

**DEPARTMENT OF ENERGY****Office of Energy Efficiency and Renewable Energy****10 CFR Parts 430 and 431**

[Docket No. EE-RM/TP-05-500]

RIN 1904-AB53

**Energy Conservation Program: Test Procedures for Consumer Products and Certain Commercial and Industrial Equipment; Certification, Compliance, and Enforcement Requirements for Consumer Products and for Certain Commercial and Industrial Equipment; Technical Amendment to Energy Conservation Standards for Certain Consumer Products and Commercial and Industrial Equipment**

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

**ACTION:** Notice of proposed rulemaking and public meeting.

**SUMMARY:** The Energy Policy Act of 2005 (EPACT 2005) includes amendments to the Energy Policy and Conservation Act (EPCA) to provide for new Federal energy efficiency and water conservation test procedures, and related definitions, for certain consumer products and certain commercial and industrial equipment. The amendments direct the Department of Energy (DOE or the Department) to establish new test procedures for many of these products and certain equipment, in most cases based on applicable testing practices generally accepted by industry and other government agencies. Today, DOE proposes test procedures for eleven types of products for which EPACT 2005 identified specific test procedures. In addition, DOE proposes test procedures for three other products for which EPACT 2005 did not specify specific test procedures. Furthermore, the Department is proposing to adopt a new version of the current test procedure for small commercial package air-conditioning and heating equipment, which will not change the existing requirements.

The Department is also proposing regulations for sampling during compliance testing, compliance certification, and enforcement to ensure compliance with EPACT's energy conservation standards. Today's proposed rule also includes compliance certification, and enforcement provisions that would also apply to commercial heating, ventilating, and air conditioning products, as well as commercial water heating products. The

Department is also announcing a public meeting to discuss all of the above referenced proposals.

Furthermore, the Department is announcing proposed technical corrections to the October 18, 2005 Final Rule, 70 FR 60407, which the Department has described in detail in today's proposed rule and will add to the rule language.

**DATES:** The Department will hold a public meeting on Tuesday, September 26, 2006, from 9 a.m. to 5 p.m., in Washington, DC. The Department must receive requests to speak at the meeting before 4 p.m., Thursday, September 14, 2006. The Department must receive a signed original and an electronic copy of statements to be given at the public meeting before 4 p.m., Tuesday, September 19, 2006.

The Department will accept comments, data, and information regarding the notice of proposed rulemaking (proposed rule) no later than October 10, 2006. See section VII, "Public Participation," of this proposed rule for details.

**ADDRESSES:** You may submit comments, identified by docket number EE-RM/TP-05-500 and/or Regulatory Information Number (RIN) 1904-AB53, by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- E-mail: [testprocedures\\_EPACT2005@ee.doe.gov](mailto:testprocedures_EPACT2005@ee.doe.gov). Include EE-RM/TP-05-500 and/or RIN 1904-AB53 in the subject line of the message.
- Postal Mail: Ms. Brenda Edwards-Jones, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, Energy Conservation Test Procedures for Consumer Products and Commercial Equipment, EE-RM/TP-05-500 and/or RIN 1904-AB53, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-2945. Please submit one signed paper original.
- Hand Delivery/Courier: Ms. Brenda Edwards-Jones, U.S. Department of Energy, Building Technologies Program, Room 1J-018, 1000 Independence Avenue, SW., Washington, DC 20585-0121.

**Instructions:** All submissions must include the agency name and docket number or RIN for this rulemaking. For detailed instructions on submitting comments and additional information on the rulemaking process, see section VII, "Public Participation," of this proposed rule for details.

**Docket:** For access to the docket to read background documents or comments received, go to the U.S.

Department of Energy, Forrestal Building, Room 1J-018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards-Jones at (202) 586-2945 for additional information regarding visiting the Resource Room. Please note: The Department's Freedom of Information Reading Room (formerly Room 1E-190 at the Forrestal Building) is no longer housing rulemaking materials.

**FOR FURTHER INFORMATION CONTACT:**

James Raba, 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, (202) 586-8654. E-mail: [jim.raba@ee.doe.gov](mailto:jim.raba@ee.doe.gov).  
Francine Pinto, U.S. Department of Energy, Office of General Counsel, GC-72, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-9507. E-mail: [Francine.Pinto@hq.doe.gov](mailto:Francine.Pinto@hq.doe.gov).

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### I. Background

The Energy Policy Act of 2005 (EPACT 2005) (Pub. L. 109–58) was enacted on August 8, 2005. Subtitle C of Title I of EPACT 2005 includes provisions that amend Part B of Title III of the Energy Policy and Conservation Act (EPCA) (42 U.S.C. 6291–6309), which provides for an energy conservation program for consumer products other than automobiles, as well as Part C of Title III of EPCA (42 U.S.C. 6311–6317), which provides for a program, similar to the energy conservation program for consumer products in Part B, for certain commercial and industrial equipment. EPACT 2005 prescribes new or amended energy conservation standards and/or test procedures and directs DOE to undertake rulemakings to promulgate such requirements.

On October 18, 2005, DOE placed into Title 10 of the Code of Federal Regulations (CFR) the energy

conservation standards and related definitions that EPACT 2005 prescribed (hereafter referred to as the October 2005 final rule). 70 FR 60407. DOE also announced that it was not exercising the discretionary authority provided in EPACT 2005 for the Secretary of Energy (the Secretary) to revise product or equipment definitions and energy conservation standards set forth in the statute, but that it might exercise this authority later.

By today's action, DOE is proposing test procedures for measuring energy efficiency and water-use efficiency and related definitions, as well as test sampling, compliance certification, and enforcement requirements, for various consumer products and commercial and industrial equipment covered by EPACT 2005's amendments to EPCA. Table 1 identifies most of the products and equipment these amendments cover, and shows the ones for which DOE is proposing to adopt test procedures, the sections of EPACT 2005 and EPCA that authorize and require these test procedures, and the sections in the CFR where DOE proposes to place them.

TABLE 1.—TEST PROCEDURES AND GENERAL REQUIREMENTS\_\_AUTHORITY AND PLACEMENT\*

| Product or equipment type   | EPACT 2005 Section | EPCA section            | U.S.C. section                     | 10 CFR section (proposed) |
|---|--------------------|-------------------------|------------------------------------|---------------------------|
| Ceiling fans .....  | 135(b)(1) .....    | 323(b)(16)(A)(i) .....  | 42 U.S.C. 6293(b)(16)(A)(i) .....  | 430.23(w)                 |
| Ceiling fan light kits .....  | 135(b)(1) .....    | 323(b)(16)(A)(ii) ..... | 42 U.S.C. 6293(b)(16)(A)(ii) ..... | 430.23(x)                 |
| Dehumidifiers .....   | 135(b)(1) .....    | 323(b)(13) .....        | 42 U.S.C. 6293(b)(13) .....        | 430.23(z)                 |
| Medium base compact fluorescent lamps.  | 135(b)(1) .....    | 323(b)(12) .....        | 42 U.S.C. 6293(b)(12) .....        | 430.23(y)                 |
| Battery chargers .....  | 135(c)(4) .....    | 325(u) .....            | 42 U.S.C. 6295(u) .....            | 430.23(aa)                |
| External power supplies .....   | 135(c)(4) .....    | 325(u) .....            | 42 U.S.C. 6295(u) .....            | 430.23(bb)                |
| Torchieres* .....   | 135(c)(4) .....    | 325(x) .....            | 42 U.S.C. 6295(x) .....            | 430.23(cc)                |
| Unit heaters** .....  | 135(c)(4) .....    | 325(aa) .....           | 42 U.S.C. 6295(aa) .....           | Part 431, Subpart N.      |
| Automatic commercial ice makers .....   | 136(f)(1) .....    | 343(a)(7)(A) .....      | 42 U.S.C. 6314(a)(7)(A) .....      | Part 431, Subpart H.      |
| Commercial prerinse spray valves .....  | 135(b)(1) .....    | 323(b)(14) .....        | 42 U.S.C. 6293(b)(14) .....        | Part 431, Subpart O.      |
| Illuminated exit signs .....  | 135(b)(1) .....    | 323(b)(9) .....         | 42 U.S.C. 6293(b)(9) .....         | Part 431, Subpart L.      |
| Traffic signal modules and pedestrian modules.  | 135(b)(1) .....    | 323(b)(11) .....        | 42 U.S.C. 6293(b)(11) .....        | Part 431, Subpart M.      |
| Refrigerated bottled or canned beverage vending machines.   | 135(b)(1) .....    | 323(b)(15) .....        | 42 U.S.C. 6293(b)(15) .....        | Part 431, Subpart Q.      |
| Very large commercial package air conditioning and heating equipment.   | 136(f)(1) .....    | 343(a)(4) .....         | 42 U.S.C. 6314(a)(4) .....         | Part 431, Subpart F.      |
| Commercial refrigerators, freezers, and refrigerator-freezers.  | 136(f)(1) .....    | 343(a)(6) .....         | 42 U.S.C. 6314(a)(6) .....         | Part 431, Subpart C.      |
| Ice-cream freezers; commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors; and commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit. | 136(f)(1)(B) ..... | 343(a)(6)(A)(i) .....   | 42 U.S.C. 6314(a)(6)(A)(i) .....   | Part 431, Subpart C.      |

\* EPACT 2005 does not expressly authorize DOE to promulgate a test procedure for torchieres. However, the statute does expressly authorize energy conservation standards for torchieres thereby implicitly authorizing DOE to issue the relevant test procedure.

\*\* The Department is proposing to adopt definitions and other general provisions for unit heaters.

## II. Summary of Today's Action

Today's proposed rule implements the portions of sections 135 and 136 of EPACT 2005 that amend EPCA. These sections direct the Department to establish test procedures based on specifications of the Federal ENERGY STAR program or industry consensus standards that the statute identifies.<sup>1</sup> Each of these ENERGY STAR specifications and industry standards, however, contains not only energy test procedures, but also provisions that are irrelevant in determining the energy use, water use, or efficiency of the products to which they apply. The Department is proposing to adopt only those sections of the ENERGY STAR specifications and industry consensus standards that specify test procedures relevant to the measurement of energy efficiency or water consumption. The Department proposes to incorporate these sections by reference into its rules, in some cases with clarifying changes or additions that do not alter the substance of the test procedure. The Department would place the test procedures and related definitions for consumer products in 10 CFR part 430 ("Energy Conservation Program for Consumer Products"), and the test procedures and definitions for commercial and industrial equipment in 10 CFR Part 431 ("Energy Efficiency Program for Certain Commercial and Industrial Equipment").

The Department is also proposing sampling procedures for compliance testing for each type of consumer product and commercial and industrial equipment covered by today's proposed rule. The proposed rule also includes compliance certification and enforcement provisions that would apply to most commercial and industrial equipment other than electric motors and some of the proposed enforcement provisions would not apply to distribution transformers.<sup>2</sup> With a few exceptions, such as the regimen for enforcement testing, today's proposed requirements follow the same approach as regulations under 10 CFR part 430, although in some cases with

revised language to clarify the requirements.

In addition, the Department recently incorporated the energy conservation standards prescribed by EPACT 2005 into 10 CFR parts 430 and 431, 70 FR 60407 (October 18, 2005), and has identified several provisions of these technical amendments that do not accurately reflect the provisions of EPACT 2005. A summary discussion of these corrections and clarifications is found in section V. As these changes will merely serve to incorporate the energy and water use standards set forth in EPACT 2005 into DOE's rules, they are not subject to comment. They will, however, be included in the final rule.

## III. Discussion—Energy Conservation Test Procedures for Consumer Products and Commercial and Industrial Equipment

### A. Ceiling Fans and Ceiling Fan Light Kits

Section 135(c)(4) of EPACT 2005 includes an amendment to section 325 of EPCA (42 U.S.C. 6295) to add subsection (v)(1), which requires test procedures and energy conservation standards for ceiling fans and ceiling fan light kits. Sections 135(b)(1) and 135(c)(4) of EPACT 2005 also contain additional provisions as to test procedures and standards, respectively, for ceiling fans and ceiling fan light kits. Today's proposed rule addresses these products separately because the requirements for them differ.

1. Ceiling Fans. Section 325(v)(1) of EPCA (42 U.S.C. 6295(v)(1)) directs the Secretary to prescribe, by rule, test procedures for ceiling fans. Furthermore, section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subparagraph (16)(A)(i), which states that test procedures for ceiling fans "shall be based on the 'ENERGY STAR Testing Facility Guidance Manual: Building a Testing Facility and Performing the Solid State Test Method for ENERGY STAR Qualified Ceiling Fans, Version 1.1' published by the Environmental Protection Agency" (EPA).

The Department's adoption of test procedures under these sections is influenced, to a limited extent, by EPCA's new provisions as to standards for ceiling fans. Section 135(c)(4) of EPACT 2005 amends section 325 of EPCA (42 U.S.C. 6295) to add subsection (ff)(1)(A), which prescribes design requirements for ceiling fans. The Department incorporated these requirements into 10 CFR part 430 in the October 2005 final rule. 70 FR

60407. Test procedures under EPCA for consumer products, however, must be designed to "measure energy efficiency, energy use, \* \* \* or estimated annual operating cost." 42 U.S.C. 6293(b)(3). Moreover, test procedures are not required for determining compliance with design standards (42 U.S.C. 6295(s)). Generally, they are unnecessary for assessing whether a product complies with an applicable design standard, and DOE believes they are not needed to determine compliance with EPCA's design standards for ceiling fans. Therefore, today's proposed test procedure for this product does not address these design standards. However, section 135(c)(4) of EPACT 2005 also adds subsection 323(ff)(6) to EPCA, which specifically authorizes DOE to prescribe energy efficiency or energy use standards for the electricity that ceiling fans use to circulate air in a room. Today's proposed test procedures provide a method for testing for airflow efficiency and a method for measuring the energy use and energy efficiency as to the electricity consumed by ceiling fans.

The ENERGY STAR Guidance Manual, on which DOE must base certain of its test procedures, provides definitions of terms, minimum requirements necessary for building a ceiling fan testing chamber, test equipment tolerances, guidance for equipment setup, requirements for test facility fan calibration to a standard calibration fan, procedures for performing product testing for airflow and airflow efficiency, requirements for documentation and reporting test results, and provisions for challenge testing. However, the Guidance Manual does not specifically describe how to measure the power consumed during the airflow test. This allows manufacturers to use different methods for measuring power consumed, and could mean the test results would not be comparable to one another. It could also result in disputes as to the validity of methods used to measure power consumption and of test results. Consequently, to assure comparable and sound results, the Department proposes to include a method for power measurement as part of the test procedure. In addition, the Department believes that the Guidance Manual is too restrictive in requiring that specific proprietary sensors and sensor software be used for performing airflow measurements. Thus, the Department is proposing to allow test facilities to use sensors and sensor software equivalent to the proprietary sensors and sensor software prescribed in the Guidance

<sup>1</sup> Section 135(b)(1) of EPACT 2005, for example, directs that the test procedure for refrigerated bottled or canned vending machines "shall be based on American National Standards Institute/American Society of Heating, Refrigerating, and Air-Conditioning Engineers Standard 32.1-2004, entitled 'Method of Testing for Rating Vending Machines for Bottled, Canned or Other Sealed Beverages'." (42 USC 6293(b)(15))

<sup>2</sup> Enforcement provisions for distribution transformers are established in the test procedures final rule for distribution transformers published on April 27, 2006. 71 FR 24972. Certification and enforcement for electric motors are in subpart B of 10 CFR part 431.

Manual, provided that the testing facility verifies the performance of the equipment used.

The Department finds that the test methods in the Guidance Manual, with the modifications just described, satisfy the instructions in section 135(b)(1) of EPACT 2005 to test ceiling fans. Therefore, DOE proposes to incorporate the applicable ENERGY STAR test procedure requirements, along with additional requirements on power measurement and the sensors and sensor software used for performing the airflow test, into Appendix U to Subpart B of 10 CFR part 430. This test procedure would also provide a foundation for developing energy conservation standards for airflow efficiency for ceiling fans.

2. Ceiling Fan Light Kits. Section 135(c)(4) of EPACT 2005 amends section 325 of EPCA (42 U.S.C. 6295) to add subsection (v)(1), which directs the Secretary to prescribe, by rule, test procedures for ceiling fan light kits. Additionally, section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subparagraph (16)(A)(ii), which states that test procedures for ceiling fan light kits “shall be based on” the test methods “referenced in the ENERGY STAR specifications for Residential Light Fixtures [RLFs] and Compact Fluorescent Light Bulbs [CFLs],” as in effect on August 8, 2005. The relevant ENERGY STAR specifications in effect at that time were version 3.2 for RLFs, which applies to ceiling fan light kits with sockets for pin-based fluorescent lamps, and version 3.0 for CFLs, which applies to ceiling fan light kits with sockets for screw base lamps. Version 3.2 for RLFs originally became effective on September 19, 2003, and version 3.0 for CFLs originally became effective on January 1, 2004.

Section 135(c)(4) of EPACT 2005 amends section 325 of EPCA (42 U.S.C. 6295) to prescribe standards for certain ceiling fan light kits manufactured on or after January 1, 2007. Specifically, new subsection 325(ff)(2) of EPCA (42 U.S.C. 6295(ff)(2)) provides that ceiling fan light kits with medium screw base sockets must be packaged with screw-based lamps to fill all of the sockets, and these lamps must either meet the “ENERGY STAR Program Requirements for Compact Fluorescent Lamps, version 3.0,” or use light sources other than CFLs that have at least equivalent efficacy. And new subsection 325(ff)(3) of EPCA (42 U.S.C. 6295(ff)(3)) requires that ceiling fan light kits which have pin-based sockets for fluorescent lamps manufactured on, or after, January 1, 2007, must be packaged with lamps to

fill all of the sockets, and that these lamps must meet the “ENERGY STAR Program Requirements for Residential Light Fixtures, version 4.0.”

For ceiling fan light kits with sockets for screw-base lamps, DOE is proposing to adopt as its test procedure the test methods in version 3.0 of the ENERGY STAR specifications for CFLs. Obviously, this satisfies the requirement that the test procedure be “based on” version 3.0. Also, the Department believes these test methods provide a sound basis for determining the efficacy of CFLs and compliance with the standards, which therefore satisfies the requirements of section 323(b)(3) of EPCA. (42 U.S.C. 6293(b)(3))

With regard to ceiling fan light kits with pin-based sockets for fluorescent lamps, EPCA specified that DOE must base its test procedure on version 3.2 of the ENERGY STAR specifications for RLFs, but that these lamps must meet the standards in version 4.0 of these specifications. (42 U.S.C. 6293(b)(16)(A)(i) and 6295(ff)(3)(A)) Most of the provisions, and the overall approach, are the same in the test methods contained in versions 3.2 and 4.0. Version 4.0, however, adds several provisions that make the test procedure more complete (e.g., a new electronic ballast requirement that reduces the number of permitted pin-based configurations, and improves quality and efficiency). Version 4.0 is based on the test procedure in version 3.2, and DOE believes it provides a sound basis for determining compliance with the standards, which therefore satisfies the requirements of section 323(b)(3) of EPCA (42 U.S.C. 6293(b)(3)). For all of these reasons, the Department proposes to incorporate by reference the test methods in the “ENERGY STAR Program Requirements for Residential Light Fixtures,” version 4.0, to measure the efficacy of pin-based fluorescent lamps that are packaged with ceiling fan light kits.

The Department notes that, where version 4.0 of the RLF test procedure refers to measurement of efficacy of these lamps, it requires determination of the system efficacy for the lamp/ballast combination in lumens per watt (LPW), as seen in Tables 1 and 2A of the test procedure. Thus, the lamp must be tested when it is plugged into a fixture that contains the appropriate ballast. By contrast, this is not a concern in testing medium screw base CFLs, because the ballast for such lamp is built into the lamp.

Finally, section 135(c)(4) of EPACT 2005 amends section 325 of EPCA (42 U.S.C. 6295) by adding new subsection (ff)(4), which directs DOE to “consider

and issue requirements” for any ceiling fan light kits other than those with medium screw base or pin-based sockets, “including candelabra screw base sockets.” The statute has two default requirements: 1) these ceiling fan light kits shall not be capable of operating with lamps that total more than 190 watts; and 2) the ceiling fan light kits must be packaged with lamps whose total wattage does not exceed 190 watts. For the latter packaging requirement, a limit on the total wattage of lamps packaged with a ceiling fan light kit, no test procedure is required. A manufacturer would simply ensure that there be sufficient lamps packaged with the ceiling fan light kit to fill any and all sockets in the fixture and the total wattage of those lamps would not exceed 190 watts. In the former requirement, the statute requires that these kits not be capable of operating with lamps that total more than 190 watts. To satisfy this requirement, the Department considered two approaches.

One approach would be for the Department to interpret the statutory requirement of “not be capable of operating with lamps that total more than 190 watts” as a design requirement, similar to features required by EPACT 2005 for ceiling fans (e.g., variable fan speed control and separate controls for fan and lights). Under this approach, there would be no test procedure required by the Department. However, manufacturers of these ceiling fan light kits would be required to incorporate some measure such as a fuse, circuit breaker or current-limiting device to ensure the light kit was not capable of operating with a lamp or lamps totaling more than 190 watts.

The alternative approach would be for the Department to adopt a test procedure that would measure the power consumption of the ceiling fan light kit. Such a test procedure would determine if the ceiling fan light kit were capable of operating with a lamp or lamps totaling more than 190 watts. DOE believes there are likely designs where it would not be apparent that the product meets the standards and that it would be necessary to test the light kit. Therefore, DOE is proposing a test procedure that incorporates by reference selected provisions from the “IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps,” LM-45-00, for lamps whose total wattage exceeds 190 watts. The sections of LM-45-00 being proposed for incorporation by reference are section 1.2, “Nomenclature and Definitions,” section 3.0, “Power Source Characteristics” (for AC power only),

section 4.0, "Circuits" (for AC power only), and section 7.0, "Electrical Instrumentation." In the testing configuration setup depicted in figure 1(b) of section 4.0, the Department proposes to replace the lamp (L) by the ceiling fan light kit being tested. In this proposed test method, lamps totaling more than 190 watts are installed into the ceiling fan light kit to determine whether it consumes more than 190 watts as described in Appendix U to Subpart B of 10 CFR Part 430.

The Department requests comment on the proposed approach of interpreting the 190-watt requirement as an energy consumption standard, and requiring manufacturers to test their products using the test procedure incorporated by reference in this notice for ceiling fan light kits with sockets for lamps with bases other than medium screw-base sockets and pin-based sockets for lamps packaged with ceiling fan light kits.

#### B. Dehumidifiers

Section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subsection (b)(13) for dehumidifiers. New subsection 323(b)(13) (42 U.S.C. 6293(b)(13)) directs the Secretary to prescribe test procedures for dehumidifiers based on the test criteria in the "ENERGY STAR Program Requirements for Dehumidifiers," as in effect on August 8, 2005.<sup>3</sup> The DOE proposes to incorporate by reference into 10 CFR Part 430 test criteria used under the "ENERGY STAR Program Requirements for Dehumidifiers," as in effect on August 8, 2005, which references the American National Standards Institute (ANSI)/Association of Home Appliance Manufacturers (AHAM) Standard DH-1-2003, "Dehumidifiers," for energy consumption measurements during capacity-rating tests and the Canadian Standards Association (CAN)/(CSA) Standard C749-1994, "Performance of Dehumidifiers," for energy factor calculations. In addition, section 135(c)(4) of EPACT 2005 amends section 325 of EPCA (42 U.S.C. 6295) by adding new subsection (cc) which prescribes energy conservation standards, consisting of minimum energy factors, for dehumidifiers, manufactured on, or after, October 1, 2007.

