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

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

### **Review Under the National Environmental Policy Act**

DOE has determined that this proposed 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, this proposed rule would adopt changes to the manner in which certain covered equipment would be certified, which would not affect the amount, quality or distribution of energy usage, and, therefore, would not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion A6 under 10 CFR part 1021, subpart D. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

### **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 has examined this proposed rule and has determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of

government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of today's proposed 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.

### **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, the proposed rule meets the relevant standards of Executive Order 12988.

## **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. Pub. L. No. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result 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.gc.doe.gov](http://www.gc.doe.gov). DOE examined today’s proposed 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.

## **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 proposal would 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.

### **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 proposed regulation would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

### **Review Under the Treasury and General Government Appropriations Act, 2001**

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

### **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 proposed 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 proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

Today's proposal to amend the certification requirements for commercial HVAC, WH, and refrigeration equipment 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.

#### **Review Under Section 32 of the Federal Energy Administration Act of 1974**

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

DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition. Today's proposal to amend the certification requirements for all covered consumer products and commercial equipment does not propose the use of any commercial standards.

#### **IV. Public Participation**

##### **Submission of Comments**

DOE will accept comments, data, and information regarding the proposed rule no later than the date provided at the beginning of this notice of proposed rulemaking. Comments, data, and information submitted to DOE's e-mail address for this rulemaking should be provided in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format. Interested parties should avoid the use of special characters or any form of encryption, and wherever possible, comments should include the electronic signature of the author. Absent an electronic signature, comments submitted electronically must be followed and authenticated by submitting a signed original paper document to the address provided at the beginning of this notice of proposed rulemaking. Comments, data, and information submitted to DOE via mail or hand delivery/courier should include one signed original paper copy. No telefacsimiles (faxes) will be accepted.

According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit two copies: one copy of the document including all the information believed to be confidential and one copy of the document with the information believed to be confidential deleted. DOE will make its own

determination as to the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include (1) a description of the items, (2) whether and why such items are customarily treated as confidential within the industry, (3) whether the information is generally known by or available from other sources, (4) whether the information has previously been made available to others without obligation concerning its confidentiality, (5) an explanation of the competitive injury to the submitting person which would result from public disclosure, (6) a date upon which such information might lose its confidential nature due to the passage of time, and (7) why disclosure of the information would be contrary to the public interest.

### **Issues on Which DOE Seeks Comment**

Although DOE welcomes comments on any aspect of this proposal, DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

1) DOE requests comment on the proposal to include “engineered-to-order” as a basic model classification and to limit the use of this classification to ensure that it cannot be used for more than one annual certification cycle. Additionally, DOE requests comment on its proposed definition of “engineered-to-order.”

2) DOE requests comment on its proposal to modify the general certification requirements by adding customer-specified model numbers, an engineered-to-order classification option, and the name of the AEDM used, if applicable, and changing the sample size specified when using an AEDM.

3) DOE requests comment on the specific certification requirements proposed in Table II.2, Table II.3, Table II.4, and Table II.5.

## **V. Approval of the Office of the Secretary**

The Secretary of Energy has approved publication of today's NOPR.

### **List of Subjects in 10 CFR Part 429**

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

Issued in Washington, DC, on February 7, 2014.

Kathleen B. Hogan,  
Deputy Assistant Secretary for Energy Efficiency,  
Energy Efficiency and Renewable Energy.

For the reasons set forth in the preamble, DOE proposes to amend part 429 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations, as set forth below:

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

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

**Authority:** 42 U.S.C. 6291–6317.

2. Section 429.2 is amended by adding, in alphabetical order, the definition for “engineered-to-order” to read as follows:

**§ 429.2 Definitions.**

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Engineered-to-order means a basic model of commercial water heating equipment, commercial packaged boiler, commercial HVAC equipment, or commercial refrigeration equipment that is not listed in any catalogs or marketing literature and is designed and built to specific customer requirements. A unit of an engineered-to-order basic model is not offered as a set of options (e.g., configure-to-order, menu-system).