ANSI/AHAM DH-1-2003 provides definitions of terms, measurement tolerances, and testing procedures to measure the ability of a dehumidifier to remove moisture from its surrounding atmosphere in pints of water per day

and liters of water consumed per kilowatt hour (L/kWh). This information is needed to determine the Energy Factor of a dehumidifier as calculated in accordance with section 4.2, "Standard Rating of Energy Factor," of CAN/CSA-C749-1994. Hence, these test procedures provide a sound means for determining compliance with the standards in section 325(cc) of EPCA, as amended (42 U.S.C. 6295(cc)). The Department also concludes that they satisfy the requirements of section 323(b)(3) of EPCA. (42 U.S.C. 6293(b)(3))

#### C. Medium Base Compact Fluorescent Lamps

Section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subsections (b)(12)(A) through (C), for "medium base" CFLs. (These CFLs are also commonly referred to as "screw base" CFLs.) The new subsection 323(b)(12)(A) of EPCA (42 U.S.C. 6293(b)(12)(A)) requires test procedures for medium base CFLs to be based on the August 9, 2001, version of the ENERGY STAR program requirements for CFLs, (the "August 9 version") which became effective October 1, 2001. Correspondingly, section 135(c)(4) of EPACT 2005 adds new subsection (bb)(1) to section 325 of EPCA to prescribe standards for CFLs, requiring that they meet the requirements in the August 9 version for minimum initial efficacy, lumen maintenance at 1000 hours, lumen maintenance at 40 percent of rated life, rapid cycle stress, and lamp life. (42 U.S.C. 6295(bb)(1)) Furthermore, new subsection 323(b)(12)(B) of EPCA specifically requires that medium base CFLs be tested for all of these parameters.<sup>4</sup> (42 U.S.C. 6293(b)(12)(B))

Effective January 1, 2004, however, the Department replaced the August 9 version with the "ENERGY STAR Program Requirements for CFLs," version 3.0. The standards for CFLs remained unchanged, as did the method for testing a unit of a lamp. But version 3.0 increased to ten (from five in the August 9 version) the minimum number of units of each model that had to be tested to determine the efficacy of that model. This change means that the efficacy ratings resulting from testing would be more accurate, although obviously it also increases the test burden on manufacturers.

<sup>4</sup> As noted above, Section 135(b)(1) of EPACT 2005 added subsections (b)(12)(A)-(C) for medium base CFL's. Subsection (b)(12)(B) erroneously references section 325(cc) as containing the regulated parameters for these CFL's. Instead, section 325(cc) contains standards for "Dehumidifiers."

The Department believes that the test methods in both the August 9 version and version 3.0 meet EPCA's criteria for test procedures for CFLs. Obviously DOE adoption of the August 9 version would satisfy the requirement that the test procedures for CFLs "be based on" that version. (42 U.S.C. 6293(b)(12)(A)) Adoption of version 3.0 would also satisfy that requirement, given its similarity to the August 9 version. In addition, although version 3.0 is both better at measuring efficiency and more burdensome, the Department has examined both versions and believes that both are "reasonably designed to \* \* \* measure energy efficiency \* \* \* and [are] not unduly burdensome to conduct," as required by 42 U.S.C. 6293(b)(3).

Because new subsection 323(b)(12)(A) of EPCA (42 U.S.C. 6293(b)(12)(A)) specifically identifies the test methods under the August 9 version as the ones which the test procedure for medium base CFLs "shall be based," the Department is proposing today to incorporate into 10 CFR Part 430 the "ENERGY STAR Program Requirements for CFLs," August 9, 2001, to measure minimum initial efficacy, lumen maintenance at 1000 hours, and 40 percent of rated life, rapid cycle stress, and lamp life. However, as indicated above, EPCA requires that the test procedure for testing CFLs in ceiling fan light kits with screw based sockets be based on version 3.0 (42 U.S.C. 6293(16)(A)(ii)), and DOE is proposing to adopt version 3.0 as the test procedure for these kits. If DOE were to adopt both this proposal and the proposal to require use of the August 9 version for testing CFLs, its regulations would incorporate two different testing regimens for testing the same product to determine whether it meets a particular efficacy standard. The Department believes that this could cause confusion and be unduly burdensome to manufacturers. In addition, because, as noted above, version 3.0 would produce more accurate results, DOE finds it preferable to the August 9 version. For these reasons, the Department is proposing adoption of provisions from version 3.0 instead of the August 9 version, and requests comments on whether the test procedures for medium base CFLs should consist of the test methods in the "ENERGY STAR Program Requirements for CFLs," version 3.0.

Finally, two of the five performance requirements in EPCA's standards for CFLs concern "lumen maintenance." (42 U.S.C. 6295(bb)(1)) However, in examining the ENERGY STAR program requirements for CFLs, August 9, 2001,

<sup>3</sup> The ENERGY STAR Program Requirements for Dehumidifiers went into effect on January 1, 2001.

the Department noted an apparent inconsistency in language regarding this term. Specifically, the table in the August 9 version that delineates “Photometric Performance Requirements” includes “lumen maintenance” among the specified properties for CFLs. In contrast, the table in the August 9 version that cites the “Referenced Standards/Procedures,” (i.e., the test procedures, for measuring the specified performance properties of CFLs makes no reference to testing for “lumen maintenance.”) Rather, this table cites procedures for measuring “lumen depreciation.” The Department interprets these tables as using the terms “lumen maintenance” and “lumen depreciation” synonymously. To ensure clarity on this point, today’s rule defines “lumen depreciation” as having the same meaning as “lumen maintenance” in the test procedure for CFLs. The Department solicits stakeholder comments about whether “lumen maintenance” and “lumen depreciation” may be taken as synonymous.

#### *D. Torchieres*

EPACT 2005 neither prescribes, nor directs DOE to develop, a test procedure for torchieres. However, section 135(c)(4) of EPACT 2005 amends section 325 of EPCA to add subsection (x) for torchieres, which establishes that torchieres manufactured on or after January 1, 2006, shall “consume not more than 190 watts of power” and shall “not be capable of operating with lamps that total more than 190 watts.” (42 U.S.C. 6295(x)(1) and (x)(2), respectively) In the October 2005 final rule, DOE incorporated these requirements into 10 CFR section 430.32(t) of its rules. 70 FR 60412–13.

The language of these two requirements is problematic. Read literally, they appear either to be redundant or not to make sense. The first requirement appears to limit total energy consumption by a torchiere to 190 watts, and the second appears to require that the torchiere not be able to operate with lamps that draw more than 190 watts. On the one hand, such requirements would be redundant because all or virtually all of the electricity a torchiere consumes is used to operate the lamps it contains. On the other hand, assuming for the sake of this discussion that torchieres consume more than the amount of electricity needed to operate the lamps they use—they could not consume less—it would not make sense to limit both the torchiere and the lamps it uses to consumption of the same maximum

amount of electricity use (in this case 190 watts).

Another possible reading of subsections 325(x)(1) and (x)(2) is that both address electricity consumption by torchieres themselves, and require that torchieres not consume, or be capable of consuming, respectively, more than 190 watts. (42 U.S.C. 6295(x)(1) and (x)(2)) Under this reading, however, the two subsections would clearly be redundant. To produce a torchiere that would not consume 190 watts, a manufacturer would have to make sure that the fixture was not capable of doing so, and, conversely, any equipment constructed to be incapable of operating above 190 watts would not operate above that wattage.

The Department also believes that subsection 325(x)(1) can be interpreted as requiring that torchieres be packaged and sold with lamps that do not consume more than 190 watts, with subsection 325(x)(2) being interpreted strictly in accordance with its terms as requiring that torchieres not be able to operate with lamps totaling more than 190 watts. The Department believes this is the soundest interpretation of these provisions. Torchieres are always, or virtually always, sold with lamps enclosed with the product’s packaging. In effect, the lamps are part of the product as manufactured and sold. Furthermore, as pointed out above, a torchiere will consume the amount of electricity drawn by the lamps it uses. Thus, the requirement that a torchiere “consume not more than 190 watts,” (42 U.S.C. 6295(x)(1)) which applies to the product as manufactured and then distributed in commerce by the manufacturer, can reasonably be interpreted as requiring that the torchiere be packaged with lamps totaling 190 watts or less.

Such a requirement complements the provision that torchieres “not be capable of operating with lamps” totaling that same wattage. (42 U.S.C. 6295(x)(2)) The norm for torchieres, as with other lighting fixtures, is that users will replace the product’s lamps, often numerous times during its life. In conjunction with a requirement that torchieres be distributed with lamps that consume no more than 190 watts, it makes sense to require that torchieres be unable to operate with lamps totaling more than that wattage, so as to assure that consumers will not use the product at energy levels above the level contemplated in the Act. Not only does this approach make sense given the nature of the product here, but it also gives meaning to both subsections (x)(1) and (2).

Furthermore, it reflects the approach the Congress took in the only other provision of section 135(c)(4) of EPACT 2005 that contains a similar two-pronged energy conservation standard for a lighting fixture. For ceiling fan light kits that have neither medium screw base sockets nor bin-based sockets, the default standard EPACT 2005 provides that a ceiling fan light kit (1) must include lamps that total 190 watts or less and (2) shall not be capable of operating with lamps totaling more than 190 watts. (42 U.S.C. 6295(ff)(4)(c)) For these reasons, DOE intends to interpret 42 U.S.C. 6295(x) as requiring that torchieres be packaged and sold with lamps that do not consume more than 190 watts, and not be able to operate with lamps totaling more than 190 watts. Section 430.32(t)(2) of DOE’s regulations already reflects the second prong of this interpretation, and in the final rule in this proceeding, the Department plans to modify section 430.32(t)(1) to reflect the first prong.

As to the second prong, the Department construes it to mean that a torchiere must be designed and manufactured in such a way that either the fixture would not function, or the component lamps when operating would not consume more than 190 watts, when lamps exceeding that wattage are installed in the fixture. To satisfy this requirement, the Department is contemplating two approaches.

One approach would be for the Department to interpret the statutory requirement of “not be capable of operating with lamps that total more than 190 watts” as a design requirement, similar to features required by section 135(c)(4) of EPACT 2005 for ceiling fans (e.g., variable fan speed control). Under this approach, the Department would not require a test procedure, and the Department’s regulations would specify one or more features that torchieres would be required to incorporate, such as a fuse, circuit breaker or other current limiting device, so that they would either cease to operate, or would draw less than 190 watts, when the user installed a lamp or lamps totaling more than 190 watts in the unit. This approach would be consistent with EPCA’s failure to mention test procedures for torchieres.

The alternative approach would be for the Department to adopt a test procedure that would measure the power consumption of a torchiere. Such a test procedure would determine if the torchiere was capable of operating with a lamp or lamps totaling more than 190 watts. A test method to this effect is proposed in Appendix AA to Subpart B of Part 430, Uniform Test Method for

Measuring the Energy Consumption of Torchieres. This proposed test method adapts and incorporates by reference selected provisions from the "IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps," LM-45-00, along with lamps whose total wattage exceed 190 watts. The sections of LM-45-00 being proposed for incorporation by reference are section 1.2, "Nomenclature and Definitions," section 3.0, "Power Source Characteristics" (for AC power only), section 4.0, "Circuits" (for AC power only), and section 7.0, "Electrical Instrumentation." In the testing configuration setup depicted in figure 1(b) of section 4.0, the Department proposes to replace the lamp (L) by the torchiere being tested. In this proposed test method, a lamp or lamps totaling more than 190 watts are installed into the torchiere to determine whether it consumes more than 190 watts.

The Department requests comment on the proposed approach of interpreting the 190 watt requirement as an energy consumption standard and requiring manufacturers to test their products using the test procedure incorporated by reference in this notice for torchieres.

#### E. Unit Heaters

Section 135(c)(4) of EPACT 2005 amends section 325 of EPCA to add subsection (aa) (42 U.S.C. 6295(aa)), which requires that unit heaters manufactured on or after August 8, 2008, be equipped with an intermittent ignition device, and have power venting or an automatic flue damper. The Department incorporated these design standards into 10 CFR 430 in the October 2005 final rule. 70 FR 60407. Test procedures under EPCA must be designed to measure "energy efficiency, energy use, \* \* \* or estimated annual operating cost." (42 U.S.C. 6314(a)(2)) Test procedures are not required for determining compliance with design standards (42 U.S.C. 6295(s)). Since EPACT 2005 promulgated design standard for unit heaters, the Department is not proposing test procedures for this equipment.

However, the Department is proposing definitions for the terms "intermittent ignition device," "power venting," "automatic flue damper," and "fan-type heater" as they relate to unit heaters. The last of these terms appears in the definition of "unit heater" that

appears in EPCA (EPACT 2005, section 135(a)(3), and 42 U.S.C. 6291(45)) and the October 2005 final rule, 70 FR 60407 and 10 CFR 431.242. The other terms appear in the unit heater standards adopted in EPCA (EPACT 2005, section 135(c)(4) and 42 U.S.C. 6295(aa)) and the October 2005 final rule, 70 FR 60407 and 10 CFR 431.246. The Department's adoption of these definitions would clarify coverage and content of the standards for unit heaters. The proposed definitions incorporate the content of definitions from industry consensus standards, with slight modifications that reflect their application to unit heaters. For example, the proposed definition of "fan-type heater" is derived from the definitions of that term in ANSI/ASHRAE Standard 103-1993, and the proposed definition of "intermittent ignition device" is derived from the definition of the term in ANSI Standard Z21.47-2001.<sup>5</sup>

#### F. Automatic Commercial Ice Makers

Section 136(f)(1)(B) of EPACT 2005 amends section 343 of EPCA to add subsection (a)(7)(A) (42 U.S.C. 6314(a)(7)(A)), which directs that the test procedures for automatic commercial ice makers "shall be the test procedures specified in the Air-Conditioning and Refrigeration Institute [ARI] Standard 810-2003, as in effect on January 1, 2005." The title of this Standard is "Performance Rating of Automatic Commercial Ice Makers."

ARI Standard 810-2003 provides definitions of terms, test requirements, and rating requirements. In particular, section 4, "Test Requirements," of ARI Standard 810-2003 references the performance tests in the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 29, "Methods of Testing Automatic Ice Makers," without indicating which version of ASHRAE Standard 29. The Department construes ARI Standard 810-2003 as providing for use of the most current version of ASHRAE Standard 29, which at present is the American National Standards Institute (ANSI)/ASHRAE Standard 29-1988 (Reaffirmed 2005). Also, section 4.1 of ARI Standard 810-2003 provides an exception to the test set-up requirements of ASHRAE Standard 29. It states that the test unit must be set up according to the manufacturer's instructions to the user for setting up the unit for normal operation, and

without any adjustments that might affect ice capacity, energy usage, or water usage. The Department believes this provision provides some assurance that all the testing and rating parameters are measured and reported in complete conformity with how the unit is intended to operate, that the unit's efficiency rating will accurately reflect the efficiency the user would experience, and that compliance with applicable standards will be determined under normal operating conditions.

ARI Standard 810-2003 cites ASHRAE Standard 29 as the source of procedures for measuring energy consumption rate and condenser water use rate. The Department has examined these procedures as set forth in ANSI/ASHRAE Standard 29-1988(RA2005) and believes they are not unduly burdensome to conduct, and would produce results that accurately reflect the efficiency of ice makers, except that the test procedure for calculating energy consumption rate in section 8.3 of this Standard is problematic. Specifically, the calculation for energy consumption rate directs that the energy consumed while cycling an ice maker through a minimum of three cycles be divided by the mass (weight) of ice measured in determining ice density (normalized to 100 pounds of ice). However, these specifications can result in an error because the ANSI/ASHRAE procedure for measuring the ice density does not clearly state if the total mass of all the ice produced during the three cycles must be used. That is, the test procedure may permit testing personnel, in performing the density determination, to discard some of the ice produced during the three or more cycles. If some of the ice is discarded, the measured energy consumption would be for a larger amount of ice than that included in the determination of the energy consumption rate, thus overstating the rate.

To correct this defect in the procedure for calculating the energy consumption rate, DOE proposes to require explicitly that the rate be determined using the total amount of ice produced during the cycles in which energy consumption is measured. Specifically, this proposed test procedure provides in 10 CFR 431.134 that the energy consumption rate normalized to 100 pounds (100 lbs) of ice be determined as follows:

<sup>5</sup> The definition of fan-type heater is the definition in ANSI/ASHRAE 103-1993 without modification. The definition of intermittent ignition device is derived from the definition in ANSI Z21.47-2001. The last sentence of the

definition as it reads in ANSI Z21.47-2001 is not incorporated by reference because it details characteristics of the ignition source and is not needed for clarifying the test procedure. The definition of power venting was derived from DOE's

Priority Setting for the 2003 fiscal year. The definition does not include the characteristics and advantages of using of the fan for venting purposes.



$$\text{Energy Consumption Rate (per 100 lbs ice)} = \frac{\text{Energy Consumed During Testing (kWh)}}{\text{Total Mass of Ice Collected During Testing (lbs)}} \times 100\%$$

The Department believes that this approach either eliminates an unintended ambiguity in ARI Standard 810–2003, or represents, at most, a relatively minor modification of the methodology in that Standard. Under either view, without the modification, the test procedure would not “be reasonably designed to produce test results which reflect [the] energy efficiency” of this equipment, as required by section 343(a)(2) of EPCA. (42 U.S.C. 6314(a)(2)) Therefore, the Department believes, given this latter statutory requirement, that it is authorized to make this modification, even if the modification is viewed as an alteration of ARI Standard 810–2003. This approach gives meaning to both the statutory provisions in EPCA. (42 U.S.C. 6341(a)(7)(A), 42 U.S.C. 6314(a)(2)) It is not barred by the EPCA provision which states that the test procedures for automatic commercial ice makers “shall be” those specified in the ARI Standard. (42 U.S.C. 6314(a)(7)(A), 42 U.S.C. 6314(a)(2))

The Department requests comments about whether this proposed requirement for collecting and measuring the mass of ice produced during the energy consumption test corrects the problem found in ANSI/ASHRAE Standard 29–1988 (RA 2005).

The Department concludes that ARI Standard 810–2003, together with the provisions it incorporates from ASHRAE Standard 29–1988 (RA 2005), and with the above correction, provide a method for measuring the energy use and water use at the harvest rate levels specified in section 342(d) of EPCA (42 U.S.C. 6313(d)), and for determining compliance with the standard levels in that section. Furthermore, DOE adoption of these provisions would satisfy both the requirement that the test procedures for automatic commercial ice makers “shall be” the test procedures in ARI Standard 810–2003 (42 U.S.C. 6314(a)(7)(A)) and the general requirements for test procedures in 42 U.S.C. 6314(a)(2).

Finally, section 136(h)(3) of EPACT 2005 amends section 345 of EPCA (42 U.S.C. 6316) to add subsection (f)(4) directing the Secretary to “monitor whether manufacturers are reducing harvest rates below tested values for the purpose of bringing non-complying equipment into compliance,” and authorizing the Secretary to take steps to minimize manipulation if the Secretary determines “that there has been a

substantial amount of manipulation with respect to harvest rates” of commercial ice makers. The Department will monitor commercial ice maker harvest rates to determine if such manipulation is occurring.

#### *G. Commercial Prerinse Spray Valves*

Section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subsection (14), which states that test procedures for measuring the flow rate for commercial prerinse spray valves “shall be based on [the] American Society for Testing and Materials [ASTM] Standard F2324, entitled ‘Standard Test Method for Pre-Rinse Spray Valves.’” Section 135(c)(4) amends EPCA to require that commercial prerinse spray valves manufactured on or after January 1, 2006, have a flow rate of 1.6 gallons per minute or less. (42 U.S.C. 6295(dd))

The reference to ASTM Standard F2324 raises two threshold matters. First, DOE presumes that Congress intended in the EPACT provision directing DOE to base its test procedure on this Standard, to require DOE to use the most recent version, ASTM Standard F2324–03. Second, ASTM Standard F2324–03 covers water consumption flow rate and cleanliness of prerinse spray valves. However, new section 323(b)(14) of EPCA (42 U.S.C. 6293(b)(14)) contemplates only a test procedure that measures flow rate for this product, and the new standard at 42 U.S.C. 6296 (dd) concerns only flow rate. Therefore, the Department has not considered adoption of the cleanliness provisions of ASTM Standard F2324–03. Furthermore, the Department has examined ASTM Standard F2324–03 and believes it provides a sound basis for determining the flow rate and compliance with the standards for prerinse spray valves, which therefore satisfies the requirements of section 323(b)(3) of EPCA. (42 U.S.C. 6293(b)(3)) For all of these reasons, DOE proposes to incorporate by reference under Subpart O of 10 CFR Part 431, Commercial Prerinse Spray Valves, the procedures in ASTM Standard F2324–03 that are pertinent to measuring the water consumption flow rate of prerinse spray valves.

#### *H. Illuminated Exit Signs*

Section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subsection (9), which provides that test procedures for

illuminated exit signs “shall be based on the test method” contained in version 2.0 of the EPA’s ENERGY STAR program requirements for illuminated exit signs. Furthermore, section 135(c)(4) of EPACT 2005 added a new subsection (w) to 325 of EPCA, which requires illuminated exit signs manufactured on, or after January 1, 2006, meet version 2.0’s performance requirements; under version 2.0 such signs must have an input power demand of five watts or less per face. See 70 FR 60417; 10 CFR 431.206. EPA updated the “ENERGY STAR Program Requirements for Exit Signs” and published version 3.0, effective August 1, 2004. The procedure for measuring input power is essentially the same in both versions, 2.0 and 3.0.

In examining the test procedures in the two versions, the Department found that in both, the provisions for measuring input power are not explicit about the length of time for performing the measurement. The Department believes that if manufacturers perform the measurement using different durations from different models, the resulting measurements for these different models would likely lack comparability. Thus, to reduce the possibility of such an outcome and to clarify the test procedure, DOE proposes to include a requirement in the test procedure that the time duration of the test shall be sufficient to measure power consumption with a tolerance of  $\pm 1$  percent. (10 CFR 431.204) The Department requests comments about whether its test procedure for illuminated exit signs should incorporate this time duration requirement.

Based on its examination of both versions 2.0 and 3.0, DOE believes that each, with this proposed modification, meets EPCA’s criteria for test procedures for illuminated exit signs. Obviously, DOE adoption of version 2.0 would satisfy the requirement that the test procedures for such signs “be based on” that version. (42 U.S.C. 6293(b)(9)) Adoption of version 3.0 would also satisfy that requirement, given its similarity to version 2.0. In addition, DOE believes that both versions, with the addition of a time duration requirement, would be “reasonably designed to \* \* \* [measure] \* \* \* energy use \* \* \* and [are] not unduly burdensome to conduct,” as required by 42 U.S.C. 6293(b)(3). See also, 42 U.S.C. 6314(a)(2).



Although new subsection 323(b)(9) of EPCA (42 U.S.C. 6293(b)(9)), specifically identifies the test method in version 2.0 as the version on which the test procedure for illuminated exits signs "shall be based," the Department proposes to incorporate by reference into 10 CFR Part 431, the "ENERGY STAR Program Requirements for Exit Signs," version 3.0, effective August 1, 2004 because the test methods in versions 2.0 and 3.0 are essentially the same and version 3.0 is the most recent iteration of that test procedure.

#### *I. Traffic Signal Modules and Pedestrian Modules*

Section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA (42 U.S.C. 6293(b)) to add subsection (11), which states that test procedures for traffic signal modules and pedestrian modules shall be based on the test method used under the "ENERGY STAR program" for traffic signal modules, as in effect on August 8, 2005. Section 4 of the ENERGY STAR specification in effect at that time, the "ENERGY STAR Program Requirements for Traffic Signals," version 1.1, prescribes use of the test methods from the Institute for Transportation Engineers (ITE), "Vehicle Traffic Control Signal Heads (VTCSH)," Part 2, 1985, section 6.4.2, "Maintained Minimum Luminous Intensity."

In addition, pursuant to Section 135(c)(4) of EPACT 2005, new subsection 325(z) of EPCA (42 U.S.C. 6295(z)) now requires that traffic signal modules and pedestrian modules manufactured on or after January 1, 2006, meet the performance requirements specified in the ENERGY STAR program requirements for traffic signals, version 1.1, which preclude the maximum wattage and nominal wattage of these modules from exceeding certain specified levels. See 70 FR 60417; 10 CFR section 431.226(a).