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3. Section 429.7 is amended by revising paragraph (a), redesignating paragraphs (b) and (c) as paragraphs (c) and (d), respectively, and adding new paragraph (b) to read as follows:

**§429.7 Confidentiality.**

(a) The following records are not exempt from public disclosure: the product or equipment type, the product or equipment class, the private labeler name, the brand name, the applicable model number(s) unless it means the criteria specified in paragraph (b) of this section, the energy or water rating submitted by manufacturers to DOE pursuant to § 429.12(b)(13), whether the certification was based on a test procedure waiver and the date of such waiver, and whether the certification was based on exception relief from the Office of Hearing and Appeals and the date of such relief.

(b) An individual manufacturer model number is public information unless it is:

(1) A unique model number of a commercial packaged boiler, commercial water heating equipment, commercial HVAC equipment or commercial refrigeration equipment that was developed for an individual customer,

(2) Not displayed on product literature, and

(3) The manufacturer treats the model number as confidential business information – in which case, the manufacturer may identify the individual manufacturer model number as a private model number on a certification report submitted pursuant to §429.12(b)(6).

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4. Section 429.12 is amended by revising paragraph (b) to read as follows:

**§ 429.12 General requirements applicable to certification reports.**

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(b) Certification report. A certification report shall include a compliance statement (see paragraph (c) of this section), and for each basic model, the information listed in this paragraph (b).

(1) Product or equipment type;

(2) Product or equipment class (as denoted in the provisions of part 430 or 431 containing the applicable energy conservation standard);

(3) Manufacturer's name and address;

(4) Private labeler's name(s) and address(es) (if applicable);

(5) Brand name;

(6) For each brand, the basic model number and the individual manufacturer model number(s) in that basic model with the following exceptions: For external power supplies that are certified based on design families, the design family model number and the individual manufacturer's model numbers covered by that design family must be submitted for each brand. For walk-in coolers, the basic model number for each brand must be submitted. For distribution transformers, the basic model number or kVA grouping model number (depending on the certification method) for each brand must be submitted. For commercial HVAC, WH, and refrigeration equipment, an individual manufacturer model number may be identified as a "private model number" if it meets the requirements of §429.7(b).

(7) Whether the submission is for a new model, a discontinued model, a correction to a previously submitted model, data on a carryover model, or a model that has been found in violation of a voluntary industry certification program;

(8) The test sample size (i.e., number of units tested for each basic model). Manufacturers must enter "0" if an AEDM was used in lieu of testing;

(9) The certifying party's U.S. Customs and Border Protection (CBP) importer identification numbers assigned by CBP pursuant to 19 CFR 24.5, if applicable;

(10) Whether certification is based upon any waiver of test procedure requirements under § 430.27 or § 431.401 of this chapter and the date of such waiver(s);

(11) Whether certification is based upon any exception relief from an applicable energy conservation standard and the date such relief was issued by DOE's Office of Hearings and Appeals;

(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", "ARM" or "linear interpolation") and the approval date, if applicable, of any such alternate rating, testing, or efficiency determination method. Manufacturers of commercial packaged boilers, commercial water heating equipment, commercial refrigeration equipment and commercial HVAC equipment, must provide the manufacturer's designation (name or other identifier) of the AEDM used; and

(13) Product specific information listed in §§ 429.14 through 429.54.

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5. Revise § 429.41 to read as follows:

**§ 429.41 Commercial warm air furnaces.**

(a) Determination of represented value. Manufacturers must determine the represented value, which includes the certified rating, for each basic model of commercial warm air furnace either by testing, in conjunction with the applicable sampling provisions, or by applying an AEDM.