However, neither EPCA nor ENERGY STAR nor section 6.4.2 of VTCSH Part 2 referenced in the ENERGY STAR test procedure, provides a definition of the energy consumption of traffic signal modules or pedestrian modules (i.e., nominal or maximum wattage). The Department proposes to clarify both the standards and test conditions for these products by adopting the following definitions of nominal wattage and maximum wattage into § 431.222:

- Nominal wattage means the power consumed by the module when it is operated within a chamber at a temperature of 25 °C after the signal has been operated for 60 minutes.
- Maximum wattage means the power consumed by the module after being

operated for 60 minutes while mounted in a temperature testing chamber so that the lensed portion of the module is outside the chamber, all portions of the module behind the lens are within the chamber at a temperature of 74 °C, and the air temperature in front of the lens is maintained at a minimum of 49 °C.

The Department developed these definitions by drawing on language in the VTCSH test procedure and from consultations with ITE. The Department believes the definitions are consistent with the test procedure, and with the standards EPCA now prescribes for traffic signal and pedestrian modules, which were developed based on application of the test procedure. Thus, DOE believes the proposed definitions reflect the intent of ITE and the ENERGY STAR program in developing the test procedures and standards. The Department invites comment on these definitions.

Sections 6.4.2.1 and 6.4.2.2 of VTCSH Part 2 may be viewed as leaving gaps in the method for measuring nominal and maximum wattages. Specifically, they direct the user to measure the nominal and maximum wattage without addressing the accuracy of the wattage sensor nor the time duration for measuring power consumption during conduct of the test. The Department believes ITE may not have specified the details of how to measure these values since they generally accepted procedures which a test laboratory would be familiar with and would affect the results. However, the Department invites comment on this view and whether DOE should specify detailed test methods for these points. If DOE finds it necessary, the Department will develop, and incorporate into the test procedure, requirements on these two points is a separate proceeding from this rulemaking.

As noted above, EPCA provides that the test procedures for both traffic signal and pedestrian modules must be based on the ENERGY STAR specification for traffic signal modules, (i.e., 6.4.2 of VTCSH Part 2). VTCSH Part 2 does not mention or, by its terms, apply to pedestrian modules. However, upon careful consideration and review of VTCSH Part 2, the Department believes the test procedures in VTCSH Part 2 for determining maximum and nominal wattages of traffic signal modules are equally applicable to testing pedestrian modules. Thus, the Department proposes to apply the VTCSH Part 2 test procedures for determining maximum and nominal wattage of traffic signal modules to pedestrian modules, without modification except for the type of module being tested. The Department

requests comments about the technical feasibility of this proposal.

DOE is proposing to incorporate by reference the test methods for measuring the maximum and nominal wattages as contained in the test specifications in section 4 of the "ENERGY STAR Program Requirements for Traffic Signals," version 1.1, and section 6.4.2 of VTCSH Part 2 (1985). DOE is aware that ITE recently updated the VTCSH to the June 27, 2005, version, referred to as VTCSH (2005). DOE is not proposing to adopt VTCSH Part 2 (2005) because it extended coverage to products not covered by EPACT 2005, uses a format that is not conducive to incorporation in the DOE test procedure, and added a number of testing requirements DOE does not find necessary to meet the requirements of EPACT 2005. In the 2005 update, for example, ITE re-organized the document, splitting apart and moving some of the provisions from previous section 6.4.2, "Maintained Minimum Luminous Intensity" of VTCSH Part 2 (1985) into section 6.4.2, "Conditioning of Modules" and section 6.4.4, "Photometric and Colorimetric Tests." The Department found the specific testing requirements for measuring the nominal wattage and the maximum wattage of the module to be in sections 6.4.4.1, 6.4.4.4, and 6.4.4.5 of VTCSH (2005). Specifically, the Department is only interested in the testing requirements in sections 6.4.4.1, 6.4.4.4, and 6.4.4.5 for red and green signal modules. In addition, VTCSH (2005) specified that the test should be performed with modules energized at nominal operating voltage unless the test requirements explicitly state otherwise. Since the requirements for nominal and maximum wattage measurements found in section 6.4.4 of VTCSH (2005) are more detailed and increase testing burden, the Department is not adopting the more stringent requirements in VTCSH (2005). The Department also found that the number of modules tested for the photometric and colorimetric tests in VTCSH (2005) was three, instead of the six required by VTCSH (1985), and that the three units be subjected to environmental tests. However, the Department is only concerned with testing for nominal wattage and maximum wattage and is not requiring manufacturers to conduct the environmental tests on their modules. Consequently, the Department is proposing to adopt the VTCSH (1985) as specified by ENERGY STAR.

In sum, the Department has examined the ENERGY STAR specifications for traffic signals in effect on August 8, 2005, and the VTCSH (1985) testing procedures it references and believes,

with the addition of definitions of maximum wattage and nominal wattage and of provisions addressing the accuracy of the wattage sensor and the duration of the test, the test methods in these documents provide a sound basis for measuring the maximum and nominal wattages, and determining compliance with the applicable standards, for traffic signal and pedestrian modules. Therefore, DOE adoption of these test methods would satisfy the requirements of section 323(b)(3) of EPCA (42 U.S.C. 6293(b)(3)). Adoption of these test methods would also satisfy EPCA's requirement that the test procedures for traffic signal modules and pedestrian modules be based on the ENERGY STAR specification in effect on August 8, 2005. For these reasons, DOE is proposing to incorporate by reference the test methods for measuring the maximum and nominal wattages as contained in the test specifications in section 4 of the "ENERGY STAR Program Requirements for Traffic Signals," version 1.1, and section 6.4.2 of VTCSH Part 2 (1985).

#### *J. Refrigerated Bottled or Canned Beverage Vending Machines*

Section 135(a)(3) of EPACT 2005 amends section 321 of EPCA to add subsection 321(40) (42 U.S.C. 6291(40)), which defines the term "refrigerated bottled or canned beverage vending machine" as a "commercial refrigerator that cools bottled or canned beverages and dispenses the bottled or canned beverages on payment." Section 135(c)(4) of EPACT 2005 amends section 325 of EPCA to add subsection 325(v)(2) (42 U.S.C. 6295(v)(2)), which directs the Secretary to prescribe, by rule, energy conservation standards for this equipment. Further, section 135(b)(1) of EPACT 2005 amends section 323(b) of EPCA by adding subsection 323(b)(15) (42 U.S.C. 6293(b)(15)), which states that test procedures for refrigerated bottled or canned beverage vending machines "shall be based on [ANSI/ASHRAE] Standard 32.1–2004, entitled 'Methods of Testing for Rating Vending Machines for Bottled, Canned or Other Sealed Beverages.'" Also pursuant to section 135(b)(2) of EPACT 2005, new subsection 323(f) of EPCA, 42 U.S.C. 6293 (f)(1), directs the Secretary to prescribe testing requirements for refrigerated bottled or canned beverage vending machines no later than two years after the enactment of EPACT 2005, that is August 8, 2007. (42 U.S.C. 6293(f)(1)) This section also directs DOE to base such testing requirements on existing industry test procedures, to the

maximum extent practicable. (42 U.S.C. 6292(f)(2))

Section 6.2 of ANSI/ASHRAE Standard 32.1–2004, "Methods of Testing for Rating Vending Machines for Bottled, Canned or Other Sealed Beverages," on "Voltage and Frequency," allows for testing "vending machines with dual nameplate voltages at both voltages or at the lower of the two voltages." The Department's understanding is that test results for a given piece of dual-voltage equipment would not be affected by the voltage during testing. Consequently, the Department proposes to test beverage vending machines at the lower voltage, as allowed by the standard, to characterize the energy consumption, as EPACT 2005 intended. The Department requests comments on this proposal.

The Department has examined ANSI/ASHRAE Standard 32.1–2004 and believes it provides sound methods for testing the energy efficiency of a refrigerated bottled or canned beverage vending machine, and that it satisfies the requirements of section 323(b)(13) of EPCA (42 U.S.C. 6293(b)(13)). Therefore, the Department proposes to incorporate this test procedure by reference into 10 CFR Part 431. After it adopts a test procedure for refrigerated bottled or canned beverage vending machines, the Department intends to establish by rule energy conservation standards for such equipment, as directed by section 325(v) of EPCA.

#### *K. Commercial Package Air-Conditioning and Heating Equipment*

Section 136(f)(1)(A) of EPACT 2005 amends section 343(a)(4)(A) and (B) (42 U.S.C. 6314(a)(4)(A) and (B)) to require test procedures for air-cooled package air conditioning and heating equipment rated at or above 240,000 and below 760,000 British thermal units per hour (Btu/h) cooling capacity (defined as "very large" equipment under section 136(a)(3) of EPACT 2005, 42 U.S.C. 6311(8)(D)). The amendment provides that the test procedure for such equipment shall be the "generally accepted industry testing procedures or rating procedures developed or recognized by the Air-Conditioning and Refrigeration Institute or by the American Society of Heating, Refrigerating and Air-Conditioning Engineers, as referenced in ASHRAE/IES Standard 90.1 and in effect on June 30, 1992." (42 U.S.C. 6314(a)(4)(A)) It also provides in essence that, DOE must adopt any amendment to such test procedure unless it determines that the amended test procedure would fail to meet EPCA's general requirements for

test procedures. (42 U.S.C. 6314(a)(4)(B))

The test procedures in effect on June 30, 1992, for very large commercial package air conditioning and heating equipment were the ARI Standard 340–1986, "Commercial and Industrial Unitary Heat Pump Equipment," and ARI Standard 360–1986, "Commercial and Industrial Unitary Air-Conditioning Equipment." ARI subsequently replaced these test standards with ARI Standard 340/360–93, "Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment," and then ARI Standard 340/360–2000, "Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment." The Department understands that neither of these new versions of ARI Standard 340/360 altered the efficiency test methods or calculation procedures that were in ARI Standards 340 and 360 as in effect on June 30, 1992. Nor did the new versions alter the measured efficiencies for the equipment being tested.

In an October 21, 2004, direct final rule, "Test Procedures and Efficiency Standards for Commercial Air Conditioners and Heat Pumps," the Department adopted test procedures for small commercial package air-conditioning and heating equipment (cooling capacities less than 135,000 Btu/h), and for large commercial package air conditioning and heating equipment (cooling capacities at or above 135,000 Btu/h and less than 240,000 Btu/h) into section 431.96. 69 FR 61962. Under that rule, the Department adopted ARI Standard 340/360–2000, the most recent ARI test procedure at the time, for commercial package air-conditioning and heating equipment with cooling capacities at or above 135,000 Btu/h and less than 240,000 Btu/h. 69 FR 61971; 10 CFR 431.96. For equipment with cooling capacities at or above 65,000 Btu/h and less than 135,000 Btu/h, other than water source equipment, the Department adopted ARI Standard 340/360–2000 with four modifications (taken from ARI Standard 210/240–2003) as the applicable test procedure. 69 FR 61971–72; 10 CFR 431.96. These modifications were necessary to ensure the proper testing of certain types, or configurations, of equipment. 69 FR 61965–66. Subsequently, ARI published ARI Standard 340/360–2004, which revised ARI Standard 340/360–200 by adding the four modifications DOE had adopted, in the October 2004 direct final rule, for equipment with cooling capacities at or above 65,000 Btu/h and less than 135,000 Btu/h. ARI made no other changes. ARI Standard 340/360–

2004, "Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment," is now the most current industry test procedure for all of this equipment, including very large commercial package air conditioning and heating equipment.

In accordance with 42 U.S.C. 6314(a)(4)(B), the Department proposes to incorporate ARI Standard 340/360–2004 by reference into 10 CFR Part 431 as the test procedure for very large air-cooled commercial package air conditioning and heating equipment. This would make the DOE test procedure consistent with the amended industry test procedure. Also, the new version of ARI Standard 340/360 would be more readily available to users than the prior version. And finally, DOE is aware of no basis for concluding that the new version fails to meet the general requirements for test procedures in 42 U.S.C. 6313(a)(2) and (3).

The Department also proposes to replace the references to ARI Standard 340/360–2000, as well as the modifications to the standard, with references to ARI Standard 340/360–2004 in the test procedures in 10 CFR Part 431 for all small and large commercial package air conditioning and heating equipment (cooling capacities equal to, and greater than, 65,000 Btu/h, but less than 240,000 Btu/h), except for water-source heat pumps with cooling capacities of less than 135,000 Btu/h. For the latter, the applicable test procedure is ISO Standard 13256–1 1998.

As indicated above, ARI Standard 340/360–2004 changes the previous version of ARI Standard 340/360 only by incorporating provisions in DOE's test procedures. Thus, incorporation of ARI Standard 340/360–2004 will not alter DOE's test procedure.

#### *L. Commercial Refrigerators, Freezers, and Refrigerator-Freezers*

Section 136(f)(1)(B) of EPACT 2005 amends section 343 of EPCA by adding subsection (a)(6)(A)(i) (42 U.S.C. 6314(a)(6)(A)(i)), which prescribes test procedures for commercial refrigerators, freezers, and refrigerator-freezers. New subsection 343(a)(6)(A)(ii) requires that ASHRAE Standard 117, as in effect on January 1, 2005, shall be the initial test procedure for equipment to which standards are applicable under section 342(c)(2)–(3) of EPCA (Section 136(c) of EPACT 2005, 42 U.S.C. 6313(c)(2)–(3)), (i.e., (1) commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and designed for holding temperature applications, and (2) commercial

refrigerators with a self-contained condensing unit, designed for pull-down temperature applications, and with transparent doors). (42 U.S.C. 6314(a)(6)(A)(ii)) ASHRAE Standard 117–2002, "Method of Testing Closed Refrigerators," was in effect on January 1, 2005. Also new subsection 343(a)(6)(E) provides that, if ASHRAE Standard 117 is amended, the Secretary must address whether to amend the test procedures for this equipment. (42 U.S.C. 6314(a)(6)(E))

ASHRAE Standard 117–2002 was recently revised and combined with ASHRAE Standard 72–1998, "Methods of Testing Open Refrigerators," into ASHRAE Standard 72–2005, "Method of Testing Commercial Refrigerators and Freezers," as part of the ASHRAE revision process. ASHRAE Standard 72–2005 clarifies or modifies certain door opening requirements, shelf loading requirements, definitions, and the reporting of results. Also, it improves upon the precision of its predecessor test procedures by providing exact specifications for testing conditions, testing instruments, pressure and temperature testing locations, and the timing of each measurement within the refrigeration cycle. In addition, ASHRAE Standard 72–2005 contains new requirements that improve the consistency of ambient temperature measurements.

Since ASHRAE Standard 117–2002 is the initial test procedure mandated by subsection 343(a)(6)(A)(ii) of EPCA (42 U.S.C. 6314(a)(6)(A)(ii)), and ASHRAE amended this test procedure in ASHRAE Standard 72–2005, DOE reviewed Standard 72–2005 pursuant to subsection 343(a)(6)(E)(i) (42 U.S.C. 6314(a)(6)(E)(i)). Based on the review, the Department believes no basis exists for concluding that the new standard fails to meet the general requirements for test procedures in 42 U.S.C. 6313(a)(2) and (3), and is proposing to incorporate it by reference into 10 CFR Part 431. Also, because EPCA defines refrigeration equipment compartment volumes, for purposes of standards for this equipment, in terms of ANSI/AHAM Standard HRF–1–1979, "Association of Home Appliance Manufacturers Standard for Household Refrigerators, Combination Refrigerator-Freezers, and Household Freezers" (Section 136(c) of EPACT 2005; 42 U.S.C. 6313(c)(1)(A) and (B)), DOE is proposing to incorporate by reference into 10 CFR Part 431 this standard. Finally, the Department has included in proposed section 431.64(b)(3) of today's rule the applicable rating temperatures for this equipment prescribed under

subsection 343(a)(6)(B) of EPCA (42 U.S.C. 6314(a)(6)(B)).

In addition, section 136(h)(3) of EPACT 2005 amends section 345 of EPCA (42 U.S.C. 6316) to add subsection (e)(5)(A), which requires manufacturers of the equipment covered by the standards in section 342(c)(2)–(3) of EPCA (Section 136(c) of EPACT 2005, 42 U.S.C. 6313(c)(2)–(3)) "to certify, through an independent, nationally recognized testing or certification program, that the commercial refrigerator, freezer, or refrigerator-freezer meets the applicable standard."<sup>6</sup> Also, the Secretary is required to encourage the establishment of at least two independent testing and certification programs. (42 U.S.C. 6316 (e)(5)(B)) The Department is not proposing separate manufacturer certification reporting procedures for these commercial refrigerators, freezers, and refrigerator-freezers, although the proposed rules would allow manufacturers to have third parties, such as certification organizations, submit such reports on their behalf. But to meet the statutory requirement of certifying through an independent testing or certification program, manufacturers of this equipment would have to use such programs to develop the efficiency ratings on which they base their certification reports.

Section 136(c) of EPACT 2005 amends section 342 of EPCA by adding subsection 342(c)(4) (42 U.S.C. 6313(c)(4)), which directs the Secretary to develop standards for ice-cream freezers; commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors; and commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit. Furthermore, new section 343(a)(6) of EPCA (Section 136(f)(1)(B) of EPACT 2005, 42 U.S.C. 6314(a)(6)), directs DOE to develop test procedures for some of this equipment. It states, first, that such test procedures must either be "generally accepted industry test procedures" or "developed or recognized" by ASHRAE or ANSI (42 U.S.C. 6314(a)(6)(A)(ii)), second, what the rating temperature must be for some of the equipment, (42 U.S.C. 6314(a)(6)(B)) and, third, that DOE must issue a rule, in accordance with EPCA's general test procedure requirements for commercial equipment (42 U.S.C. 6314(a)(2) and (3)), to establish the appropriate rating temperatures for the remainder of these products. (42 U.S.C.

<sup>6</sup> The standards applicable to this equipment were codified into section 431.66 of 10 CFR part 431 in the October 2005 final rule. 70 FR 60414.

6314(a)(6)(C)) ARI recently developed methods for testing such commercial refrigeration equipment in ARI Standard 1200–2006, “Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets.”

In general, ARI Standard 1200–2006 provides testing and rating requirements for commercial refrigerated display merchandisers and storage cabinets, both those with self-contained condensing units and those with remote condensing units. It covers commercial refrigerated display merchandisers regardless of whether they are open or closed, or for service or self-service. The ARI Standard was developed to provide guidance to the commercial refrigeration industry and allows comparison of energy consumption among remote commercial refrigerated display cases, and among self-contained commercial refrigerated display cases. The Standard provides rating conditions and testing requirements, and specifies equations for the calculation of energy consumption, volume, and total display area. The testing requirements are based on testing provisions in ASHRAE Standard 72–2005.

ARI Standard 1200–2006 also includes product-temperature rating specifications that require maintaining test-package temperatures during the tests. This is important for a valid comparative evaluation of energy consumption among products. For commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors, and commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit, the rating temperatures are based on the application in which the product is used. For low-temperature applications, the rating-temperature specification is an integrated average temperature of all test-package averages of 0 °F ( $\pm 2$  °F). For medium-temperature applications, the rating-temperature specification is an integrated average temperature of all test-package averages of 38.0 °F ( $\pm 2$  °F).

The rating temperature that ARI Standard 1200–2006 specifies for ice-cream freezers is an integrated average temperature of all test package averages of  $-5.0$  °F ( $\pm 2$  °F). However, ice-cream freezers with doors, which DOE understands to constitute all or the vast majority of ice-cream freezers, were covered by standards adopted in 2002 by the California Energy Commission (CEC). Therefore, this equipment appears to be subject to the requirement that its rating temperature be the integrated average temperature of “0 degrees F ( $\pm 2$  degrees F).” (Section 136(f)(B) of EPACT 2005, 42 U.S.C.

6314(a)(6)(B)(i)) But because ice-cream freezers typically operate at  $-5$  F, a test procedure that uses an integrated average temperature of 0°F ( $\pm 2$  °F) as the rating temperature for this equipment “would produce test results” that fail to “reflect [its] energy efficiency,” and DOE adoption of such a test procedure would violate section 343(a)(2) of EPCA (42 U.S.C. 6314(a)(2)). The Department notes that the 2002 CEC standards use the integrated average temperature of 0 F ( $\pm 2$ °F) as the rating temperature for all commercial freezers with doors covered by the standards, except for ice-cream freezers. For ice-cream freezers, CEC uses an integrated average temperature of  $-5.0$  °F ( $\pm 2$  °F). Because use of an integrated average temperature of  $-5.0$  °F ( $\pm 2$  °F) as the rating temperature for ice-cream freezers would be more consistent from a technical standpoint, DOE proposes to resolve the conflict between subsections 343(a)(2) and (a)(6)(B)(i) of EPCA (42 U.S.C. 6314(a)(2) and 6314(a)(6)(B)(i)) by incorporating that rating temperature into its test procedure for ice-cream freezers, as provided in ARI Standard 1200–2006.

On December 15, 2005, in response to the Department’s request for input on its Schedule Setting for the 2006 Appliance Standards Rulemaking Process (70 FR 61395), ARI urged the Department to place the standards rulemaking for ice-cream freezers, commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors, and commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit, on its high priority list because the effort requires significant work and the regulatory deadline of January 1, 2009, is just three years away. (ARI, DOE–EE–PS–2006–001, No. 18). Regarding test procedures, ARI stated that ARI Standard 1200 is undergoing an ANSI review to become a national standard, and that ARI expects ANSI to approve the standard in the second quarter of 2006. ARI therefore asked that DOE initiate a review of the standard once this process is complete.

The Department, however, reviewed ARI Standard 1200, and is proposing to adopt it as the DOE test procedure, prior to completion of the ANSI review process. The Department understands that ARI Standard 1200–2004 underwent ANSI review and received sufficient support for ANSI approval, but that ARI revised it to address the two negative votes and resubmitted it to ANSI for approval as ARI Standard 1200–2006. The Department understands that final ANSI action on this standard is now expected in the third or fourth quarter of 2006, and that

one of the negative votes has already been reversed. Because DOE anticipates ANSI approval of ARI Standard 1200–2006, it believes the standard will meet the criterion of 42 U.S.C.

6314(a)(6)(A)(i) that allows DOE to adopt, for commercial refrigeration products, test procedures that have been recognized by ANSI.

In sum, ARI Standard 1200–2006 contains rating-temperature provisions for ice-cream freezers; commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors; and commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit, which will provide a basis for accurate efficiency determinations for these types of equipment, as required under EPCA. (Section 136(f)(1)(B) of EPACT 2005; 42 U.S.C. 6314(a)(6)(C)). In addition, ARI Standard 1200–2006 requires performance tests to be conducted according to the ASHRAE Standard 72 test method, which DOE believes to be a sound method that will produce results that accurately reflect the efficiency of the products tested. The Department also understands that the method has been widely used in the industry, thus indicating that it is not unduly burdensome to conduct. Furthermore, as discussed above, the Department is incorporating ASHRAE Standard 72–2005 by reference into 10 CFR part 431 for other commercial refrigerators, freezers, and refrigerator-freezers. Thus, DOE adoption of ARI Standard 1200–2006, and the consequent use of ASHRAE Standard 72–2005 for testing the equipment under discussion here, avoids any burden that a manufacturer producing all of these types of equipment might incur if a different method was required here. Finally, DOE has reviewed the calculation methods in ARI Standard 1200–2006, as well as the definitions it provides of terms used in the test procedure, and believes they will help to produce accurate results as to the efficiency of the products being tested.

For these reasons, and in anticipation of the standards rulemaking, the Department is proposing to incorporate ARI Standard 1200–2006 by reference into 10 CFR part 431 for ice-cream freezers; commercial refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors; and for commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit. The Department requests comments on the proposed test procedures for this equipment.

Finally, the Department is proposing a definition of “ice-cream freezer,” to be included in 10 CFR 431.62. EPCA does not define this term, and a definition is needed to delineate which products will be covered by the test procedure for this equipment. Today’s proposed definition is based on the definition used in the ENERGY STAR program. The Department requests comments on that definition. The Department notes that it recently initiated a rulemaking to set standards for certain commercial refrigeration equipment, including ice-cream freezers, as directed by 42 U.S.C. 6313(c)(4)(A). That rulemaking will address the issue of which products will be covered by the standards.

#### *M. Battery Chargers and External Power Supplies*

Section 135(a)(3) of EPACT 2005 amends section 321 of EPCA by adding subsection 321(32) (42 U.S.C. 6291(32)), which defines the term “battery charger” as a “device that charges batteries for consumer products, including battery chargers embedded in other consumer products.” Similarly, section 135(a)(3) of EPACT 2005 also amends section 321 of EPCA by adding subsection 321(36) (42 U.S.C. 6291(36)), which defines the term “external power supply” as “an external power supply circuit that is used to convert household electric current into DC [direct current] or lower-voltage AC [alternating current] to operate a consumer product.” Further, section 135(c)(4) of EPACT 2005 amends section 325 of EPCA (42 U.S.C. 6295) by adding subsection (u) for battery chargers and external power supplies. Subsection 325(u)(1)(A) of EPCA (42 U.S.C. 6295(u)(1)(A)) directs the Secretary to prescribe, by rule, definitions and test procedures for measuring the energy consumption of battery chargers and external power supplies. Subsection 325(u)(1)(B) of EPCA (42 U.S.C. 6295(u)(1)(B)(i)) directs the Secretary, in establishing these test procedures, to “consider existing definitions and test procedures used for measuring energy consumption in standby mode and other modes.” Finally, subsection 325(u)(1)(E) of EPCA (42 U.S.C. 6295(u)(1)(E)) also states that the Secretary shall determine whether and to what extent to issue standards for these products. In making this determination, the Department will follow the requirements set forth in subsection 325(u)(1)(E) of EPCA. (42 U.S.C. 6295(u)(1)(E)(ii))

While EPACT 2005 addresses battery chargers and external power supplies under one general product heading, today’s notice addresses them separately. The Department elected to

treat these two products separately because (1) the nature and operation of these products is different; (2) they have separate and discrete utilities to the consumer; (3) the EPA developed separate ENERGY STAR test procedures and program requirements for these products; and (4) several stakeholders participating in the development of the EPA’s ENERGY STAR program called for separate treatment of these products.

1. **Battery Chargers.** The Department has examined the definitions and test procedures under the “ENERGY STAR Program Requirements for Products with Battery Charging Systems,” December 2005, and proposes to incorporate by reference into 10 CFR Part 430, with modifications discussed below, the test procedure presented in sections 4.0 and 5.0 of EPA’s ENERGY STAR “Test Methodology for Determining the Energy Performance of Battery Charging Systems, December 2005” (the ENERGY STAR test method).

As quoted above, subsection 325(u)(1)(B) of EPCA directs the Secretary to consider existing definitions and test procedures for measuring the energy consumption of battery chargers in standby mode and other modes. The only existing energy consumption test procedures that DOE is aware of for this product are test methods in IEEE standards and the ENERGY STAR test method. The Department examined both. It found that none of the IEEE standards was adequate and complete within itself. Only the ENERGY STAR test method, which is based on the IEEE standards, comprehensively addresses energy testing of battery chargers. Sections 4.0 and 5.0 of the ENERGY STAR test procedure were designed to measure energy consumption in the maintenance and standby modes, which appears to be appropriate for consumer products using battery chargers. The Department understands that the standby mode is a non-operational mode where no battery is present in the charger but the charger is plugged in and drawing power. The Department understands that the maintenance mode is the condition where the battery is still connected to the charger, but has been fully charged. Based on its examination of the ENERGY STAR test method, DOE believes that this test method does in fact measure energy consumption in both of these modes and that it does not measure a battery charger’s energy consumption when it is in the “active” mode, (i.e., is charging a battery). Consequently, the Department believes that it fulfills the EPCA requirements both for standby mode and “other modes,” such as maintenance mode.

In today’s notice, the Department is proposing to adopt verbatim the statutory definition of battery charger. The Department is also proposing to refine the scope of the test procedure coverage, so that the test method in today’s proposed rule has the same applicability as the test method in the ENERGY STAR program. The ENERGY STAR program limits coverage to battery chargers with an input power rating between 2 and 300 watts. The energy labeling and standards program provides a means to promote energy efficiency improvement opportunities of covered products through energy representations and standards. Smaller battery chargers, (i.e., less than 2 watts), because of their size, have few technical opportunities for affecting the energy performance and therefore, consumers would not benefit from the labeling and standards for small battery chargers. Larger battery chargers (i.e., greater than 300 watts) tend to be used for other than residential applications, and as such, are not “consumer products,” within the scope of Part B of Title III of EPCA. Thus, DOE is proposing to limit the scope of the test procedures to the same products covered by the ENERGY STAR program, (i.e., 2 to 300 watts). The Department requests comments on the test method scope of coverage contained in section 1 of Appendix Y to Subpart B of Part 430.

In general, DOE found that the ENERGY STAR test method provides sufficient detail, tolerances, and a test protocol to measure the energy consumption of battery chargers, as required under section 325(u)(1)(A) of EPCA. (42 U.S.C. 6295(u)(1)(A)) The Department also believes that this test procedure has a reasonable degree of industry support, based on comments submitted to the EPA and the public comment process that EPA and its contractors engaged in while developing this document. However, the Department has identified certain issues pertaining to specific elements contained in the ENERGY STAR test method for battery chargers. The Department requests comments on these and any other issues that may be pertinent to the Department’s proposal to adopt this test procedure for battery chargers.

The ENERGY STAR “Test Methodology for Determining the Energy Performance of Battery Charging Systems,” December 2005, provides two discrete testing procedures that measure the energy consumption of battery chargers—an abbreviated and a full test methodology. The abbreviated methodology has a test duration of 7 hours and the full test methodology has

a test duration of 48 hours. The Department proposes to adopt the full test methodology, which has a test duration of 48 hours, and invites comment on this proposal.

The Department notes that while the ENERGY STAR program exempts inductively coupled battery charging devices, the sections of the ENERGY STAR test procedure DOE is proposing to adopt, do not include this exemption. The Department believes inductively coupled battery charging devices provide an important consumer utility and are within the scope of the EPACT 2005 definition of "battery charger." Furthermore, DOE believes the nonactive energy use of inductively coupled battery charging devices, which is captured by today's proposed test procedure, would affect the energy efficiency of these devices. Thus, the Department is proposing to adopt the ENERGY STAR test procedure for battery chargers, including inductively coupled battery charging devices. The Department invites comment on this proposal.

The Department understands that certain battery charger designs draw current in short pulses and, therefore, the instrumentation requirements for testing such designs should be capable of fully measuring the energy consumed by these pulses. Based on DOE review, the ENERGY STAR test methodology for a battery charger during testing does not adequately address non-sinusoidal waveforms, including these short pulses of current. Therefore, in order to address this, the Department proposes adding a requirement in section 3 of Appendix Y to Subpart B of Part 430 that addresses the capability of testing equipment to account for crest factor and frequency spectrum in the measurement, in addition to the other ENERGY STAR requirements specified in section 4.0 of the ENERGY STAR test methodology for battery chargers.

Finally, the Department understands that some battery chargers for consumer products can operate over a wide range of input voltages and frequencies. For regulatory purposes in the United States, the Department is only concerned with the performance of a battery charger closest to U.S. voltage conditions, namely 115 volts, 60 hertz. Therefore, the Department proposes to require that manufacturers only conduct this test procedure at this voltage.

Notwithstanding the issues identified above, the EPA's ENERGY STAR "Test Methodology for Determining the Energy Performance of Battery Charging Systems, December 2005" satisfies the provisions of section 135(c)(4) of EPACT 2005 to provide a test procedure for

measuring the energy consumption of battery chargers. Therefore, DOE proposes to incorporate by reference sections 4.0 and 5.0 of this ENERGY STAR document along with the modifications detailed above into 10 CFR part 430.

2. External Power Supplies. The Department proposes to incorporate by reference into 10 CFR Part 430 sections 4 and 5 of the EPA's ENERGY STAR "Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies (August 11, 2004)." The Department found that this test procedure provides sufficient detail, tolerances, and test protocols to measure the energy consumption of external power supplies required under section 325(u) of EPCA, as amended. 42 U.S.C. 6295. The Department also believes that this test procedure has a reasonable degree of industry support, based on comments submitted to the EPA and the public comment process that EPA engaged in while developing these test methods.

Notwithstanding, the Department has identified certain issues pertaining to the ENERGY STAR test procedure for external power supplies. The Department requests comments on these and any other issues that may be pertinent to the Department's proposal to adopt this test procedure for external power supplies.

EPCA, as amended by EPACT 2005, defines external power supply as a circuit that is used to convert household electric current into DC current or lower-voltage AC current to operate a consumer product. 42 U.S.C. 6291(36). In today's notice, the Department is proposing to adopt the statutory definition verbatim. Additionally, the Department is proposing to make the scope of applicability for the test method consistent with that of the ENERGY STAR program, which was designed to address external power supplies used with consumer electronics. The Department believes that the proposed scope of coverage for the external power supply test method does not deviate substantively from the statutory definition, since it is drafted to be applicable to these devices powering consumer electronics. The Department requests comments on the test method scope of coverage contained in section 1 of the new Appendix Z to Subpart B of Part 430.

The Department also understands that some external power supplies for consumer products can operate over a wide range of input voltages and frequencies. For regulatory purposes in the United States, the Department is only concerned with the performance of

an external power supply closest to U.S. voltage conditions, namely 115 volts, 60 hertz. Therefore, the Department proposes to require that manufacturers only conduct this test procedure at these voltage conditions.

Furthermore, ENERGY STAR measures the energy consumption of the external power supply at 25, 50, 75, and 100 percent of rated current output. The efficiencies at each loading point are calculated, and then a simple average is calculated to indicate the efficiency of the unit. The Department invites stakeholders to comment on this methodology for determining the active mode efficiency of the device.

The Department understands that power factor, defined as the ratio of actual power drawn in watts to apparent power drawn in volt-amperes, affects the efficiency of electric utility distribution systems. Power factor correction processes are used to adjust this ratio (i.e., the power factor) towards a value of 1.0. The Department invites comments on power factor as it relates to the test procedure proposed for external power supplies. The Department is concerned that, from a utility distribution system perspective, the aggregate effect of external power supplies with low power factors would increase distribution system losses.

Notwithstanding the issues identified above, the EPA's ENERGY STAR "Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies," August 11, 2004, satisfies the provisions of section 135(c)(4)(ii) of EPACT 2005 to provide a test procedure for measuring the energy consumption of external power supplies. Therefore, the Department proposes to incorporate by reference sections 4 and 5 of this ENERGY STAR document along with the modifications detailed above into 10 CFR Part 430.

#### **IV. Discussion—Compliance and Enforcement**

##### *A. Sampling, Manufacturer Certification, and Enforcement—General*

EPACT 2005 does not specify sampling, manufacturer certification, or DOE enforcement procedures for ensuring compliance with the standards. The Department previously adopted such certification and enforcement procedures for the consumer products that EPCA already covered. These procedures are found in § 430.24 and subpart F to 10 CFR part 430. The Department has reviewed those procedures, and generally bases today's sampling, certification, and

enforcement proposals on them. In addition, on December 13, 1999, the Department previously proposed sampling, certification and enforcement provisions for commercial heating, air conditioning and water heating products (hereafter referred to as the "December 1999 proposed rule"). 64 FR 69598. That rulemaking is still pending with respect to those proposals, and DOE recently published a supplemental notice of proposed rulemaking that seeks comment on alternatives to certain of those proposals (hereafter referred to as the "April 2006 supplemental notice"). 71 FR 25103. Some of today's proposals are drawn from the December 1999 proposed rule and the 2006 supplemental notice.

For each consumer product that EPCACT 2005 covers and for which DOE proposes test procedures in today's notice, the Department is proposing sampling requirements. These requirements address the number of units of each basic model a manufacturer must test as the basis for rating the model and determining whether it complies with the applicable standard. These sampling plans follow the approach for sampling found in 10 CFR part 430. Once DOE has adopted its final rule containing test procedures and sampling requirements for these consumer products (i.e., ceiling fans, ceiling fan light kits, torchieres, medium base compact fluorescent lamps, and dehumidifiers), each product would automatically become subject to the existing manufacturer certification and DOE enforcement provisions in 10 CFR part 430. These provisions are § 430.62 for certification, and §§ 430.61, 430.71, 430.72, 430.73, and 430.74 for enforcement. Today's proposed rule also includes an amendment to section 430.62(a)(4) about information that manufacturers must include in certification reports for the consumer products the rule covers.

For each type of commercial or industrial equipment EPCACT 2005 covers and for which DOE proposes test procedures in today's notice (except very large air conditioning equipment, which is addressed below), the Department is proposing to adopt sampling requirements for manufacturer testing similar to those in Part 430 for consumer products.

The Department is also proposing to require that each manufacturer of commercial or industrial equipment file a compliance statement and certification reports. The compliance statement is essentially a one-time filing in which the manufacturer or private labeler states that it is in compliance with applicable energy conservation

requirements, and the certification reports generally provide the efficiency, or energy or water use, as applicable, for each covered basic model that it distributes. These requirements take the same approach as the certification procedures in Part 430 and incorporate, with some modifications, certification provisions that the Department proposed for commercial heating, air conditioning, and water heating equipment in the December 1999 proposed rule and the April 2006 supplemental proposed rule. In today's proposal, the Department has reorganized and renumbered these provisions to reflect the current structure of 10 CFR part 431. Moreover, as set forth in proposed Subpart T, they would apply not only to the equipment for which DOE proposes test procedures in today's notice, but also to distribution transformers and the commercial heating, air conditioning, and water heating equipment for which DOE originally proposed them. (The proposed certification procedures would not apply to electric motors, for which certification requirements are already in place in Part 431). Although DOE, provided an opportunity for comment on the application of these procedures in the December 1999 proposed rule, it will accept comment in response to this notice on their application to heating, ventilation, air-conditioning and water heating (HVAC and WH) products and to the other equipment to which DOE is now proposing to apply them.

Today's proposed rule also includes provisions as to DOE enforcement of the standards. As with the certification proposal discussed in the previous paragraph, the proposals as to DOE's initial steps in an enforcement action and manufacturer cessation of distribution of non-complying equipment, follow the approach for such provisions in Part 430 and are essentially the same procedures DOE proposed for HVAC and WH products in the December 1999 proposed rule. For enforcement testing, including, in particular, provisions on sampling during such testing and determination of compliance or non-compliance, the Department is proposing two approaches. For commercial prerinse spray valves, illuminated exit signs, traffic signal modules and pedestrian modules, and refrigerated bottled or canned vending machines, DOE believes each basic model is manufactured in relatively large quantities, similar to consumer products covered by Part 430, and the Department is proposing to adopt the same provisions that apply to

consumer products under Part 430. For automatic commercial ice makers, as well as commercial refrigerators, freezers, and refrigerator-freezers, DOE understands each basic model is manufactured in smaller quantities, similar to commercial heating, air conditioning and water heating equipment, and the Department is proposing the same provisions it proposed for those products in the 2006 supplemental notice. (The proposed enforcement procedures do not apply to electric motors, for which enforcement requirements are already in place in Subpart U of Part 431.) Moreover, only the proposed provisions as to cessation of distribution of non-complying equipment apply to distribution transformers, because DOE has already adopted provisions as to the initial steps in an enforcement action and as to enforcement testing for this equipment. 71 FR 24972.

The Department notes that, as with the certification provisions, today's proposed rule also includes provisions on DOE's initial steps in enforcement action and manufacturer cessation of distribution of non-complying equipment would apply not only to distribution transformers and equipment for which DOE is proposing test procedures in today's notice, but also to commercial HVAC and WH products for which DOE previously proposed such provisions. The Department will accept comments in response to this notice on the application of these proposals to HVAC and WH products, and to the other equipment to which DOE is now proposing to apply them.

As indicated above, in the December 1999 proposed rule, DOE proposed compliance and enforcement procedures for HVAC and WH products. On October 21, 2004, DOE adopted a final rule incorporating some of the general provisions proposed for this equipment, including certain enforcement provisions (hereafter referred to as the "October 2004 rule"). 69 FR 61916. These enforcement provisions are now set forth in §§ 431.382, 431.386 and 431.387, 70 FR 60416, previously §§ 431.191, 431.195 and 431.196 (2005). The provisions apply to "covered equipment" generally, which comprises electric motors and commercial HVAC and WH products. (10 CFR 431.2) Once DOE has adopted its final rule in this rulemaking, the commercial and industrial equipment the rule covers would automatically become subject to these enforcement provisions.

In the October 2004 rule, DOE did not adopt the 1999 proposed rule's



proposals that commercial HVAC and WH manufacturers use to determine and certify compliance, or most of its enforcement proposals, and the rulemaking continues on these proposals. In the 2006 supplemental notice, DOE sought comments on alternatives to the December 1999 proposed rule, primarily about: (1) Manufacturer sampling plans; (2) other methods for manufacturers to rate their equipment, including voluntary independent certification programs and alternative efficiency determination methods (AEDMs); and (3) sampling in enforcement testing. 71 FR 25103. Moreover, although the December 1999 proposed rule did not concern the “very large commercial package air conditioning and heating equipment” that EPCACT 2005 added to EPCA under section 340(1)(D) (42 U.S.C. 6311(1)(D)), the 2006 supplemental notice seeks comment on applying the proposals in that notice to this equipment.

The December 1999 proposed rule used subpart designations and section numbers that corresponded to the structure of 10 CFR part 431 at that time. Since then, DOE has reorganized and renumbered the rules in 10 CFR part 431 to incorporate the commercial and industrial equipment that EPCACT 2005 added. 70 FR 60407. To facilitate public review and comment on the 2006 supplemental notice, and comparison of its proposals with those in the 1999 proposed rule, DOE did not change the subpart designations and section numbers to correspond to the reorganized 10 CFR part 431. However, as DOE stated in the 2006 supplemental notice, the Department will reorganize and renumber the sampling, certification, and enforcement provisions in the final rule to reflect the new structure of 10 CFR Part 431. In addition, based on comments received on the 2006 supplemental notice and today’s proposed rule, as well as the timing of the two rulemakings, DOE will decide whether to publish two final rules or a single final rule with the sampling, certification, and enforcement provisions for commercial and industrial equipment that EPCACT 2005 added, and for commercial heating, ventilating, air conditioning, and water heating equipment.

#### *B. Sampling Plans for Compliance and Enforcement Testing*

In accordance with section 323(b)(3) of EPCA (42 U.S.C. 6293(b)(3)), any test procedure that DOE prescribes shall be reasonably designed to produce test results that measure, for example, energy efficiency or energy use, and are not unduly burdensome to conduct. The

Department proposes the use of a statistically meaningful sampling procedure for selecting test specimens of consumer products to reduce the testing burden on manufacturers, while giving sufficient assurance that the true mean energy efficiency of a basic model meets or exceeds the applicable energy efficiency standard. The Department reviewed sampling plans for consumer products and commercial and industrial equipment that could provide guidance on how many and which units to test to determine compliance.<sup>7</sup> The Department considered four factors in this process: (1) Minimizing manufacturers’ testing time and costs; (2) assuring compatibility with other sampling plans the Department has promulgated; (3) providing a highly statistically valid probability that basic models that are tested meet applicable energy conservation standards; and (4) providing a highly statistically valid probability that a manufacturer preliminarily found to be in noncompliance will actually be in noncompliance.

Based on a review of sampling plans for consumer products found in subpart F of 10 CFR Part 430, the Department considered three alternatives for the specification of test sample size: (1) Test every unit to determine with 100-percent certainty that each one complies with the statute; (2) test a predetermined number of units to yield a high level of statistical confidence (e.g., 90 percent); and (3) test until a determination can be made that a basic model does, or does not comply.

In this last alternative, the size of the total sample is not determined in advance. Instead, the manufacturer selects a sample at random from a production line and, after each unit or group of units is tested, either accepts the sample, rejects the sample, or continues testing additional sample units until a decision is ultimately reached. This method often permits reaching a statistically valid decision on the basis of fewer tests than fixed-number sampling. This third alternative is the basis for most of the statistical sampling procedures that DOE has established for consumer products under 10 CFR 430.24, Units to be Tested. The Department proposes to adopt such sampling procedures described in detail below for each of the consumer products and certain commercial and industrial equipment.

<sup>7</sup> The sampling plans reviewed for consumer products are those found in 10 CFR Part 430 and the sampling plans reviewed for commercial and industrial equipment are those found in 10 CFR Part 431 and the December 1999 proposed rule. 64 FR 69598.

In the case of actual testing, the proposed procedures require randomly selecting and testing a sample of production units of a representative model. A simple average of the values would be calculated, which would be the actual mean value of the sample. For each representative model, a sample of sufficient size would be selected at random and tested to ensure that any represented value of energy efficiency is, for example, no greater than the lower of (A) the mean of the sample; or (B) the lower 95-percent confidence limit of the mean of the entire population of that basic model, divided by a coefficient applicable to the represented value. These coefficients are intended to reasonably reflect variations in material, and in the manufacturing and testing processes.

The Department is interested in receiving comments and data concerning the accuracy and workability of these sampling plans for each product and welcomes discussion on improvements or alternatives to this approach. The Department is particularly interested in gathering comments on whether the proposed statistical sampling plan is appropriate for testing each of the consumer products in today’s notice. The Department asks stakeholders to pay close attention to the practicality and applicability of the proposed confidence limits and coefficients proposed for each consumer product. The Department also seeks comment on whether a more valid approach exists within the industry that establishes a sampling plan for the product. Finally, the Department proposes to adapt such sampling procedures for certain commercial equipment described in detail below, and invites comments on whether the approach used to develop sampling plans for consumer products should be applied to commercial equipment.

#### *C. Manufacturer Certification for Distribution Transformers*

As discussed in section IV.A. of today’s notice, the Department is proposing manufacturer certification procedures that would apply to most commercial and industrial equipment, including those distribution transformers subject to energy conservation standards. EPCACT 2005 established energy conservation standards for low-voltage dry-type distribution transformers manufactured on or after January 1, 2007. Thus, manufacturers of these transformers would be subject to the proposed certification provisions upon their adoption, although today’s proposed

rule states that manufacturers of low-voltage dry-type distribution transformers would not have to comply with these certification requirements until January 1, 2008.<sup>8</sup> The proposed certification provisions would not be applicable, however, to other types of distribution transformers (specifically, liquid-immersed and medium-voltage dry-type) unless or until the Department promulgates energy conservation standards for them.

The certification requirements have two elements: a compliance statement and certification reports. The Department is proposing a single format and set of requirements for compliance statements for all covered commercial and industrial equipment (except electric motors), including distribution transformers. The Department is proposing an approach for certification reports for distribution transformers similar to that which currently exists for electric motors, due to the large number of distribution transformer models that each manufacturer typically produces. This proposed approach is different from what DOE is proposing for other covered equipment.

For certification reporting on regulated equipment, the DOE's procedures are for manufacturers to report on the efficiency or energy or water consumption of each basic model. A basic model are those models that have no differentiating electrical, physical, or functional features that affect energy consumption. For distribution transformers, each time a change is made to a core or winding, the energy consumption of the transformer can change, making that design a different basic model. Therefore, due to the way in which distribution transformers are specified and manufactured, customized transformer designs will virtually always be a different basic model. Customized designs are necessary to meet customer requirements and to accommodate price changes in the raw materials used in the production of a distribution transformer. The Department understands that some manufacturers could produce literally thousands of basic models each year and is concerned that applying to them the same certification and reporting requirements as found in 10 CFR Part 430 could place a significant burden on distribution transformer manufacturers.