(1) Units to be tested. (i) If the represented value is determined through testing, the general requirements of § 429.11 are applicable; and

(ii) For each basic model selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(A) Any represented value of energy consumption or other measure of energy use of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(1) 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  $i^{\text{th}}$  sample; Or,

(2) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.95} \left( \frac{s}{\sqrt{n}} \right)$$

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 t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A to subpart B of part 429). And,

(B) Any represented value of energy efficiency 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:

(1) 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  $i^{\text{th}}$  sample; Or,

(2) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{0.95} \left( \frac{s}{\sqrt{n}} \right)$$

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 t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A to subpart B of part 429).

(2) Alternative efficiency determination methods. In lieu of testing, a represented value of efficiency or consumption for a basic model of commercial warm air furnace must be determined through the application of an AEDM pursuant to the requirements of § 429.70 and the provisions of this section, where:

(i) Any represented value of energy consumption or other measure of energy use of a basic model for which consumers would favor lower values shall be greater than or equal to the output of the AEDM and less than or equal to the Federal standard for that basic model; and

(ii) Any represented value of energy efficiency 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 output of the AEDM and greater than or equal to the Federal standard for that basic model.

(b) Certification reports. (1) The requirements of § 429.12 are applicable to commercial warm air furnaces; and

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public, product-specific information: the thermal efficiency in percent (%), and the maximum rated input capacity in British thermal units per hour (Btu/h).

(3) Pursuant to § 429.12(b)(13), a certification report must include the following additional product-specific information:

(i) Whether the basic model is engineered-to-order; and

(ii) For any basic model rated with an AEDM, whether the manufacturer elects the witness test option for verification testing. (See § 429.70(c)(5)(iii) for options). However, the manufacturer may not select more than 10% of AEDM-rated basic models.

(4) Pursuant to § 429.12(b)(13), a certification report may include supplemental testing instructions in PDF format. A manufacturer may also include with a certification report other supplementary items in PDF format (e.g., manuals) for DOE consideration in performing testing under subpart C of this part.

6. Section 429.42 is amended by:

- a. Removing “can” from paragraph (a) introductory text and adding “must” in its place; and
- b. Revising paragraph (b) to read as follows:

**§ 429.42 Commercial refrigerators, freezers, and refrigerator-freezers.**

\* \* \* \* \*

(b) Certification reports. (1) The requirements of § 429.12 are applicable to commercial refrigerators, freezers, and refrigerator-freezers; and

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public, product-specific information:

(i) The daily energy consumption in kilowatt hours per day (kWh/day);

(ii) The rating temperature (e.g. lowest product application temperature, if applicable) in degrees Fahrenheit (°F); and

(iii) The chilled or frozen compartment volume in cubic feet (ft<sup>3</sup>), the adjusted volume in cubic feet (ft<sup>3</sup>), or the total display area (TDA) in feet squared (ft<sup>2</sup>) (as appropriate for the equipment class).

(3) Pursuant to § 429.12(b)(13), a certification report must include the following additional, product-specific information:

(i) Whether the basic model is engineered-to-order; and

(ii) For any basic model rated with an AEDM, whether the manufacturer elects the witness test option for verification testing. (See § 429.70(c)(5)(iii) for options). However, the manufacturer may not select more than 10% of AEDM-rated basic models.

(4) Pursuant to § 429.12(b)(13), a certification report must include supplemental information submitted in PDF format. The product-specific, supplemental information must include testing instructions (e.g., charging instructions); and which, if any, special features were included in rating the basic model. A manufacturer may also include with a certification report other supplementary items in PDF format (e.g., manuals) for DOE consideration in performing testing under subpart C of this part.

7. Section 429.43 is amended by:

- a. Removing “can” from paragraph (a) introductory text and adding “must” in its place; and
- b. Revising paragraph (b) to read as follows:

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

\* \* \* \* \*

(b) Certification reports. (1) The requirements of § 429.12 are applicable to commercial HVAC equipment; and

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public product-specific information:

(i) Commercial package air-conditioning and heating equipment (except commercial package air conditioning and heating equipment that is air-cooled with a cooling capacity less than 65,000 Btu/h): the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the coefficient of performance (COP) (as applicable), the rated cooling capacity in British thermal units per hour (Btu/h), and the type(s) of heating used by the basic model (e.g., electric, gas, hydronic, none).

(ii) Commercial package air conditioning and heating equipment that is air-cooled with a cooling capacity less than 65,000 Btu/h (3-Phase): 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)) (as applicable), and the rated cooling capacity in British thermal units per hour (Btu/h).

(iii) Package terminal air conditioners: The energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the rated cooling capacity in British thermal units per hour (Btu/h), and the wall sleeve dimensions in inches (in).

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

(v) Single package vertical air conditioners: 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).

(vi) Single package vertical heat pumps: the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the coefficient of performance (COP), and the rated cooling capacity in British thermal units per hour (Btu/h).

(vii) Variable refrigerant flow multi-split air conditioners and heat pumps with rated cooling capacity less than 65,000 Btu/h: 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)) (as applicable), and rated cooling capacity in British thermal units per hour (Btu/h).

(viii) Variable refrigerant flow multi-split air conditioners and heat pumps with rated cooling capacity greater than or equal to 65,000 Btu/h: the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the coefficient of performance (COP) (as applicable), rated cooling capacity in British thermal units per hour (Btu/h), and the type(s) of heating used by the basic model (e.g., electric, gas, hydronic, none).

(ix) Water source variable refrigerant flow heat pumps (all rated cooling capacities): the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the coefficient of performance (COP), rated cooling capacity in British thermal units per hour (Btu/h), and the type(s) of heating used by the basic model (e.g., electric, gas, hydronic, none).

(x) Computer room air-conditioners: 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).

(xi) Water source heat pumps (other than variable refrigerant flow): the energy efficiency ratio (EER in British thermal units per Watt-hour (Btu/Wh)), the coefficient of performance (COP), the rated cooling capacity in British thermal units per hour (Btu/h), and the type(s) of heating used by the basic model (e.g., electric, gas, hydronic, none).

(3) Pursuant to § 429.12(b)(13), a certification report must include the following additional product-specific information:

(i) Whether the basic model is engineered-to-order; and

(ii) For any basic model rated with an AEDM, whether the manufacturer elects the witness test option for verification testing. (See § 429.70(c)(5)(iii) for options). However, the manufacturer may not select more than 10% of AEDM-rated basic models.

(4) Pursuant to § 429.12(b)(13), a certification report must include supplemental information submitted in PDF format. A manufacturer may also include with a certification report other supplementary items in PDF format (e.g., manuals) for DOE consideration in performing testing under subpart C of this part. The product-specific, supplemental information must include at least the following:

(i) Commercial package air-conditioning and heating equipment (except commercial package air conditioning and heating equipment that is air-cooled with a cooling capacity less than 65,000 Btu/h): the nominal cooling capacity in British thermal units per hour (Btu/h); rated heating capacity in British thermal units per hour (Btu/h), if applicable; rated airflow in standard cubic feet per minute (SCFM) for each fan coil; water flow rate in gallons per minute (gpm) for water cooled units only; rated 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; 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.

(ii) Commercial package air conditioning and heating equipment that is air-cooled with a cooling capacity 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), if applicable; rated airflow in standard cubic feet per minute (SCFM) for each fan coil; rated 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; 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.

(iii) Variable refrigerant flow multi-split air conditioners and heat pumps with cooling capacity less than 65,000 Btu/h: the nominal cooling capacity in British thermal units per hour (Btu/h); rated heating capacity in British thermal units per hour (Btu/h), if applicable; outdoor unit(s) and indoor units identified in the tested combination; components needed for heat recovery, if applicable; rated airflow in standard cubic feet per minute (SCFM) for each indoor unit; water flow rate in gallons per minute (gpm) for water-cooled units only; rated static pressure in inches of water; compressor frequency set points; required dip switch/control settings

for step or variable components; 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, upon DOE request, the manufacturer must provide a layout of the system set-up for testing including charging instructions consistent with the installation manual.