The Department considered several approaches to manufacturer certification

reporting requirements for distribution transformers, and decided to propose a methodology similar to the one electric motor manufacturers follow. 10 CFR 431.36(b)(2) and Appendix C to Subpart B of Part 431. The Department is proposing this methodology because (1) manufacturers would still be required to certify in the compliance statement that all basic models manufactured or imported will meet or exceed the minimum efficiency standards; (2) it would minimize the reporting burden on manufacturers; and (3) the Department believes that manufacturers of electric motors and distribution transformers encounter similar market dynamics and manufacturing issues.

The Department proposes that each distribution transformer manufacturer submit a certification report on the efficiency of the least efficient basic model within a kilovolt-ampere (kVA) group. For low-voltage dry-type distribution transformers, kVA groups would be defined as the combination of a kVA rating and number of phases for a transformer, as presented in the table of efficiency values in § 431.196, as amended by the October 2005 final rule. 70 FR 60417. These are the groupings EPACT 2005 uses for the minimum efficiency standards for low-voltage dry-type distribution transformers: single-phase kVA groups would be 15 kVA, 25 kVA, 37.5 kVA, and so on; and three-phase kVA groups would include 15 kVA, 30 kVA, 45 kVA, and so on. In total, for low-voltage dry-type distribution transformers, there would be 20 kVA groups. A manufacturer may have several basic models within any one of these 20 kVA groups (e.g., 25 kVA, single-phase), but it would only certify to the Department the efficiency of the basic model that had the lowest efficiency within that kVA group. Basic models that have non-standard kVA ratings (i.e., falling between two kVA groups) would be included in the next higher kVA group. This approach is consistent with how the Institute of Electrical and Electronics Engineers (IEEE) treats non-standard kVA ratings with respect to manufacturing and testing requirements.

Depending on the outcome of the rulemaking regarding energy conservation standards for liquid-immersed and medium-voltage dry-type distribution transformers, the number of groupings for which DOE promulgates standards for these transformers might be greater than the number for low-voltage dry-type distribution transformers. If the Department adopts equipment categories and energy conservation standards for liquid-immersed distribution transformers,

which reflect the methodology followed under the rulemaking for low-voltage dry-type distribution transformers, then groups of kVA values would be created based on insulation type (liquid-immersed) and the number of phases (single or three). Similarly, if the Department adopts equipment categories and energy conservation standards for medium-voltage dry-type distribution transformers, then groups of kVA values would be created based on the insulation type (dry-type), number of phases (single or three), and the basic impulse insulation level, or BIL rating, such as 20–45 kV BIL, 46–95 kV BIL, and greater than 96 kV BIL.

In today's proposed rule, DOE is proposing that manufacturers set forth in their certification reports the efficiency of their least efficient basic model in each kVA group that is delineated by these factors. (Should the final rule regarding energy conservation standards for liquid-immersed and medium-voltage dry-type distribution transformers contain standards based on a different grouping, DOE would revise its requirements for certification reports accordingly.) The Department believes the approach is appropriate, in view of the potentially large number of basic models of distribution transformers manufactured each year. Further, by certifying that the least efficient basic model within a particular kVA group meets the applicable energy conservation standard, the manufacturer would, in effect, be certifying that all basic models produced within that kVA group have an efficiency equal to or greater than the certified efficiency rating. In summary, a manufacturer would submit to DOE the certification report in conjunction with a compliance statement affirming that all distribution transformers produced by that manufacturer will be at, or above, the applicable energy conservation standards detailed in § 431.196 of 10 CFR Part 431. Moreover, the Department believes that the proposed certification report would minimize the reporting burden on manufacturers while fulfilling the purposes served by the compliance statement and certification report required for consumer appliances at 10 CFR 430.62.

For new basic models that a manufacturer produces or imports subject to energy conservation standards for distribution transformers, the Department proposes to follow the methodology recommended by the National Electrical Manufacturers Association (NEMA) for electric motors and adopted by the Department. By responding to changing customer requirements and input-material price

<sup>8</sup> The Department expects this rulemaking to be finalized in November 2006. The standards for low-voltage dry-type distribution transformers go into effect on January 1, 2007. Therefore, the Department is providing manufacturers until January 1, 2008 for testing and submittal of reports.

volatility, distribution transformer manufacturers will continue to introduce new basic models across their product offerings. The Department seeks to avoid imposing a burden of excessive reporting of certification reporting for such new basic models. Therefore the Department proposes that certification reports will be submitted only if the manufacturer has not previously submitted to DOE a certification report for a basic model of distribution transformer that (1) is in the same kVA grouping as the new basic model, and (2) has a lower efficiency than the new basic model.

#### *D. General Requirements for Consumer Products and Commercial and Industrial Equipment*

Consumer products and commercial and industrial equipment covered by DOE's regulations are subject to various provisions in 10 CFR Parts 430 and 431, respectively. These provisions address a variety of matters, such as waivers of applicable test procedures, treatment of imported and exported equipment, maintenance of records, subpoenas, confidentiality of information, and petitions to exempt state regulations from preemption. Once DOE has adopted its final rule, the consumer products and commercial and industrial equipment covered by the rule would, by virtue of such action, automatically become subject to such provisions. For consumer products, those provisions are in §§ 430.27, 430.40 through 430.49, 430.50 through 430.57, 430.64, 430.65, 430.72, and 430.75 of 10 CFR Part 430. For commercial equipment, those provisions are in §§ 431.401, 431.403 through 431.407, and 431.421 through 431.430, 70 FR 60417, which previously were §§ 431.201, 431.203 through 431.207, and 431.211 through 431.220 (2005).

The Department is also proposing in today's rule provisions as to the preemption of State energy use and efficiency regulations for the consumer products and commercial or industrial equipment which were added to EPCA by EPACT 2005. The EPACT 2005 amendments to EPCA include various provisions concerning preemption with respect to these products and equipment. 42 U.S.C. 6295(ff)(7), 6295(gg), and 6316(e). All of the provisions applicable to consumer products provide that, once Federal energy conservation standards take effect for a product, the preemption requirements of section 327 of EPCA (42 U.S.C. 6297) become applicable to any State or local standard for that product. 42 U.S.C. 6295(ff)(7) and 6295(gg). The Department's existing rules for covered

consumer products essentially embody such a requirement, providing that any Federal standard that is in effect for "a covered product" preempts any State standard for the product that is not identical to the Federal standard, except as otherwise provided in section 327 of EPCA. 10 CFR 430.33 Since this provision of DOE regulations is consistent with EPCA's preemption provisions for the newly covered consumer products, the Department proposes to make it applicable to them. This will occur as a consequence of DOE's amendment, as proposed today, of its definition of "covered product" in 10 CFR 430.2 to add battery chargers, ceiling fans, ceiling fan light kits, external power supplies, medium base compact fluorescent lamps, and torchieres to the list of covered products.

For the new commercial and industrial equipment added to EPCA by EPACT 2005, the pattern is largely the same as for consumer products. A common element of the preemption provisions for most of this equipment is that, once Federal energy conservation standards take effect for a type of equipment, the preemption requirements of section 327 of EPCA (42 U.S.C. 6297) become applicable to any State or local standard for that equipment. 42 U.S.C. 6295(gg) and 6316(d) through (f). Although current DOE rules address preemption with respect to electric motors, 10 CFR 431.26, and commercial heating, air conditioning and water heating equipment, 10 CFR 431.202, these provisions are specific to those products and do not concern commercial and industrial equipment generally. Therefore, for the commercial and industrial equipment added to EPCA by EPACT 2005, as well as distribution transformers, proposed § 431.408 of today's proposed rule contains provisions on preemption that are similar to those in 10 CFR 430.33 for consumer products. However, for commercial refrigerators, freezers, and refrigerator-freezers, as well as automatic commercial ice makers and commercial clothes washers, EPCA sets schedules for DOE to issue rules as to amendment of the initial standards, and suspends preemption during certain periods for any equipment for which DOE does not issue such a rule on schedule. 42 U.S.C. 6313(c)(5), (d)(3), and (e)(2), and 6316(e)(4), (f)(3), and (g)(1). The Department references these limitations on preemption in proposed section 431.408 of 10 CFR Part 431.

#### **V. Corrections to the Recent Technical Amendment to DOE's Energy Conservation Standards**

In the final rule that will result from today's notice, the Department intends to incorporate minor revisions to the October 18, 2005, final rule in which it adopted a technical amendment to its energy conservation standards for certain consumer products and commercial and industrial equipment. 70 FR 60407. These revisions consist of editorial corrections, corrections to errors in fact, and clarifying language. Each of the revisions will be added to the appropriate section of the CFR in the final rule. Because the revisions will simply conform DOE's regulations to EPACT 2005's recent amendments to EPCA, DOE neither is required to seek, nor seeks, public comment on them. The corrections and clarifications to the October 2005 final rule are as follows:

1. In section 430.2, in the definition of "Dehumidifier," DOE will change "and mechanically encased assembly" to "and mechanically refrigerated encased assembly." The definition now in section 430.2 is the same as the definition in EPACT 2005. The EPACT 2005 definition, however, appears to be drawn from definitions in ANSI/AHAM Standard DH-1-2003 and the ENERGY STAR program, both of which include the word "refrigerated." The Department also believes that an assembly is not properly described as "mechanically encased." Therefore, the Department will add the word "refrigerated," as indicated, as a clarifying modification to the definition of "Dehumidifier."

2. In § 430.32(u), the Department will make the following changes in the table on standards for medium base CFLs:

- a. In the "Requirements" column and opposite "Lamp Power (Watts) & Configuration," change "Minimum Efficiency: lumen/watt" to "Minimum Efficacy: lumens/watt."

- b. In the "Factor" column, change "Base Lamp" to "Bare Lamp."

- c. In the "Factor" column, delete the reference to "Covered Lamp (with reflector)," "Lamp Power <20," and "Lamp Power >20" because these products are not covered under EPACT 2005. Correspondingly, delete "33.0" and "40.0" from the "Requirements" column.

- d. In the "Requirements" column, opposite "Average Rated Lamp Life," delete "and qualification form." The clause would then read, "as declared by the manufacturer on packaging."

- e. In footnote 1, change "in the base up an/or" to "in the base up and/or."

3. In section 431.97(b), the Department will make the following changes:

a. In the text preceding Table 1 in paragraph (a), the Department will add the words “in the case of air-cooled equipment with a capacity greater than 65,000 Btu per hour,” after the date “January 1, 2010.” This change is needed because the new standards promulgated in section 136(b)(5) of EPACT 2005 for commercial package air-conditioning and heating equipment apply only to air-cooled equipment larger than 65,000 Btu per hour. (42 U.S.C. 6313(a)(7)–(9)) The change makes clear that the minimum cooling efficiency levels (shown in Table 1) and minimum heating efficiency levels (shown in Table 2) for water cooled, evaporatively cooled, and water-source equipment with cooling capacities less than 240,000 Btu/h and air-cooled three-phase equipment with cooling capacities of less than 65,000 Btu/h will remain applicable after January 1, 2010. Standards in section 431.97(b) for air-cooled equipment also will be updated after January 1, 2010.

b. In the text preceding the table, the Department will add the term “Air-cooled” at the beginning, and will insert the words “with cooling capacities equal to or greater than 65,000 Btu/h and less than 760,000 Btu/h” after the date “January 1, 2010.” These changes are needed to more accurately describe the equipment covered by the efficiency standards set forth in section 431.97(b).

c. In the table, DOE will change “Very large commercial package air conditioning (air-cooled)” to “Very large commercial package air conditioning and heating equipment (air-cooled).” This change will correct the inadvertent omission of three words, and conforms the language of the table to that of the relevant provisions of EPACT 2005.

4. In § 431.226(a) for traffic signal modules and pedestrian modules, change the requirements from “a nominal wattage no greater than” to “a nominal wattage and maximum wattage no greater than.” This change will conform the language introducing the table in section 431.226(a) with the headings in the table.

## VI. Procedural Requirements

### A. Review Under Executive Order 12866, “Regulatory Planning and Review”

Today’s proposed rule is not a “significant regulatory action” under section 3(f)(1) of Executive Order 12866, “Regulatory Planning and Review.” 58 FR 51735 (October 4, 1993). Accordingly, today’s action was not

subject to review by the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB).

### B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis 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. A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative impacts. Also, 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. The Department has made its procedures and policies available on the Office of General Counsel’s Web site: <http://www.gc.doe.gov>.

EPACT 2005 amended EPCA to incorporate into DOE’s energy conservation program certain consumer products and commercial and industrial equipment, including the products for which DOE is proposing test procedures in this notice. On October 18, 2005, the Department published in the **Federal Register** a technical amendment to place in the Code of Federal Regulations the energy conservation standards, and related definitions, that Congress prescribed in EPACT 2005. 70 FR 60407. Today, the Department is publishing further technical amendments to certain energy conservation standards for consumer products and commercial and industrial equipment published in the **Federal Register** on October 8, 2005. DOE is proposing to revise the Code of Federal Regulations to incorporate, essentially without substantive change, the energy conservation test procedures that Congress prescribed or otherwise identified in EPACT 2005 for certain consumer products and commercial and industrial equipment. The Department is also proposing to adopt test procedures for consumer products and commercial and industrial equipment for which EPACT did not identify specific test procedures.

The Department reviewed today’s proposed rule under the provisions of the Regulatory Flexibility Act and the

policies and procedures published on February 19, 2003. The Department conducted its examination for the products and equipment covered under EPACT 2005 in several groups: equipment for which EPACT 2005 amended EPCA to direct DOE to adopt test procedures the statute identifies; products or equipment for which the EPACT 2005 amendments to EPCA do not specifically identify any test procedure; and products or equipment for which the EPACT 2005 amendments mandate that DOE base its test procedures on test procedures the statute identifies.

EPACT 2005 establishes specific test procedures for automatic commercial ice makers; for commercial refrigerators, freezers, and refrigerator-freezers for which the statute prescribes standards; and for very large commercial package air conditioning and heating equipment (240,000 Btu/h through 760,000 Btu/h). Since EPCA now mandates the test procedures, they are incorporated into today’s proposed rule. Any costs of complying with them are imposed by EPCA and not the rule. For this equipment, the Department is merely incorporating by reference into 10 CFR Part 431 the required test procedures as the statute directs. Therefore, the Department concludes that the proposed rule would not impose a significant impact on a substantial number of small businesses producing automatic commercial ice makers; commercial refrigerators, freezers, and refrigerator-freezers; or very large commercial package air conditioning and heating equipment (240,000 Btu/h through 760,000 Btu/h).

EPACT 2005 does not prescribe test procedures for all products and equipment it addresses. For example, EPACT 2005 establishes energy conservation design requirements for commercial unit heaters. EPACT 2005 also does not prescribe a test procedure for torchieres and ceiling fan light kits other than those with medium screw base or pin-based sockets. However, the Department is proposing a test procedure for these two products and is soliciting stakeholder comment on the application of the test procedure. The Department is not aware of any domestically manufactured torchieres and ceiling fan light kits other than those with medium screw base or pin-based sockets sold in the U.S. today are manufactured either in Mexico or China. The Regulatory Flexibility Act requires examination of the impact of a

proposed rule on only U.S. firms. For these reasons, the Department certifies that the rule will not impose a significant impact on a substantial number of small businesses producing unit heaters, torchieres, or ceiling fan light kits other than those with medium screw base or pin-based sockets.

For the remaining products and equipment that EPACT 2005 covers and today's proposed rule addresses, the proposed test procedures are based on test procedures developed and already in general use by industry. Many manufacturers have been redesigning the products and equipment covered under today's proposed rule, and testing them for compliance with existing voluntary performance standards such as the ENERGY STAR program requirements, using industry-developed test procedures that are the basis for the test procedures in EPACT 2005. These products and equipment include dehumidifiers, commercial prerinse spray valves, illuminated exit signs, ceiling fan light kits with medium screw base and pin-based sockets, medium-base CFLs, traffic signal modules, and pedestrian modules. To the extent manufacturers already test their products for efficiency using the test procedures identified in EPACT 2005, and incorporated into today's proposed rule, to assure that the products meet existing energy conservation requirements, manufacturers would experience no additional burdens if DOE adopts these test procedures and requires manufacturers to use them. Furthermore, as to the test procedures proposed today that EPACT 2005 directs DOE to adopt, and arguably for the proposed test procedures that EPACT 2005 specifically identifies and states shall be the basis for the DOE test procedure, any cost of complying with the proposed rule arises from the underlying statutory requirement and not the rule itself. Moreover, for the products and equipment for which EPACT 2005 prescribes energy efficiency standards, implicit in such requirements is that manufacturers must test their products to assure compliance with the standards. For all of these reasons, DOE believes today's proposed test procedures would not impose significant economic costs on manufacturers, including small manufacturers, of these products.

Certain products and equipment—ceiling fans, battery chargers, external power supplies, and refrigerated bottled and canned beverage vending machines—are the subject of voluntary standards and/or test procedures but are not yet covered by DOE energy conservation standards. The

Department's adoption in this rulemaking of the test procedures proposed for these products would entail even less burden for their manufacturers than described in the previous paragraph, because these manufacturers would not be required to perform testing to establish compliance with standards. Thus, DOE believes the proposed rule clearly would not impose significant economic costs on small manufacturers of these products.

The proposed rule also has been drafted to minimize the testing burden for manufacturers. For example, the proposed statistical sampling procedures are based on procedures established for consumer appliance products at 10 CFR 430.24. These procedures are designed to keep the testing burden on manufacturers as low as possible, while still providing confidence that the test results can be applied to all units of the same basic model. Also, regardless of whether DOE prescribes such procedures, manufacturers would have to assure themselves that their products comply with applicable standards. The Department believes that the proposed procedures reduce the burden that manufacturers might undertake, in the absence of the procedures, to establish the compliance of their products and equipment.

As to the proposed maintenance of records and the compliance reporting requirements, they are also based largely on current industry practices for similar products and equipment under 10 CFR Part 430 and 10 CFR Part 431. Moreover, for the products and equipment covered by this notice, manufacturers participating in the ENERGY STAR program already report the energy performance of their products to EPA, and many report such performance to industry trade associations such as ARI. The Department also understands that, as a matter of sound business practice, manufacturers routinely maintain the types of records as to product and equipment testing that today's rule would require. For all of these reasons, DOE believes that the cost of complying with the proposed rule, excluding the cost inherent in complying with the applicable energy conservation standards imposed by EPACT 2005, would not be significant for small manufacturers of these products.

Based on the foregoing factual basis, DOE certifies that this proposed rule would not have a significant economic impact on a substantial number of small entities. The Department invites comments on this certification.

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

The proposed rule would require manufacturers of covered consumer products and commercial and industrial equipment to maintain records about how they determined the energy efficiency or energy consumption of their products. The proposed rule also would require manufacturers to make a one-time submission by each manufacturer, stating in essence that it is complying with the applicable energy conservation standards and test procedures, as well as certification reports that set forth the energy performance of the basic models it manufactures. The certification reports are submitted once for each basic model, either when the requirements go into effect or when the manufacturer begins distribution of that model. The proposed collections of information are necessary for implementing and monitoring compliance with the efficiency standards and testing requirements for the consumer products and commercial and industrial equipment mandated by EPCA.

Under the Paperwork Reduction Act, an agency may not conduct or sponsor a collection of information unless the collection displays a currently valid OMB control number (44 U.S.C. 3506(c)(1)(B)(iii)(V)). The certification and recordkeeping requirements for consumer products in 10 CFR Part 430 have previously been assigned OMB control number 1910-1400. The proposed certification and recordkeeping requirements for the commercial and industrial equipment in 10 CFR Part 431 must be approved and assigned a control number by OMB. DOE has submitted these proposed certification and recordkeeping requirements to OMB for review and approval under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

The following are the DOE estimates of the total annual reporting and recordkeeping burden imposed on manufacturers of commercial and industrial equipment by today's proposed rule.

- For ceiling fans the estimated number of covered manufacturing firms is 20. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 3,200 hours per year. (20 firms  $\times$  160 hours per firm).

- For ceiling fan light kits the estimated number of covered manufacturing firms is 20. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 3,200

hours per year. (20 firms  $\times$  160 hours per firm).

- For dehumidifiers the estimated number of covered manufacturing firms is 22. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 3,520 hours per year. (22 firms  $\times$  160 hours per firm).

- For medium base compact fluorescent lamps the estimated number of covered manufacturing firms is 112. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 17,920 hours per year. (112 firms  $\times$  160 hours per firm).

- For torchieres the estimated number of covered manufacturing firms is 12. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 1,920 hours per year. (12 firms  $\times$  160 hours per firm).

- For unit heaters the estimated number of covered manufacturing firms is 15. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 2,400 hours per year. (15 firms  $\times$  160 hours per firm).

- For automatic commercial ice makers the estimated number of covered manufacturing firms is 10. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 1,600 hours per year. (10 firms  $\times$  160 hours per firm).

- For commercial prerinse spray valves the estimated number of covered manufacturing firms is 5. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 800 hours per year. (5 firms  $\times$  160 hours per firm).

- For illuminated exit signs the estimated number of covered manufacturing firms is 15. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 7,840 hours per year. (49 firms  $\times$  160 hours per firm).

- For traffic signal modules and pedestrian modules, the estimated number of covered manufacturing firms is 8. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 1,280 hours per year. (8 firms  $\times$  160 hours per firm).

- For very large commercial package air-conditioning and heating equipment, the estimated number of covered manufacturing firms is 15. The total annual reporting and recordkeeping burden from compliance with the

proposed rule is expected to be 2,400 hours per year. (15 firms  $\times$  160 hours per firm).

- For commercial refrigerators, freezers, and refrigerator-freezers, the estimated number of covered manufacturing firms is 23. The total annual reporting and recordkeeping burden from compliance with the proposed rule is expected to be 3,680 hours per year. (23 firms  $\times$  160 hours per firm).

In developing the burden estimates, DOE considered that each manufacturer is required to comply with the statutory energy efficiency standards for each type of commercial and industrial equipment it is manufacturing on the effective date of the Act, and for each model it begins to manufacture after that date. The required certification would contain the type of information that many manufacturers already submit to trade associations or government agencies, such as the Environmental Protection Agency under the ENERGY STAR program. Those manufacturers should be able to comply with the proposed certification without undue burden. Moreover, DOE understands that manufacturers already maintain the types of records the proposed rule would require them to keep.

The Department believes the collection of information required by this proposed rule is the least burdensome method of meeting the statutory requirements and achieving the program objectives of the DOE compliance certification program for these products and equipment. Nevertheless, the Department invites comments concerning the estimated paperwork reporting burden. DOE is particularly interested in comments on the accuracy of DOE's burden estimates and on any means of minimizing the burden of the collection of information on manufacturers that must comply with the certification and recordkeeping requirements. Send comments to the Department in accordance with the instructions in the **DATES** and **ADDRESSES** sections and section VII.D. of this notice of proposed rulemaking, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for DOE."

#### *D. Review Under the National Environmental Policy Act of 1969*

DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and the Department's implementing regulations at 10 CFR part

1021. Specifically, this rule establishing test procedures will not affect the quality or distribution of energy and will not result in any environmental impacts, and, therefore, is covered by the Categorical Exclusion in paragraph A6 to subpart D, 10 CFR part 1021. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

#### *E. Review Under Executive Order 13132, "Federalism"*

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 developing 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 developing such regulations. 65 FR 13735. DOE examined this proposed rule and determined that it does 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. Executive Order 13132 requires no further action.

#### *F. Review Under Executive Order 12988, "Civil Justice Reform"*

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," 61 FR 4729 (February 7, 1996), imposes on Federal agencies the duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct

while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this proposed rule meets the relevant standards of Executive Order 12988.

#### *G. Review Under the Unfunded Mandates Reform Act of 1995*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104-4) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. For a proposed regulatory action likely to result in a rule that may cause expenditures 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) and (b). The UMRA 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." The UMRA also requires an agency plan for giving notice and opportunity for timely input to small governments that may be affected before establishing a requirement that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA (62 FR 12820) (also available at <http://www.gc.doe.gov>). Today's proposed 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 under the Unfunded Mandates Reform Act do not apply.

#### *H. Review Under the Treasury and General Government Appropriations Act of 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. Today's proposed rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is unnecessary to prepare a Family Policymaking Assessment.

#### *I. Review Under Executive Order 12630, "Governmental Actions and Interference With Constitutionally Protected Property Rights"*

The Department has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 53 FR 8859 (March 18, 1988), that this rule would not result in any takings that might require compensation under the Fifth Amendment to the United States Constitution.

#### *J. Review Under the Treasury and General Government Appropriations Act of 2001*

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

#### *K. Review Under Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use"*

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 the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget 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 a final rule 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 reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. Because this proposed rule would not have a significant adverse effect on the supply, distribution, or use of energy, the rule is not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects.

#### *L. Review Under Section 32 of the Federal Energy Administration (FEA) Act of 1974*

Under section 301 of the Department of Energy Organization Act (Pub. L. 95-91), the Department of Energy 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. Section 32 provides, in essence 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 Department of Justice (DOJ) and the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition.

The rules proposed in this notice incorporate certain commercial standards which EPCA requires as the basis for DOE's test procedures. These include testing standards referenced by ASHRAE, ENERGY STAR, ANSI, AHAM, ITE, ASTM, and ARI. "The ENERGY STAR Testing Facility Guidance Manual: Building a Testing Facility and Performing the Solid Stat Test Method for ENERGY STAR Qualified Ceiling Fans," includes testing standards for the measurement of airflow efficiency of ceiling fans. The "ENERGY STAR Program Requirements for RLFs," version 4.0, includes testing standards for the measurement of the efficacy of pin-based fluorescent lamps that are packaged with ceiling fan light kits. The "ENERGY STAR Program Requirements for CFLs," version 3.0, includes testing standards for the measurement of the efficacy of ceiling fan light kits with medium screw-base lamps. ANSI/AHAM HRF-1-1979, "Association of Home Appliance Manufacturers Standard for Household Refrigerators, Combination Refrigerator-Freezers, and Household Freezers," includes testing standards for the measurement of the minimum energy



factor for dehumidifiers. The "ENERGY STAR Program Requirements for CFLs," August 9 version, includes testing standards for the measurement of the initial efficacy, lumen maintenance at 1000 hours, 40 percent of rate life, rapid cycle stress, and lamp life of medium base compact fluorescent lamps. ARI Standard 810-2003, "Performance Rating of Commercial Ice Makers," and ASHRAE Standard 29-1988 (RA 2005), "Methods of Testing Automatic Ice Makers," include testing standards for the measurement of the maximum energy use and the maximum condenser water use of commercial ice makers. ASTM Standard F2324-2003, "Standard Test Method for Prerinse Spray Valves," includes testing standards for the measurement of the flow rate of commercial prerinse spray valves. The "ENERGY STAR Program Requirements for Illuminated Exit Signs," version 2.0, include testing standards for the measurement of the input power demand for illuminated exit signs. The "ENERGY STAR Program Requirements for Traffic Signals," version 1.1, and the ITE "Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement," Part 2, 1985, include testing standards for the measurement of the maximum wattage and nominal wattage of traffic signal modules and pedestrian modules. ASHRAE Standard 32.1-2004, "Methods of Testing for Rating Vending Machines for Bottled, Canned, and Other Sealed Beverages," include testing standards for the measurement of the daily energy consumption in beverage vending machines. ASHRAE Standard 72-2005, "Method of Testing Commercial Refrigerators and Freezers," includes testing standards for the measurement of the daily energy consumption of certain commercial refrigerators, freezers, and refrigerator-freezers. In these instances, the Department has some discretion to depart from the ASHRAE, ENERGY STAR, ANSI, AHAM, ITE, ASTM, and ARI standards referenced in EPACT 2005, because the DOE test procedures must be "reasonably designed to produce test results which measure energy efficiency, energy use, \* \* \* or estimated annual operating cost \* \* \* during a representative average use cycle or period of use, \* \* \* and shall not be unduly burdensome to conduct." (42 U.S.C. 6293(b)(3), 42 U.S.C. 6314(a)(2)) In addition, all DOE test procedures must be clear and complete so that they are understandable to manufacturers who must certify test results. DOE has reviewed these industry test standards

to ensure that EPCA's statutory criteria are met and that DOE's proposals are clear and complete. Today's rule contains proposed test procedures based on the required test standards enumerated in EPACT 2005, with certain modifications that have been explained in this document. Because EPCA, not today's proposed rule, requires the use of these commercial standards, section 32 of the FEAA does not apply to them. DOE lacks any discretion not to use these standards as the basis of its regulations.

The only test standards incorporated in this proposed rule that are not referenced by EPACT 2005 are ARI Standard 1200-2006, "Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets," for the measurement of the energy consumption of ice-cream freezers, refrigerators, freezers, and refrigerator-freezers with a self-contained condensing unit and without doors, and commercial refrigerator, freezers, and refrigerator-freezers with a remote condensing unit; ARI Standard 340/360-2004, "Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment," for the measurement of the energy efficiency ratio and coefficient of performance of certain commercial unitary air-conditioning and heat pump equipment; the "ENERGY STAR Test Methodology for Determining the Energy Performance of Battery Charging Systems," December 2005; the IEEE Standard 1515-2000, "IEEE Recommended Practice for Electronic Power Subsystems: Parameter Definitions, Test Conditions, and Test Methods," for the measurement of the energy consumption of battery chargers; the "ENERGY STAR Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies," August 11, 2004, for the measurement of the energy consumption of external power supplies; and the IESNA Standard LM 45-2000, "Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps," for the measurement of the total wattage of ceiling fan light kits packaged with lamps other than medium-screw base and pin-based and torchieres. Although Congress in EPACT 2005 did not require DOE to use these industry test procedures as the basis for DOE's own test procedures, the Department believes that they offer a reasonable basis for constructing new DOE test procedures. However, the Department has evaluated these standards and is unable to

conclude whether they fully comply with the requirements of section 32(b) of the Federal Energy Administration Act, (i.e., that they were developed in a manner that fully provides for public participation, comment and review). DOE will consult with the Attorney General and the Chairman of the FTC concerning the impact of these test procedures on competition, prior to prescribing a final rule.

## VII. Public Participation

### A. Attendance at Public Meeting

The time and date of the public meeting are listed in the **DATES** section at the beginning of this notice of proposed rulemaking. The public meeting will be held at the U.S. Department of Energy, Forrestal Building, Room 1E-245, 1000 Independence Avenue, SW., Washington, DC 20585-0121. To attend the public meeting, please notify Ms. Brenda Edwards-Jones at (202) 586-2945. Foreign nationals visiting DOE Headquarters are subject to advance security screening procedures, requiring a 30-day advance notice. Any foreign national wishing to participate in the meeting should contact Ms. Brenda Edwards-Jones as soon as possible to initiate the necessary procedures.

### B. Procedure for Submitting Requests To Speak

Any person who has an interest in today's notice, or who is a representative of a group or class of persons that has an interest in these issues, may request an opportunity to make an oral presentation. Such persons may hand-deliver requests to speak, to the address shown in the **ADDRESSES** section at the beginning of this notice between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Requests may also be sent by mail or e-mail to: Ms. Brenda Edwards-Jones, U.S. Department of Energy, Building Technologies Program, Room 1J-018, 1000 Independence Avenue, SW., Washington, DC 20585-0121, or [Brenda.Edwards-Jones@ee.doe.gov](mailto:Brenda.Edwards-Jones@ee.doe.gov).

Persons who wish to speak should include a computer diskette or CD in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format that briefly describes the nature of their interest in this rulemaking and the topics they wish to discuss, and provides a telephone number for contact. The Department requests that those persons who are selected to speak submit a copy of their statements at least two weeks before the public meeting. DOE may permit any person who cannot supply an advance copy to participate, if that

person has made alternative arrangements with the Building Technologies Program in advance. The request to give an oral presentation should ask for such alternative arrangements.

### C. Conduct of Public Meeting

The Department will designate a DOE official to preside at the public meeting and may also employ a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary public hearing, but DOE will conduct it in accordance with 5 U.S.C. 553 and section 336 of EPCA, 42 U.S.C. 6306. A court reporter will record the proceedings and prepare a transcript. The Department reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the public meeting. After the public meeting, interested parties may submit further comments on the proceedings and on any aspect of the rulemaking until the end of the comment period.

At the public meeting, the Department will present summaries of comments received before the public meeting, allow time for presentations by participants, and encourage all interested parties to share their views on issues affecting this rulemaking. Each participant may present a prepared general statement (within time limits determined by DOE) before the discussion of specific topics. Other participants may comment briefly on any general statements.

At the end of all the prepared statements, participants may clarify their statements briefly and comment on statements made by others. Participants should be prepared to answer questions from DOE and other participants. Department representatives may also ask questions about other matters relevant to this rulemaking. The official conducting the public meeting will accept additional comments or questions from those attending, as time permits. The presiding official will announce any further procedural rules or modification of procedures needed for the proper conduct of the public meeting.

The Department will make the entire record of this proposed rulemaking, including the transcript from the public meeting, available for inspection at the U.S. Department of Energy, Forrestal Building, Room 1J-018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9127, between 9:00 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Anyone may purchase a copy

of the transcript from the transcribing reporter.

### D. Submission of Comments

The Department will accept comments, data, and information about the proposed rule no later than the date provided at the beginning of this notice. Please submit comments, data, and information electronically to <http://www.regulations.gov> or [testprocedures\\_EPACT2005@ee.doe.gov](mailto:testprocedures_EPACT2005@ee.doe.gov). Please submit electronic comments in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format, and avoid the use of special characters or any form of encryption. Comments in electronic format should be identified by the docket number EE-RM/TP-500 and/or RIN number 1904-AB53, and wherever possible carry the electronic signature of the author. Absent an electronic signature, comments submitted electronically must be followed and authenticated by submitting the signed original paper document. 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 without the information believed to be confidential. The Department of Energy will make its own determination about the confidential status of the information.

When determining whether to treat submitted information as confidential, the Department considers: (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) whether the submitting person would suffer competitive injury from public disclosure; (6) when such information might lose its confidential character due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

### E. Issues on Which DOE Seeks Comment

EPACT 2005 requires certain test procedures by directive. However, in certain cases where EPACT 2005 has been unclear or refers to an ENERGY STAR test procedure as a basis for testing, it also allows some latitude for adopting the most recent version of the test procedure. In such cases, the

Department is interested in receiving comments and data concerning the accuracy and workability of the test procedures in today's proposed rule. Also, because the proposed test procedures will become codified under either 10 CFR Part 430 or 10 CFR Part 431, and will be covered under sampling, certification, and other established regulatory protocols, the Department seeks comment on these matters. In particular, the Department invites comments on the following:

1. The Department proposes sampling procedures for consumer products that are consistent with the procedures set forth in 10 CFR Part 430, "Units to be tested." The Department is also proposing sampling procedures for certain commercial and industrial equipment that are consistent with the methods used for consumer products. Is the Department's proposed approach to statistical sampling appropriate both for consumer products and commercial and industrial equipment? Are the sampling plans suggested for certain consumer products and commercial and industrial equipment accurate and workable? More specifically, are the proposed confidence limits and coefficients included for each of the products appropriate? See section IV.A for further details.

2. The Department is proposing to require that manufacturers provide a compliance statement and certification report on distribution transformers for which minimum efficiency standards are in effect. The Department specifically seeks comment on the certification report approach for distribution transformers that was adapted from electric motors. Will this proposed reporting regimen ensure compliance certification without imposing an undue reporting burden? See section IV.C for details.

3. Should the approach for determining certification and enforcement provisions under 10 CFR Part 430 for consumer products be applied to 10 CFR Part 431 for the commercial and industrial equipment? See section IV.B for details.

4. Should the Department revise the test procedure version specified by EPACT 2005 for ceiling fan light kits with pin-based sockets for fluorescent lamps to incorporate by reference the test procedures specified in the "ENERGY STAR Program Requirements for RLFs," version 4.0? Would adopting version 4.0 reconcile the apparent inconsistency in the EPACT 2005 provisions for standards and test procedures? See section III.A.2 for details.

5. The Department is proposing to interpret the standards required by EPACT 2005 for ceiling fan light kits with sockets other than medium screw base or pin-based as energy efficiency requirements rather than design standards. Should the test procedures for these products be IESNA LM-45-00? See section III.A.2 for details.

6. Should the test procedure specified in EPACT 2005 for medium base CFLs be updated to the "ENERGY STAR Program Requirements for CFLs," version 3.0, to obviate the need to test essentially the same product by two different testing methods? See sections III.A and III.C for details.

7. Can the terms "lumen maintenance" and "lumen depreciation" be interpreted as synonymous for the purposes of specifying and testing the photometric performance properties of medium base CFLs? See section III.C for details.

8. The Department is proposing to interpret the standards required by EPACT 2005 for torchieres as energy efficiency requirements. Should the test procedures for these products be IESNA LM-45-00? See section III.D for details.

9. Are there any technical reasons for developing requirements for maximum and nominal wattage in the test procedure for pedestrian modules that differ from the requirements for traffic signal modules? Are the proposed definitions describing the nominal and maximum wattage of traffic signal modules and pedestrian modules sufficient? See section III.I for details.

10. Section 135(b)(1) of EPACT 2005 prescribes test procedures for traffic signal and pedestrian modules that correspond to the VTCSH Part 2 (1985). The Department is proposing to adopt VTCSH Part 2 (1985). However, the Department recognizes that ITE recently published a new version of the VTCSH specifications (VTCSH (2005)). Should the Department revise the test procedure requirements to be consistent with the most current version of the ITE test procedures for these products, which is VTCSH (2005)? If so, the Department requests comment on the specific sections of VTCSH (2005) that would clarify the test requirements, specifically test conditions, for measuring the nominal and maximum wattage and can be specified in the rule language that accompanies the specifications in VTCSH (2005)? See section III.I for details.

11. Is the proposed test procedure, ARI Standard 1200-2006, sufficient for ice-cream freezers; commercial refrigerators, freezers, and refrigerator-freezers with a self contained condensing unit and without doors; and

commercial refrigerators, freezers, and refrigerator-freezers with a remote condensing unit sufficient? In addition, is the proposed definition for ice-cream freezers sufficient? See section III.L for details.

12. The Department incorporated the full test duration (48 hours) from the ENERGY STAR test procedure for battery chargers and requests comments on this proposal. Is the Department's proposed scope of coverage for the battery charger test method appropriate, especially the power range of battery chargers of consumer products (2-300 watts)? Is it appropriate that the Department only require testing at the input voltage/frequency combination of 115 volts and 60 hertz? Finally, the Department proposes adding a requirement in section 3 of Appendix Y to Subpart B of Part 430 that addresses the capability of testing equipment to account for crest factor and frequency spectrum in the measurement, in addition to the other ENERGY STAR requirements specified in section 4.0 of the ENERGY STAR test methodology for battery chargers and request comments: "The test equipment must be capable of accounting for crest factor and frequency spectrum in its measurement of the UUT input current." See section III.M.1 for details.

13. The Department seeks comments on the proposed scope of coverage for the external power supply test method, especially the nameplate-output power value of less than, or equal to, 250 watts. Are the loading points as defined by the ENERGY STAR test procedure for external power supplies, namely, 25 percent, 50 percent, 75 percent, and 100 percent of rated current output, sufficient? Should the Department only require testing at the input voltage/frequency combination of 115 volts and 60 hertz? See section III.M.2 for details.

14. Are there any other factors that the Department should consider when determining whether the incremental costs of complying with today's proposed test procedure rule would impose a significant economic impact on small businesses for the consumer products and commercial and industrial equipment specified in this proposed rule? See section IV.B for details.

## VIII. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of today's proposed rule.

### List of Subjects

#### 10 CFR Part 430

Administrative practice and procedure, Energy conservation test

procedures, Household appliances, Incorporation by reference.

#### 10 CFR Part 431

Administrative practice and procedure, Commercial products, Energy conservation test procedures, Incorporation by reference.

Issued in Washington, DC, on June 30, 2006.

**Richard F. Moorer,**

*Deputy Assistant Secretary, Technology Development, Energy Efficiency and Renewable Energy.*

For the reasons stated in the preamble, DOE proposes to amend Chapter II, Subchapter D, of Title 10 of the Code of Federal Regulations as set forth below:

## PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

1. The authority citation for part 430 continues to read as follows:

**Authority:** 42 U.S.C. 6291-6309; 28 U.S.C. 2461 note.

2. Section 430.2 is amended by:
  - a. Adding to the definition of "basic model" paragraphs (21) through (27).
  - b. Revising the definition of "covered product."
  - c. Adding in alphabetical order the definition of "Battery charger," "External power supply," and "Pin-based."

The revisions and additions read as follows:

### § 430.2 Definitions.

\* \* \* \* \*

#### *Basic model* \* \* \*

(21) With respect to ceiling fans, which have electrical characteristics that are essentially identical, and which do not have any differing physical or functional characteristics that affect energy consumption.

(22) With respect to ceiling fan light kits, which have electrical characteristics that are essentially identical, and which do not have differing physical or functional characteristics that affect energy consumption.

(23) With respect to medium base compact fluorescent lamps, which have electrical characteristics that are essentially identical, and which do not have any differing physical or functional characteristics that affect energy consumption.

(24) With respect to dehumidifiers, which have electrical characteristics that are essentially identical, and which do not have any differing physical or functional characteristics that affect energy consumption.

(25) With respect to battery chargers, which have electrical characteristics that are essentially identical, and which do not have any different physical or functional characteristics that affect energy consumption.

(26) With respect to external power supplies, which have electrical characteristics that are essentially identical, and which do not have any different physical or functional characteristics that affect energy consumption.

(27) With respect to torchieres, which have electrical characteristics that are essentially identical, and which do not have any different physical or functional characteristics that affect energy consumption.

\* \* \* \* \*

*Battery charger* means a device that charges batteries for consumer products, including battery chargers embedded in other consumer products.

\* \* \* \* \*

*Covered product* means a consumer product:

(1) Of a type specified in section 322 of the Act, or

(2) That is a ceiling fan, ceiling fan light kit, medium base compact fluorescent lamp, dehumidifier, battery charger, or external power supply.

\* \* \* \* \*

*External power supply* means an external power supply circuit that is used to connect household electric current into DC current or lower-voltage AC current to operate a consumer product.

\* \* \* \* \*

*Pin-based* means a fluorescent lamp with a plug-in lamp base, including multi-tube, multibend, spiral, and circline types.

\* \* \* \* \*

3. Section 430.22 is amended by:

a. Adding new paragraphs (b)(1) 9., and 10.

b. Adding new paragraphs (b)(2) 8., 9., 10., 11., and 12.

c. Revising paragraph (b)(7).

d. Adding new paragraphs (b)(9), (b)(10), and (b)(11).

The revision and additions read as follows:

#### § 430.22 Reference sources.

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \*

9. American National Standards Institute (ANSI) Standard C78.5–1997, “Specifications for Performance of Self-Ballasted Compact Fluorescent Lamps.”

10. American National Standards Institute (ANSI) Standard C78.375–1997, “Guide for Electrical Measurements of Fluorescent Lamps.”

(2) \* \* \*

8. Illuminating Engineering Society of North America (IESNA) LM 9–1999, “Electrical and Photometric Measurements of Fluorescent Lamps.”

9. Illuminating Engineering Society of North America (IESNA) LM 40–2001, “Approved Method for Life Performance Testing of Fluorescent Lamps.”

10. Illuminating Engineering Society of North America (IESNA) LM 65–2001, “Life Testing of Single-Ended Compact Fluorescent Lamps.”

11. Illuminating Engineering Society of North America (IESNA) LM 66–2000, “Approved Method for the Electrical and Photometric Measurements of Single-Ended Compact Fluorescent Lamps.”

12. Illuminating Engineering Society of North America (IESNA) LM 45–2000, “Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps.”

\* \* \* \* \*

(7) Association of Home Appliance Manufacturers (AHAM), 1111 19th Street, NW., Suite 402, Washington, DC 20036, (202) 872–5955.

1. American National Standards Institute (ANSI)/AHAM DW–1–1992, “Household Electric Dishwashers.”

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(9) Environmental Protection Agency (EPA), Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, (202) 272–0167.

1. “ENERGY STAR Testing Facility Guidance Manual: Building a Testing Facility and Performing the Solid State Test Method for ENERGY STAR Qualified Ceiling Fans,” Version 1.1.

2. “ENERGY STAR Program Requirements for Residential Light Fixtures,” Version 4.0.

3. “ENERGY STAR Program Requirements for Dehumidifiers,” January 1, 2001.

4. “Test Methodology for Determining the Energy Performance of Battery Charging Systems,” December 2005.

5. “Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies,” August 11, 2004.

(10) U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Forrestal Building, Room 1J–018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585–0121, (202) 586–9127.

1. “ENERGY STAR Program Requirements for Compact Fluorescent Lamps,” Version 3.0.

2. “ENERGY STAR Program Requirements for Compact Fluorescent Lamps,” Version August 9, 2001.

(11) Institute of Electrical and Electronics Engineers (IEEE), 3 Park Avenue, 17th Floor, New York, NY 10016–5997, (212) 419–7900.

1. IEEE Std 1515–2000, “IEEE Recommended Practice for Electronic Power Subsystems: Parameter Definitions, Test Conditions, and Test Methods.”

\* \* \* \* \*

4. Section 430.23 is amended by revising the section heading, adding new paragraphs (w), (x), (y), (z), (aa), (bb), (cc) to read as follows:

#### § 430.23 Test procedures for the measurement of energy and water consumption.

\* \* \* \* \*

(w) *Ceiling fans*. The airflow and airflow efficiency for ceiling fans, expressed in cubic feet per minute (CFM) and CFM per watt (CFM/watt), respectively, shall be measured in accordance with section 4 of Appendix U of this subpart.

(x) *Ceiling fan light kits*. (1) The efficacy, expressed in lumens per watt (lumens/watt), for ceiling fan light kits with sockets for medium screw base lamps or pin-based fluorescent lamps shall be measured in accordance with section 4 of Appendix V of this subpart.

(2) The power consumption, expressed in watts (W), for ceiling fan light kits with sockets for lamps other than medium screw base lamps or pin-based fluorescent lamps shall be measured in accordance with section 4 of Appendix V of this subpart.

(y) *Medium Base Compact Fluorescent Lamps*. The initial efficacy, lumen maintenance at 1,000 hours, lumen maintenance at 40-percent of rated life, rapid cycle stress test, and lamp life shall be measured in accordance with section 4 of Appendix W of this subpart.

(z) *Dehumidifiers*. The energy factor for dehumidifiers, expressed in liters per kilowatt hour (L/kWh), shall be measured in accordance with section 4 of Appendix X of this subpart.

(aa) *Battery Chargers*. The energy consumption of a battery charger, expressed as the nonactive energy ratio, shall be measured in accordance with section 4 of Appendix Y of this subpart.

(bb) *External Power Supplies*. The energy consumption of an external power supply, which is a function of the active mode efficiency in a percentage, and the no-load energy consumption in watts, shall be measured in accordance with section 4 of Appendix Z of this subpart.

(cc) *Torchieres*. The power consumption for torchieres, expressed in watts (W), shall be measured in accordance with section 4 of Appendix AA of this subpart.

5. Section 430.24 is amended by revising the introductory paragraph and

by adding new paragraphs (w), (x), (y), (z), (aa), (bb), and (cc) to read as follows:

**§ 430.24 Units to be tested.**

When testing of a covered product is required to comply with section 323(c) of the Act, or to comply with rules prescribed under sections 324 or 325 of the Act, a sample shall be selected and tested comprised of units, or are representative of production units of the basic model being tested, and shall meet the following applicable criteria. Components of similar design may be substituted without requiring additional testing if the represented measures of energy consumption, or, in the case of showerheads, faucets, water closets and urinals, water use, continue to satisfy the applicable sampling provision.

\* \* \* \* \*

(w) For each basic model of ceiling fan with sockets for medium screw base lamps or pin-based fluorescent lamps selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 95 percent confidence limit of the true mean divided by 1.10, and

(2) Any represented value of the airflow efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or  
(ii) The lower 95 percent confidence limit of the true mean divided by 0.90.