(iv) Variable refrigerant flow multi-split air conditioners and heat pumps with cooling capacity greater than or equal to 65,000 Btu/h: the nominal cooling capacity in British thermal units per hour (Btu/h); rated heating capacity in British thermal units per hour (Btu/h), if applicable; outdoor unit(s) and indoor units identified in the tested combination; components needed for heat recovery, if applicable; rated airflow in standard cubic feet per minute (SCFM) for each indoor unit; water flow rate in gallons per minute (gpm) for water-cooled units only; rated static pressure in inches of water; compressor frequency set points; required dip switch/control settings for step or variable components; 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,

upon DOE request, the manufacturer must provide a layout of the system set-up for testing including charging instructions consistent with the installation manual.

(v) Water source variable refrigerant flow heat pumps: 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 indoor unit; water flow rate in gallons per minute (gpm); rated static pressure in inches of water; refrigeration charging instructions (e.g., refrigerant charge, superheat and/or subcooling temperatures); frequency set points for variable speed components (e.g., compressors, VFDs), including the required dip switch/control settings for step or variable components; 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, upon DOE request, the manufacturer must provide a layout of the system set-up for testing including charging instructions consistent with installation manual.

(vi) Water source heat pumps: 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 indoor unit; water flow rate in gallons per minute (gpm); rated static pressure in inches of water; refrigerant charging instructions, (e.g., refrigerant charge, superheat and/or subcooling temperatures); frequency set points for variable speed components (e.g., compressors, VFDs), including the required dip switch/control settings

for step or variable components; 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.

(vii) Single package vertical air conditioners and single package vertical heat pumps: 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.

(viii) Computer room air-conditioners: any additional testing instructions, if applicable; and which, if any, special features were included in rating the basic model.

(ix) Package terminal air conditioners and package terminal heat pumps: any additional testing instructions, if applicable.

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8. Section 429.44 is amended by:

- a. Removing "can" in paragraph (a) introductory text and adding "must" in its place; and
- b. Revising paragraph (b) to read as follows:

**§ 429.44 Commercial water heating equipment.**

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(b) Certification reports. (1) The requirements of § 429.12 are applicable to commercial WH equipment; and

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public product-specific information:

(i) Commercial electric storage water heaters: the maximum standby loss in percent per hour (%/hr) and the measured storage volume in gallons (gal).

(ii) Commercial gas-fired and oil-fired storage water heaters: the thermal efficiency in percent (%), the maximum standby loss in British thermal units per hour (Btu/h), the rated storage volume in gallons (gal), and the nameplate input rate in British thermal units per hour (Btu/h).

(iii) Commercial water heaters and hot water supply boilers with storage capacity greater than 140 gallons: the thermal efficiency in percent (%), whether the 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); for gas or oil-fired water heaters, whether the basic model has a fire damper or fan assisted combustion (Yes/No); and, if applicable pursuant to 10 CFR 431.110, maximum standby loss in British thermal units per hour (Btu/h) and measured storage volume in gallons (gal).

(iv) Commercial gas-fired and oil-fired instantaneous water heaters greater than or equal to 10 gallons and gas-fired and oil-fired hot water supply boilers greater than or equal to 10 gallons: the thermal efficiency in percent (%), the maximum standby loss in British thermal units per hour (Btu/h), the rated storage volume in gallons (gal), and the nameplate input rate in Btu/h.

(v) Commercial gas-fired and oil-fired instantaneous water heaters less than 10 gallons and gas-fired and oil-fired hot water supply boilers less than 10 gallons: the thermal efficiency in percent (%) and the rated storage volume in gallons (g).

(vi) Commercial unfired hot water storage tanks: the thermal insulation (i.e., R-value) and stored volume in gallons (gal).

(3) Pursuant to § 429.12(b)(13), a certification report must include the following additional, product-specific information:

(i) Whether the basic model is engineered-to-order; and

(ii) For any basic model rated with an AEDM, whether the manufacturer elects the witness test option for verification testing. (See § 429.70(c)(5)(iii) for options). However, the manufacturer may not select more than 10% of AEDM-rated basic models.

(4) Pursuant to § 429.12(b)(13), a certification report may include supplemental testing instructions in PDF format. A manufacturer may also include with a certification report other supplementary items in PDF format (e.g., manuals) for DOE consideration in performing testing under subpart C of this part.

\* \* \* \* \*

9. Add § 429.60 to read as follows:

**§ 429.60 Commercial packaged boilers.**

(a) Determination of represented value. Manufacturers must determine the represented value, which includes the certified rating, for each basic model of commercial packaged boilers either by testing, in conjunction with the applicable sampling provisions, or by applying an AEDM.

(1) Units to be tested. (i) If the represented value is determined through testing, the general requirements of § 429.11 are applicable; and

(ii) For each basic model selected for testing, a sample of sufficient size shall be randomly selected and tested to ensure that—

(A) Any represented value of energy consumption or other measure of energy use of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

(1) 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  $i^{\text{th}}$  sample; Or,

(2) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, 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 t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A to subpart B of part 429). And,

(B) Any represented value of energy efficiency 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:

(1) 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  $i^{\text{th}}$  sample; Or,

(2) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{0.95} \left( \frac{s}{\sqrt{n}} \right)$$

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 t statistic for a 95% one-tailed confidence interval with n-1 degrees of freedom (from Appendix A to subpart B of part 429).

(2) Alternative efficiency determination methods. In lieu of testing, a represented value of efficiency or consumption for a basic model of commercial packaged boiler must be determined through the application of an AEDM pursuant to the requirements of § 429.70 and the provisions of this section, where:

(i) Any represented value of energy consumption or other measure of energy use of a basic model for which consumers would favor lower values shall be greater than or equal to the output of the AEDM and less than or equal to the Federal standard for that basic model; and

(ii) Any represented value of energy efficiency 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 output of the AEDM and greater than or equal to the Federal standard for that basic model.

(b) Certification reports. (1) The requirements of § 429.12 are applicable to commercial packaged boilers; and

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public product-specific information: the combustion efficiency in percent (%) or the thermal efficiency in percent (%), as required in § 431.87 of this chapter; and the maximum rated input capacity in British thermal units per hour (Btu/h).

(3) Pursuant to § 429.12(b)(13), a certification report must include the following additional product-specific information:

(i) Whether the basic model is engineered-to-order; and

(ii) For any basic model rated with an AEDM, whether the manufacturer elects the witness test option for verification testing. (See § 429.70(c)(5)(iii) for options). However, the manufacturer may not select more than 10% of AEDM-rated basic models.

(4) Pursuant to § 429.12(b)(13), a certification report may include supplemental testing instructions in PDF format. A manufacturer may also include with a certification report other supplementary items in PDF format (e.g., manuals) for DOE consideration in performing testing under subpart C of this part.

(c) Alternative methods for determining efficiency or energy use for commercial packaged boilers can be found in § 429.70.

10. Section 429.70 is amended by revising the heading of paragraph (c) to read as follows:

**§ 429.70 Alternative methods for determining energy efficiency and energy use.**

\* \* \* \* \*

*(c) Alternative efficiency determination method (AEDM) for commercial HVAC (includes commercial warm air furnaces and commercial packaged boilers), WH, and refrigeration equipment— \*\*\**

\* \* \* \* \*

[FR Doc. 2014-03103 Filed 02/13/2014 at 8:45 am; Publication Date: 02/14/2014]