(x) For each basic model of ceiling fan light kit with sockets for medium screw base lamps or pin-based fluorescent lamps selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 97.5 percent confidence limit of the true mean divided by 1.05, and

(2) Any represented value of the efficacy or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or

(ii) The lower 97.5 percent confidence limit of the true mean divided by 0.95.

(y) For each basic model of bare or covered (no reflector) medium base compact fluorescent lamp selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 97.5 percent confidence limit of the true mean divided by 1.05, and

(2) Any represented value of the efficacy or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or  
(ii) The lower 97.5 percent confidence limit of the true mean divided by 0.95.

(z) For each basic model of dehumidifier selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 95 percent confidence limit of the true mean divided by 1.10, and

(2) Any represented value of the energy factor or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or  
(ii) The lower 95 percent confidence limit of the true mean divided by 0.90.

(aa) For each basic model of battery charger selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of the estimated nonactive energy ratio or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 97.5 percent confidence limit of the true mean divided by 1.05, and

(2) Any represented value of the estimated nonactive energy ratio or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or  
(ii) The lower 97.5 percent confidence limit of the true mean divided by 0.95.

(bb) For each basic model of external power supply selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of the estimated energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 97.5 percent confidence limit of the true mean divided by 1.05, and

(2) Any represented value of the estimated energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or  
(ii) The lower 97.5 percent confidence limit of the true mean divided by 0.95.

(cc) For each basic model of torchiere selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that—

(1) Any represented value of power consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(i) The mean of the sample, or  
(ii) The upper 97.5 percent confidence limit of the true mean divided by 1.05, and

(2) Any represented value of the energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(i) The mean of the sample, or  
(ii) The lower 97.5 percent confidence limit of the true mean divided by 0.95.

6. Subpart B of Part 430 is amended by adding new Appendices U, V, W, X, Y, Z, and AA, to read as follows:

**Appendix U to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Ceiling Fans**

1. *Scope:* This appendix covers the test requirements used to measure the energy performance of ceiling fans.

2. *Definitions:*

a. *Airflow* means the rate of air movement at a specific fan-speed setting expressed in cubic feet per minute (CFM).

b. *Airflow efficiency* means the ratio of airflow divided by power at a specific ceiling fan-speed setting expressed in CFM per watt (CFM/watt).

3. *Test Apparatus and General Instructions:* The test apparatus and instructions for testing ceiling fans shall conform to the requirements specified in Chapter 3, "Air-Delivery Room Construction and Preparation," Chapter 4, "Equipment

Set-up and Test Procedure,” and Chapter 6, “Definitions and Acronyms,” of the EPA’s “ENERGY STAR Testing Facility Guidance Manual: Building a Testing Facility and Performing the Solid State Test Method for ENERGY STAR Qualified Ceiling Fans,” version 1.1, December 9, 2002 (see § 430.22). Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. Round the final energy consumption value to the nearest whole number as follows:

(i) A fractional number at or above the midpoint between the two consecutive whole numbers shall be rounded up to the higher of the two whole numbers; or

(ii) A fractional number below the midpoint between the two consecutive whole numbers shall be rounded down to the lower of the two whole numbers.

4. *Test Measurement:* Measure the airflow and airflow efficiency for ceiling fans, expressed in cubic feet per minute (CFM) and CFM per watt (CFM/watt), in accordance with the test requirements specified in Section 4, “Equipment Setup and Test Procedure,” of the EPA’s “ENERGY STAR Testing Facility Guidance Manual: Building a Testing Facility and Performing the Solid State Test Method for ENERGY STAR Qualified Ceiling Fans,” version 1.1, December 9, 2002 (see § 430.22). In performing the airflow test, measure ceiling fan power using a RMS sensor capable of measuring power with an accuracy of  $\pm 1\%$ . Prior to using the sensor and sensor software it has selected, the test laboratory shall verify their performance. Measure power input at a point that includes all power consuming components of the ceiling fan (but without any attached light kit energized). Measure power at the rated voltage that represents normal operation continuously over the time period for which the airflow test is conducted, and report the average value of the power measurement in watts (W). Use the average value of power input to calculate the airflow efficiency in CFM/W.

#### **Appendix V to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Ceiling Fan Light Kits**

1. *Scope:* This appendix covers the test requirements used to measure the energy performance of ceiling fan light kits.

##### **2. Definitions:**

a. *Input power* means the actual total power used by all lamp(s) and ballast(s) of the light fixture during operation, expressed in watts (W) and measured using the lamp and ballast packaged with the fixture.

b. *Lamp ballast platform* means a pairing of one ballast with one or more lamps that can operate simultaneously on that ballast. A unique platform is defined by the manufacturer and model number of the ballast and lamp(s) and the quantity of lamps that operate on the ballast.

c. *Lamp lumens* means a measurement of luminous flux expressed in lumens and measured using the lamp and ballast shipped with the fixture.

d. *System efficacy per lamp ballast platform* means the ratio of measured lamp

lumens expressed in lumens and measured input power expressed in watts (W).

##### **3. Test Apparatus and General Instructions:**

(a) The test apparatus and instruction for testing screw base lamps packaged with ceiling fan light kits that have medium screw base sockets shall conform to the requirements specified in section 2, “Definitions,” section 3, “Referenced Standards,” and section 4, “CFL Requirements for Testing” of the DOE’s “ENERGY STAR Program Requirements for Compact Fluorescent Lamps,” version 3.0, (see § 430.22). Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. Round off the final energy consumption value to a whole number as follows:

(i) A fractional number at or above the midpoint between the two consecutive whole numbers shall be rounded up to the higher of the two whole numbers; or

(ii) A fractional number below the midpoint between the two consecutive whole numbers shall be rounded down to the lower of the two whole numbers.

(b) The test apparatus and instruction for testing pin-based fluorescent lamps packaged with ceiling fan light kits that have pin-based sockets shall conform to the requirements specified in section 1, “Definitions,” and section 3, “Energy Efficiency Specifications for Qualifying Products” of the EPA’s “ENERGY STAR Program Requirements for Residential Light Fixtures,” version 4.0, (see § 430.22). Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. The final energy consumption value shall be rounded to a whole number as follows:

(i) A fractional number at or above the midpoint between the two consecutive whole numbers shall be rounded up to the higher of the two whole numbers; or

(ii) A fractional number below the midpoint between the two consecutive whole numbers shall be rounded down to the lower of the two whole numbers.

(c) The test apparatus and instruction for testing ceiling fan light kits with sockets other than medium screw base and pin-based sockets for lamps shall conform to the requirements of section 1.2 “Nomenclature and Definitions”, section 3.0 “Power Source Characteristics” for AC power only and section 7.0 “Electrical Instrumentation” of the IESNA’s “IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps”, LM-45-2000, (see § 430.22). Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. The final energy consumption value shall be rounded to a whole number as follows:

(i) A fractional number at or above the midpoint between the two consecutive whole numbers shall be rounded up to the higher of the two whole numbers; or

(ii) A fractional number below the midpoint between the two consecutive whole numbers shall be rounded down to the lower of the two whole numbers.

##### **4. Test Measurement:**

(a) For screw base compact fluorescent lamps packaged with ceiling fan light kits that have medium screw base sockets, measure the efficacy, expressed in lumens per watt, in accordance with the test requirements specified in section 4, “CFL Requirements for Testing,” of the “ENERGY STAR Program Requirements for Compact Fluorescent Lamps,” version 3.0 (see § 430.22).

(b) For pin-based compact fluorescent lamps packaged with ceiling fan light kits that have pin-based sockets, measure the efficacy, expressed in lumens per watt, in accordance with the test requirements specified in section 3, “Energy-Efficiency Specifications for Qualifying Products” of the “ENERGY STAR Program Requirements for Residential Light Fixtures,” version 4.0 (see § 430.22).

(c) Measure the ceiling fan light kit, with sockets other than medium screw base and pin-based, input power, expressed in watts, in accordance with the test setup specified for AC voltage in section 4.0, “Circuits” of the IESNA’s “IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps”, LM-45-2000 (see § 430.22), with the terminals of the voltmeter and potential element of the wattmeter connected to the input lead (“plug”) for a ceiling fan light kit. In other words, in figure 1(b) in section 4.0, the lamp (L) would be replaced by the ceiling fan light kit under test. If dimmable, ceiling fan light kits should be tested at maximum light output using all the lamps packaged with the ceiling fan light kit. The ceiling fan light kit shall be tested using a lamp or combination of lamps whose total wattage exceeds 190 watts.

#### **Appendix W to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Medium Base Compact Fluorescent Lamps**

1. *Scope:* This appendix covers the test requirements used to measure the initial efficacy, lumen maintenance at 1,000 hours, lumen maintenance at 40 percent of rated life, rapid cycle stress, and lamp life of medium base compact fluorescent lamps.

##### **2. Definitions:**

a. *Average rated life* means the length of time declared by the manufacturer at which 50 percent of any large number of units of a lamp reaches the end of their individual lives.

b. *Initial performance values* means the photometric and electrical characteristics of the lamp at the end of 100 hour of operation. Such values include the initial efficacy, the rated luminous flux and the rated lumen output.

c. *Lumen maintenance* means the luminous flux or lumen output at a given time in the life of the lamp and expressed as a percentage of the rated luminous flux or rated lumen output, respectively.

d. *Rated luminous flux or rated lumen output* means the initial lumen rating (100 hour) declared by the manufacturer, which consists of the lumen rating of a lamp at the end of 100 hours of operation.

e. *Rated supply frequency* means the frequency marked on the lamp.

f. *Rated voltage* means the voltage marked on the lamp.

g. *Rated wattage* means the wattage marked on the lamp.

h. *Self-ballasted compact fluorescent lamp* means a compact fluorescent lamp unit that incorporates, permanently enclosed, all elements that are necessary for the starting and stable operation of the lamp, and does not include any replaceable or interchangeable parts.

### 3. *Test Apparatus and General*

*Instructions:* The test apparatus and instructions for testing medium base compact fluorescent lamps shall conform to the requirements specified in section 2, "Definitions," section 3, "Referenced Standards," and section 4, "CFL Requirements for Testing," of the DOE's "ENERGY STAR Program Requirements for Compact Fluorescent Lamps," version dated August 9, 2001 (see § 430.22). Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. Round the final energy consumption value, as applicable, to the nearest decimal place or whole number as follows:

(i) A fractional number at or above the midpoint between two consecutive decimal places or whole numbers shall be rounded up to the higher of the two decimal places or whole numbers; or

(ii) A fractional number below the midpoint between two consecutive decimal places or whole numbers shall be rounded down to the lower of the two decimal places or whole numbers. Round the final initial efficacy to one decimal place. Round the final lumen maintenance at 1,000 hours to a whole number. Round the final lumen maintenance at 40 percent of rated life, the final rapid cycle stress, and the final lamp life for medium base compact fluorescent lamps to whole numbers.

4. *Test Measurement:* Measure the initial efficacy expressed in lumens per watt; lumen maintenance at 1,000 hours expressed in lumens; lumen maintenance at 40 percent of rated life expressed in lumens; rapid cycle stress expressed in the number of lamps that meet or exceed the minimum number of cycles; and lamp life expressed in hours in accordance with the test requirements specified in section 4, "CFL Requirements for Testing" of the DOE's "ENERGY STAR Program Requirements for Compact Fluorescent Lamps," version dated August 9, 2001 (see § 430.22).

## Appendix X to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Dehumidifiers

1. *Scope:* This appendix covers the test requirements used to measure the energy performance of dehumidifiers.

### 2. *Definitions:*

a. *Product capacity for dehumidifiers* means a measure of the ability of a dehumidifier to remove moisture from its surrounding atmosphere, measured in pints collected per 24 hours of continuous operation.

b. *Energy factor for dehumidifiers* means a measure of energy efficiency of a dehumidifier calculated by dividing the water removed from the air by the energy consumed, measured in liters per kilowatt hour (L/kWh).

### 3. *Test Apparatus and General*

*Instructions:* The test apparatus and instructions for testing dehumidifiers shall conform to the requirements specified in section 1, "Definitions," section 2, "Qualifying Products," and section 4, "Test Criteria," of the EPA's "ENERGY STAR Program Requirements for Dehumidifiers" (see § 430.22). Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. Round the final minimum energy factor value to two decimal places as follows:

(i) A fractional number at or above the midpoint between two consecutive decimal places shall be rounded up to the higher of the two decimal places, or

(ii) A fractional number below the midpoint between two consecutive decimal places shall be rounded down to the lower of the two decimal places.

4. *Test Measurement:* Measure the energy factor for dehumidifiers, expressed in liters per kilowatt hour (L/kWh) and product capacity in pints per day (pints/day), in accordance with the test requirements specified in section 4, "Test Criteria," of EPA's "ENERGY STAR Program Requirements for Dehumidifiers" (see § 430.22).

## Appendix Y to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Battery Chargers

1. *Scope:* This appendix covers the test requirements used to measure the nonactive energy ratio of battery chargers. This test method applies to battery chargers with nameplate input power between 2 and 300 watts and that use household electronic current to charge rechargeable batteries less than 42 volts that may be either a battery charger with a detachable battery or battery pack, or a battery charger system functioning with a product or appliance that is powered by an integral battery. The test method applies to: motor-driven battery charged products; products whose principal output is heat, light, motion or movement of air; battery charging systems intended to replace standard sized primary alkaline cells (e.g., AAA, AA, C, 9-volt, etc); and other product with detachable batteries and stand-alone battery chargers whose designs are not an external power supply.

2. *Definitions:* The following definitions are for the purposes of understanding terminology associated with the test method for measuring battery charger energy consumption. For clarity on any other terminology used in the test method, please refer to IEEE Standard 1515–2000.

a. *Accumulated nonactive energy* is the sum of the energy, in watt-hours, consumed by the battery charger in battery-maintenance mode and standby mode over time periods defined in the test procedure.

b. *Battery energy* is the energy, in watt-hours, delivered by the battery under the specified discharge conditions in the test procedure.

c. *Battery maintenance mode or maintenance mode* is the mode of operation when the battery charger is connected to the main electricity supply and the battery is fully charged, but is still connected to the charger.

d. *Energy ratio or nonactive energy ratio* means the ratio of the accumulated nonactive energy divided by the battery energy.

e. *Standby mode* means the mode of operation when the battery charger is connected to the main electricity supply and the battery is not connected to the charger.

### 3. *Test Apparatus and General*

*Instructions:* The test apparatus, standard testing conditions, and instructions for testing battery chargers shall conform to the requirements specified in section 4.0, "Standard Testing Conditions," of the EPA's "ENERGY STAR Test Methodology for Determining the Energy Performance of Battery Charging Systems, December 2005." The test voltage specified in section 4.1.1 shall be 115 volts, 60 Hz. The battery charger should be tested using the full test methodology, which has a test duration of 48 hours. In section 4.3.1 Precision Requirements, append this sentence to the end: "The test equipment must be capable of accounting for crest factor and frequency spectrum in its measurement of the UUT input current."

4. *Test Measurement:* The measurement of the battery charger energy ratio shall conform to the requirements specified in section 5.0 of the EPA's "Test Methodology for Determining the Energy Performance of Battery Charging Systems, December 2005" (see § 430.22).

## Appendix Z to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of External Power Supplies

1. *Scope:* This appendix covers the test requirements used to measure the active mode efficiency and the no-load energy consumption of external power supplies. This test method applies to external power supplies that are sold with, or intended to be used with, a separate end-use consumer product that constitutes the primary load; are contained in a physical enclosure separate from the end-use product; are either hard-wired into the end-use product or otherwise connected to it; do not have batteries or battery packs that physically attach directly to the power supply unit; do not have both a selector switch for battery chemistry, and a state of charge indicator light or meter; are able to convert to only one output voltage at a time; and have nameplate output power less than or equal to 250 watts.

2. *Definitions:* The following definitions are for the purposes of understanding terminology associated with the test method for measuring external power supply energy consumption. For clarity on any other terminology used in the test method, please refer to IEEE Standard 1515–2000.

a. *Active mode* is the mode of operation when the external power supply is connected



to the main electricity supply and the output is connected to a load.

b. *Active mode efficiency* is the ratio, expressed as a percentage, of the total real output power produced by a power supply to the real input power required to produce it.

c. *No load mode* means the mode of operation when the external power supply is connected to the main electricity supply and the output is not connected to a load.

d. *Single voltage external AC-AC power supply* means an external power supply that is designed to convert line voltage AC input into lower voltage AC output and is able to convert to only one AC output voltage at a time.

e. *Single voltage external AC-DC power supply* means an external power supply that is designed to convert line voltage AC input into lower voltage DC output and is able to convert to only one DC output voltage at a time.

f. *Total harmonic distortion*, expressed as a percent, is the RMS value of an AC signal after the fundamental component is removed and interharmonic components are ignored, divided by the RMS value of the fundamental component.

g. *True power factor* is the ratio of the active, or real, power consumed in watts to the apparent power, drawn in volt-amperes.

3. *Test Apparatus and General Instructions*: The test apparatus, standard testing conditions, and instructions for testing external power supplies shall conform to the requirements specified in section 4, "General Conditions for Measurement," of the EPA's "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies," August 11, 2004. The test voltage specified in section 4.d, "Test Voltage," shall only be 115 volts, 60 Hz.

4. *Test Measurement*: The measurement of the external power supply active mode efficiency and no-load energy consumption shall conform to the requirements specified in section 5.0 of the EPA's "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies," August 11, 2004 (see § 430.22).

## Appendix AA to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Torchiere

1. *Scope*: This appendix covers the test requirements used to measure the energy consumption of torchieres.

### 2. Definitions:

a. *Input power* means the actual total power used by all lamp(s) and ballast(s) of the torchiere during operation, expressed in watts (W).

3. *Test Apparatus and General Instructions*: The test apparatus and instruction for testing torchieres shall conform to the requirements of section 1.2 "Nomenclature and Definitions," section 3.0 "Power Source Characteristics" for AC power only and section 7.0 "Electrical Instrumentation" of the IESNA's "IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps," LM-45-2000, (see § 430.22). Record

measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. The final energy consumption value shall be rounded to a whole number as follows:

(i) A fractional number at or above the midpoint between the two consecutive whole numbers shall be rounded up to the higher of the two whole numbers; or

(ii) A fractional number below the midpoint between the two consecutive whole numbers shall be rounded down to the lower of the two whole numbers.

4. *Test Measurement*: Measure the torchiere input power, expressed in watts, in accordance with the test setup specified for AC voltage in section 4.0, "Circuits" of the IESNA's "IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps," LM-45-2000 (see § 430.22), with the terminals of the voltmeter and potential element of the wattmeter connected to the input lead ("plug") for a torchiere. In other words, in figure 1(b) in section 4.0, the lamp (L) would be replaced by the torchiere under test. The torchiere shall be tested using a lamp or combination of lamps whose total wattage exceeds 190 watts.

7. Section 430.62 is amended by adding new paragraphs (a)(4)(xviii), (a)(4)(xix), (a)(4)(xx), and (a)(4)(xxi) to read as follows:

### § 430.62 Submission of data.

(a) \* \* \*

(4) \* \* \*

(xviii) Ceiling fan light kits with sockets for medium screw base lamps or pin-based fluorescent lamps, the efficacy in lumens per watt.

(xix) Medium base compact fluorescent lamps, the minimum initial efficacy in lumens per watt, the lumen maintenance at 1,000 hours in lumens, the lumen maintenance at 40 percent of rated life in lumens, the rapid cycle stress test, and the lamp life in hours.

(xx) Dehumidifiers, the energy factor in liters per kilowatt hour, and capacity in pints per day.

(xxi) Torchieres, the power consumption in watts.

\* \* \* \* \*

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

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

**Authority:** 42 U.S.C. 6291-6317.

9. Section 431.2 is amended by revising the definition of "Covered equipment," and adding, in alphabetical order, the definition of "Energy conservation standard" to read as follows:

### § 431.2 Definitions.

\* \* \* \* \*

*Covered equipment* means any electric motor, as defined in § 431.12; commercial heating, ventilating, and air conditioning, and water heating product (HVAC & WH product), as defined in §§ 431.172; commercial refrigerator, freezer, or refrigerator-freezer, as defined in § 431.62; automatic commercial ice maker, as defined in § 431.132; commercial clothes washer, as defined in § 431.152; distribution transformer, as defined in § 431.192; illuminated exit sign, as defined in § 431.202; traffic signal module or pedestrian module, as defined in § 431.222; unit heater, as defined in § 431.242; commercial prerinse spray valve, as defined in § 431.262; mercury vapor lamp ballast, as defined in § 431.282; or refrigerated bottled or canned beverage vending machine, as defined in § 431.292.

\* \* \* \* \*

*Energy conservation standard means:*

(1) A performance standard that prescribes a minimum level of energy efficiency or in the case of commercial prerinse spray valves, water use, or a maximum quantity of energy use for covered equipment; or

(2) A design requirement for covered equipment.

\* \* \* \* \*

10. Section 431.62 is amended by adding, in alphabetical order, new definitions for "Basic model," "Ice-cream freezer," and "Test package," to read as follows:

### § 431.62 Definitions concerning commercial refrigerators, freezers, and refrigerator-freezers.

*Basic model* means, with respect to commercial refrigerators, freezers, and refrigerator-freezers, all units of a given type of commercial refrigerator, freezer, or refrigerator-freezer (or class thereof) manufactured by one manufacturer that have the same primary energy source, which have electrical characteristics that are essentially identical, and which do not have any differing electrical, physical, or functional characteristics that affect energy consumption.

\* \* \* \* \*

*Ice-cream freezer* means a commercial freezer that is designed to operate at or below -5°F (-21°C) and that the manufacturer designs, markets, or intends for the storing, displaying, or dispensing of ice cream.

\* \* \* \* \*

*Test package* means a packaged material that is used as a standard product temperature-measuring device.

11. Subpart C of Part 431 is amended by revising the undesignated center

heading following § 431.62 and adding new §§ 431.63, 431.64, and 431.65, to read as follows:

### Test Procedures

#### § 431.63 Materials incorporated by reference.

(a) *General.* The Department incorporates by reference the following test procedures into Subpart C of Part 431. The Director of the Federal Register has approved the material listed in paragraph (b) of this section for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Any subsequent amendment to this material by the standard-setting organization will not affect the DOE test procedures unless DOE amends its test procedures. The Department incorporates the material as it exists on the date of the approval by the **Federal Register** and a notice of any change in the material will be published in the **Federal Register**.

(b) *Test procedures incorporated by reference.* (1) American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 72–2005, “Method of Testing Commercial Refrigerators and Freezers.”

(2) American National Standards Institute (ANSI)/Association of Home Appliance Manufacturers (AHAM) Standard HRF–1–1979, “Association of Home Appliance Manufacturers Standard for Household Refrigerators, Combination Refrigerator-Freezers, and Household Freezers.”

(3) Air-Conditioning and Refrigeration Institute (ARI) Standard 1200–2006, “Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets.”

(c) *Availability of references.* (1) *Inspection of test procedures.* The test procedures incorporated by reference are available for inspection at:

(i) National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(ii) U.S. Department of Energy, Forrestal Building, Room 1J–018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585–0121, (202) 586–9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

(2) *Obtaining copies of standards.* (i) Anyone can purchase a copy of ASHRAE Standard 72–2005, “Method of Testing Commercial Refrigerators and Freezers,” from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle, NE, Atlanta, GA 30329, (404) 636–8400, or <http://www.ashrae.org>.

(ii) Anyone can purchase a copy of ANSI/AHAM Standard HRF–1–1979, “Association of Home Appliance Manufacturers Standard for Household Refrigerators, Combination Refrigerator-Freezers, and Household Freezers,” from the American National Standards Institute, 1819 L Street, NW., 6th floor, Washington, DC 20036, (202) 293–8020, or <http://www.ansi.org>.

(iii) Anyone can obtain a copy of ARI Standard 1200–2006, “Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets,” from the Air-Conditioning and Refrigeration Institute, 4100 N. Fairfax Dr., Suite 200, Arlington, VA 22203 or <http://www.ari.org/std/standards.html>.

#### § 431.64 Uniform test method for the measurement of energy consumption of commercial refrigerators, freezers, and refrigerator-freezers.

(a) *Scope.* This section provides the test procedures for measuring, pursuant to EPCA, the daily energy consumption in kilowatt hours per day (kWh/day) for a given product category and volume or total display area of commercial refrigerators, freezers, and refrigerator-freezers.

(b) *Testing and calculations.* (1) Determine the daily energy consumption of each covered commercial refrigerator, freezer, or refrigerator-freezer, other than those described in paragraph (b)(2) of this section, by conducting the test

procedure, set forth in the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 72–2005, “Method of Testing Commercial Refrigerators and Freezers,” section 3, “Definitions,” section 4, “Test Conditions,” section 5, “Instruments,” section 6, “Apparatus,” section 7, “Test Procedure,” and section 8, “Calculations.”

(2) Determine the daily energy consumption of each ice-cream freezer, commercial refrigerator, freezer, or refrigerator-freezer with a self-contained condensing unit and without doors, or commercial refrigerator, freezer, or refrigerator-freezer with a remote condensing unit, by conducting the test procedure set forth in the Air-Conditioning and Refrigeration Institute (ARI) Standard 1200–2006, “Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets,” section 3, “Definitions,” section 4, “Test Requirements,” section 5, “Rating Requirements for Remote Commercial Refrigerated Display Merchandisers and Storage Cabinets,” section 6, “Rating Requirements for Self-contained Commercial Refrigerated Display Merchandisers and Storage Cabinets,” and section 7, “Symbols and Subscripts.” For each commercial refrigerator, freezer, or refrigerator-freezer with a self-contained condensing unit and without doors, also use ARI Standard 1200–2006, section 6, “Rating Requirements for Self-contained Commercial Refrigerated Display Merchandisers and Storage Cabinets.” For each commercial refrigerator, freezer, or refrigerator-freezer with a remote condensing unit, also use ARI Standard 1200–2006, section 5, “Rating Requirements for Remote Commercial Refrigerated Display Merchandisers and Storage Cabinets.”

(3) Conduct the testing required in paragraphs (b)(1) and (b)(2) of this section, and determine the daily energy consumption, at the applicable integrated average temperature in the following table. The integrated average temperature is determined using the required test method.

| Category   | Test procedure           | Integrated average temperatures |
|--|--------------------------|---------------------------------|
| (i) Refrigerator with Solid Door(s) .....        | ASHRAE Standard 72–2005. | 38 °F (±2 °F).                  |
| (ii) Refrigerator with Transparent Door(s) ..... | ASHRAE Standard 72–2005. | 38 °F (±2 °F).                  |
| (iii) Freezer with Solid Door(s) .....           | ASHRAE Standard 72–2005. | 0 °F (±2 °F).                   |
| (iv) Freezer with Transparent Door(s) .....      | ASHRAE Standard 72–2005. | 0 °F (±2 °F).                   |

| Category  | Test procedure            | Integrated average temperatures  |
|---|---------------------------|--|
| (v) Refrigerator-Freezer with Solid Door(s) .....   | ASHRAE Standard 72–2005.  | 38 °F (±2 °F) for refrigerator compartment 0 °F (±2 °F) for freezer compartment.   |
| (vi) Commercial Refrigerator with a Self-Contained Condensing Unit Designed for Pull-Down Temperature Applications and Transparent Doors. | ASHRAE Standard 72–2005.  | 38 °F (±2 °F).   |
| (vii) Ice-Cream Freezer .....   | ARI Standard 1200–2006 .. | –5.0 °F (±2 °F).   |
| (viii) Commercial Refrigerator, Freezer, and Refrigerator-Freezer with a Self-Contained Condensing Unit and without Doors.                | ARI Standard 1200–2006 .. | (A) For low temperature applications, the integrated average temperature of all test package averages shall be 0 °F (±2 °F).<br>(B) For medium temperature applications, the integrated average temperature of all test package averages shall be 38.0 °F (±2 °F). |
| (ix) Commercial Refrigerator, Freezer, and Refrigerator-Freezer with a Remote Condensing Unit.  | ARI Standard 1200–2006 .. | (A) For low temperature applications, the integrated average temperature of all test package averages shall be 0 °F (±2 °F).<br>(B) For medium temperature applications, the integrated average temperature of all test package averages shall be 38.0 °F (±2 °F). |

(4) Determine the volume of each covered commercial refrigerator, freezer, or refrigerator-freezer, other than those described in paragraph (b)(2) of this section, by conducting the test procedure set forth in the ANSI/AHAM Standard HRF–1–1979, section 3.20, sections 4.2 through 4.3, and sections 5.1 through 5.3.

#### § 431.65 Units to be tested.

For each basic model of commercial refrigerator, freezer, or refrigerator-freezer selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that (Components of similar design may be substituted without requiring additional testing if the represented measures of energy continue to satisfy the applicable sampling provision.)—

(a) Any represented value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of:

(1) The mean of the sample; or  
(2) The upper 95 percent confidence limit of the true mean divided by 1.10; and

(b) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of:

(1) The mean of the sample; or  
(2) The lower 95 percent confidence limit of the true mean divided by 0.90.

12. Section 431.95 is amended by revising paragraph (b)(2) to read as follows:

#### § 431.95 Materials incorporated by reference.

\* \* \* \* \*

(b) \* \* \*  
(2) ARI Standard 340/360–2004 published in 2004, “Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment,” IBR approved for § 431.96.

\* \* \* \* \*

13. Section 431.96 is revised to read as follows:

#### § 431.96 Uniform test method for the measurement of energy efficiency of small, large, and very large commercial package air conditioning and heating equipment, packaged terminal air conditioners, and packaged terminal heat pumps.

(a) *Scope.* This section contains test procedures that must be followed for measuring, pursuant to EPCA, the energy efficiency of any small, large, or very large commercial package air conditioning and heating equipment, packaged terminal air conditioner, or packaged terminal heat pump.

(b) *Testing and calculations.* Determine the energy efficiency of each covered product by conducting the test procedure(s) listed in the rightmost column of Table 1 of this section, that apply to the energy efficiency descriptor for that product, category, and cooling capacity.

TABLE 1 TO § 431.96.—TEST PROCEDURES FOR ALL SMALL COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, FOR LARGE COMMERCIAL PACKAGE AIR CONDITIONING AND HEATING EQUIPMENT, FOR VERY LARGE COMMERCIAL PACKAGE AIR CONDITIONING AND HEATING EQUIPMENT, AND FOR PACKAGED TERMINAL AIR CONDITIONERS, AND PACKAGED TERMINAL HEAT PUMPS

| Product   | Category                                  | Cooling capacity                   | Energy efficiency descriptor | Use tests, conditions and procedures <sup>1</sup> in |
|---|---|------------------------------------|------------------------------|--|
| Small Commercial Packaged Air Conditioning and Heating Equipment. | Air Cooled, 3 Phase, AC and HP.           | <65,000 Btu/h .....                | SEER .....                   | ARI Standard 210/240–2003                            |
|   |   |                                    | HSPF .....                   | ARI Standard 210/240–2003                            |
|   | Air Cooled AC and HP .....                | ≥65,000 Btu/h and <135,000 Btu/h.  | EER .....                    | ARI Standard 340/360–2004                            |
|   |   |                                    | COP .....                    | ARI Standard 340/360–2004                            |
|   | Water Cooled and Evaporatively Cooled AC. | <65,000 Btu/h .....                | EER .....                    | ARI Standard 210/240–2003                            |
|   |   |                                    | EER .....                    | ARI Standard 340/360–2004                            |
| Large Commercial Packaged Air Conditioning and Heating Equipment. | Water-Source HP .....                     | <135,000 Btu/h .....               | EER .....                    | ISO Standard 13256–1 (1998)                          |
|   |   |                                    | COP .....                    | ISO Standard 13256–1 (1998)                          |
|   | Air Cooled AC and HP .....                | ≥135,000 Btu/h and <240,000 Btu/h. | EER .....                    | ARI Standard 340/360–2004                            |
|   |   |                                    | COP .....                    | ARI Standard 340/360–2004                            |
|   | Water Cooled AC .....                     | ≥135,000 Btu/h and <240,000 Btu/h. | EER .....                    | ARI Standard 340/360–2004                            |
|   |   |                                    | EER .....                    | ARI Standard 340/360–2004                            |

TABLE 1 TO § 431.96.—TEST PROCEDURES FOR ALL SMALL COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, FOR LARGE COMMERCIAL PACKAGE AIR CONDITIONING AND HEATING EQUIPMENT, FOR VERY LARGE COMMERCIAL PACKAGE AIR CONDITIONING AND HEATING EQUIPMENT, AND FOR PACKAGED TERMINAL AIR CONDITIONERS, AND PACKAGED TERMINAL HEAT PUMPS—Continued

| Product  | Category                    | Cooling capacity                   | Energy efficiency descriptor | Use tests, conditions and procedures <sup>1</sup> in   |
|--|-----------------------------|------------------------------------|------------------------------|--|
| Very Large Commercial Packaged Air Conditioning and Heating Equipment.<br>Packaged Terminal Air Conditioners and Heat Pumps. | Evaporatively Cooled AC ... | ≥135,000 Btu/h and <240,000 Btu/h. | EER .....                    | ARI Standard 340/360–2004                              |
|  | Air Cooled AC and HP .....  | ≥240,000 Btu/h and <760,000 Btu/h. | EER .....<br>COP .....       | ARI Standard 340/360–2004<br>ARI Standard 340/360–2004 |
|  | AC and HP .....             | All .....                          | EER .....                    | ARI Standard 310/380–2004                              |
|  | HP .....                    | All .....                          | COP .....                    | ARI Standard 310/380–2004                              |

<sup>1</sup> Incorporated by reference, see § 431.95.

\* \* \* \* \*

14. Section 431.132 is amended by adding in alphabetical order new definitions for “Basic model,” “Cube type ice,” “Energy use,” “Ice-making head,” “Maximum condenser water use,” “Remote compressor,” “Remote condensing,” and “Self-contained” to read as follows:

**§ 431.132 Definitions concerning automatic commercial ice makers.**

\* \* \* \* \*

*Basic model* means, with respect to automatic commercial ice makers, all units of a given type of automatic commercial ice maker (or class thereof) manufactured by one manufacturer and which have the same primary energy source, which have electrical characteristics that are essentially identical, and which do not have any differing electrical, physical, or functional characteristics that affect energy consumption.

*Cube type ice* means ice that is fairly uniform, hard, solid, usually clear, and generally weighs less than two ounces (60 grams) per piece, as distinguished from flake, crushed, or fragmented ice.

*Energy use* means the total energy consumed, stated in kilowatt hours per one-hundred pounds (kWh/100 lb) of ice and stated in multiples of 0.1. For remote condensing automatic commercial ice makers, total energy consumed shall include condenser fan power. \* \* \*

*Ice-making head* means automatic commercial ice makers that do not contain integral storage bins, but are generally designed to accommodate a variety of bin capacities. Storage bins entail additional energy use not included in the reported energy consumption figures for these units.

*Maximum condenser water use* means the maximum amount of water used by the condensing unit (if water-cooled),

stated in gallons per 100 pounds (gal/100 lb) of ice, in multiples of 1.

*Remote compressor* means a type of automatic commercial ice maker in which the ice-making mechanism and compressor are in separate sections.

*Remote condensing* means a type of automatic commercial ice maker in which the ice-making mechanism and condenser or condensing unit are in separate sections.

*Self-contained* means a type of automatic commercial ice maker in which the ice-making mechanism and storage compartment are in an integral cabinet.

15. Subpart H of Part 431 is amended by revising the undesignated center heading following § 431.132 and adding new §§ 431.133, 431.134, and 431.135, to read as follows:

**Test Procedures**

**§ 431.133 Materials incorporated by reference.**

(a) *General.* The Department incorporates by reference the following test procedures into Subpart H of Part 431. The Director of the Federal Register has approved the material listed in paragraph (b) of this section for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Any subsequent amendment to this material by the standard-setting organization will not affect the DOE test procedures unless DOE amends its test procedures. The Department incorporates the material as it exists on the date of the approval by the **Federal Register** and a notice of any change in the material will be published in the **Federal Register**.

(b) *Test procedures incorporated by reference.* (1) Air-Conditioning and Refrigeration Institute (ARI) Standard 810–2003, “Performance Rating of Commercial Ice-Makers.”

(2) American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 29–1988 (RA 2005), “Methods of Testing Automatic Ice Makers.”

(c) *Availability of references.* (1) *Inspection of test procedures.* The test procedures incorporated by reference are available for inspection at:

(i) National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(ii) U.S. Department of Energy, Forrestal Building, Room 1J–018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585–0121, (202) 586–9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

(2) *Obtaining copies of test procedures.* (i) Anyone can obtain a copy of ARI Standard 810–2003 from the Air-Conditioning and Refrigeration Institute, 4100 N. Fairfax Dr., Suite 200, Arlington, VA 22203 or <http://www.ari.org/std/standards.html>.

(ii) Anyone can purchase a copy of ASHRAE Standard 29–1988 (RA 2005), “Methods of Testing Automatic Ice Makers,” from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle, NE, Atlanta, GA 30329, (404) 636–8400, or <http://www.ashrae.org>.

**§ 431.134 Uniform test methods for the measurement of energy consumption and water consumption of automatic commercial ice makers.**

(a) *Scope.* This section provides the test procedures for measuring, pursuant to EPCA, the energy use in kilowatt

hours per 100 pounds of ice (kWh/100 lbs ice) and the condenser water use in gallons per 100 pounds of ice (gal/100 lbs ice).

(b) *Testing and Calculations.* Determine the energy consumed and the condenser water use rate of each covered product by conducting the test

procedures, set forth in the Air-Conditioning and Refrigeration Institute's Standard 810-2003, "Performance Rating of Automatic Commercial Ice-Makers," section 4, "Test Requirements," and section 5, "Rating Requirements." Do not use the formula in Standard 810-2003 for

calculating energy use, but instead calculate the energy use rate (kWh/100 lbs Ice) by dividing the energy consumed during testing by the total mass of the ice produced during the time period over which energy consumption is measured, normalized to 100 pounds of ice as follows:

$$\text{Energy Consumption Rate (per 100 lbs ice)} = \frac{\text{Energy Consumed During Testing (kWh)}}{\text{Total Mass of Ice Collected During Testing (lbs)}} \times 100\%$$

#### § 431.135 Units to be tested.

For each basic model of automatic commercial ice maker selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that (Components of similar design may be substituted without requiring additional testing if the represented measures of energy continue to satisfy the applicable sampling provision.)—

(a) Any represented value of estimated maximum energy use or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of;

(1) The mean of the sample; or  
(2) The upper 95 percent confidence limit of the true mean divided by 1.10; and

(b) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of;

(1) The mean of the sample; or  
(2) The lower 95 percent confidence limit of the true mean divided by 0.90.

16. Section 431.202 is amended by adding in alphabetical order new definitions for "Basic model," "Face," and "Input power demand" to read as follows:

#### § 431.202 Definitions concerning illuminated exit signs.

*Basic model* means, with respect to illuminated exit signs, all units of a given type of illuminated exit sign (or class thereof) manufactured by one manufacturer and which have the same primary energy source, which have electrical characteristics that are essentially identical, and which do not have any differing electrical, physical, or functional characteristics that affect energy consumption.

*Face* means an illuminated side of an illuminated exit sign.

\* \* \* \* \*

*Input power demand* means the amount of power required to

continuously illuminate an exit sign model, measured in watts (W). For exit sign models with rechargeable batteries, input power demand shall be measured with batteries at full charge.

17. Subpart L of Part 431 is amended by revising the undesignated center heading following § 431.202 and adding new §§ 431.203, 431.204, and 431.205, to read as follows:

#### Test Procedures

##### § 431.203 Materials incorporated by reference.

(a) *General.* The Department incorporates by reference the following test procedures into subpart L of part 431. The Director of the Federal Register has approved the material listed in paragraph (b) of this section for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Any subsequent amendment to this material by the standard-setting organization will not affect the DOE test procedures unless and until DOE amends its test procedures. The Department incorporates the material as it exists on the date of the approval by the **Federal Register** and a notice of any change in the material will be published in the **Federal Register**.

(b) *Test procedures incorporated by reference.* Environmental Protection Agency "ENERGY STAR Program Requirements for Exit Signs," Version 2.0.

(c) *Availability of references.* (1) *Inspection of test procedures.* The test procedures incorporated by reference are available for inspection at:

(i) National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html);

(ii) U.S. Department of Energy, Forrestal Building, Room 1J-018 (Resource Room of the Building Technologies Program), 1000

Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

(2) *Obtaining copies of standards.* Copies of the Environmental Protection Agency "ENERGY STAR Program Requirements for Exit Signs," version 2.0, may be obtained from the Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, (202) 272-0167 or at <http://www.epa.gov>.

##### § 431.204 Uniform test method for the measurement of energy consumption of illuminated exit signs.

(a) *Scope.* This section provides the test procedure for measuring, pursuant to EPCA, the input power demand of illuminated exit signs. For purposes of this part 431 and EPCA, the test procedure for measuring the input power demand of illuminated exit signs shall be the test procedure specified in § 431.205(b).

(b) *Testing and calculations.* Determine the energy efficiency of each covered product by conducting the test procedure, set forth in the Environmental Protection Agency's "ENERGY STAR Program Requirements for Exit Signs," version 3.0, section 4 (Test Criteria), "Conditions for testing" and "Input power measurement." The test duration shall be sufficient to allow the determination of true RMS input power with an uncertainty of  $\pm 1\%$ .

##### § 431.205 Units to be tested.

For each basic model of illuminated exit sign selected for testing, a sample of sufficient size shall be selected at random and tested to ensure (Components of similar design may be substituted without requiring additional testing if the represented measures of energy continue to satisfy the applicable sampling provision.)

(a) Any represented value of estimated input power demand or other measure of energy consumption of a basic model for which consumers would

favor lower values shall be no less than the higher of:

- (1) The mean of the sample, or
- (2) The upper 95 percent confidence limit of the true mean divided by 1.10, and

(b) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of:

- (1) The mean of the sample, or
- (2) The lower 95 percent confidence limit of the true mean divided by 0.90.

18. Section 431.222 is amended by adding in alphabetical order new definitions for “Basic model,” “Maximum wattage,” and “Nominal wattage,” to read as follows:

**§ 431.222 Definitions concerning traffic signal modules and pedestrian modules.**

*Basic model* means, with respect to traffic signal modules and pedestrian modules, all units of a given type of traffic signal module or pedestrian module (or class thereof) manufactured by one manufacturer and which have the same primary energy source, which have electrical characteristics that are essentially identical, and which do not have any differing electrical, physical, or functional characteristics that affect energy consumption.

*Maximum wattage* means the power consumed by the module after being operated for 60 minutes while mounted in a temperature testing chamber so that the lensed portion of the module is outside the chamber, all portions of the module behind the lens are within the chamber at a temperature of 74 °C, and the air temperature in front of the lens is maintained at a minimum of 49 °C.

*Nominal wattage* means the power consumed by the module when it is operated within a chamber at a temperature of 25 °C after the signal has been operated for 60 minutes.

\* \* \* \* \*

19. Subpart M of Part 431 is amended by revising the undesignated center heading following § 431.222 and adding new §§ 431.223, 431.224, and 431.225, to read as follows:

**Test Procedures**

**§ 431.223 Materials incorporated by reference.**

(a) *General.* The Department incorporates by reference the following test procedures into Subpart M of Part 431. The Director of the Federal Register has approved the material listed in paragraph (b) of this section for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Any subsequent

amendment to this material by the standard-setting organization will not affect the DOE test procedures unless and until DOE amends its test procedures. The Department incorporates the material as it exists on the date of the approval by the **Federal Register** and a notice of any change in the material will be published in the **Federal Register**.

(b) *List of test procedures incorporated by reference.* (1) Environmental Protection Agency, “ENERGY STAR Program Requirements for Traffic Signals,” Version 1.1.

(2) Institute of Transportation Engineers (ITE), “Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement,” Part 2, 1985.

(c) *Availability of references.* (1) *Inspection of test procedures.* The test procedures incorporated by reference are available for inspection at:

(i) National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(ii) U.S. Department of Energy, Forrestal Building, Room 1J-018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

(2) *Obtaining copies of standards.* Standards incorporated by reference may be obtained from the following source:

(i) Environmental Protection Agency “ENERGY STAR Program Requirements Traffic Signals,” Version 1.1, Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, (202) 272-0167 or at <http://www.epa.gov>.

(ii) Institute of Transportation Engineers, 1099 14th Street, NW., Suite 300 West, Washington, DC 20005-3438, (202) 289-0222, or [ite\\_staff@ite.org](mailto:ite_staff@ite.org).

**§ 431.224 Uniform test method for the measurement of energy consumption for traffic signal modules and pedestrian modules.**

(a) *Scope.* This section provides the test procedures for measuring, pursuant to EPCA, the maximum wattage and nominal wattage of traffic signal modules and pedestrian modules. For purposes of 10 CFR Part 431 and EPCA, the test procedures for measuring the

maximum wattage and nominal wattage of traffic signal modules and pedestrian modules shall be the test procedures specified in § 431.225(b).

(b) *Testing and Calculations.*

Determine the nominal wattage and maximum wattage of each covered traffic signal module or pedestrian module by conducting the test procedure set forth in Environmental Protection Agency, “ENERGY STAR Program Requirements for Traffic Signals,” version 1.1, section 1, “Definitions,” and section 4, “Test Criteria.” Measure wattage continuously at the rated voltage that represents normal operation using an RMS sensor having an accuracy of  $\pm 1\%$  over the time for which the minimum luminous intensity tests described in VTCSH Part 2, section 6.4.2.1 (nominal wattage) and section 6.4.2.2 (maximum wattage) are conducted.

**§ 431.225 Units to be tested.**

For each basic model of traffic signal module or pedestrian module selected for testing, a sample of sufficient size shall be selected at random and tested to ensure (Components of similar design may be substituted without requiring additional testing if the represented measures of energy continue to satisfy the applicable sampling provision.)—

(a) Any represented value of estimated maximum and nominal wattage or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of:

- (1) The mean of the sample, or
- (2) The upper 95 percent confidence limit of the true mean divided by 1.10, and

(b) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of:

- (1) The mean of the sample, or
- (2) The lower 95 percent confidence limit of the true mean divided by 0.90.

20. Section 431.242 is amended by adding in alphabetical order new definitions for “Automatic flue damper,” “Fan-type heater,” “Intermittent ignition device,” “Power venting,” and “Warm air furnace,” to read as follows:

**§ 431.242 Definitions concerning unit heaters.**

*Automatic flue damper* means a damper, usually electrically operated, which when fitted in the flue of a gas- or oil-fired space- or water-heating appliance and connected to the appliance control system opens on

firing and shuts after the main burner has been extinguished.

*Fan-type heater* means a type of heater in which a fan incorporated in the equipment supplies air for combustion at a pressure exceeding atmospheric pressure.

*Intermittent ignition device* means a device that utilizes electricity to ignite gas at the pilot using an ignition source which is automatically ignited or energized when an appliance is called on to operate and which remains continuously ignited or energized during each period of burner operation.

*Power venting* means a venting system that uses a separate fan in the vent pipe.

\* \* \* \* \*

*Warm air furnace* mean commercial warm air furnace as defined in § 431.72.

21. Section 431.262 is amended by adding in alphabetical order a new definition for "Basic model" to read as follows:

**§ 431.262 Definitions concerning commercial prerinse spray valves.**

*Basic model* means, with respect to commercial prerinse spray valves, all units of a given type of commercial prerinse spray valve (or class thereof) manufactured by one manufacturer and which have the identical flow control mechanism attached to or installed within the fixture fitting, or the identical water-passage design features that use the same path of water in the highest flow mode.

\* \* \* \* \*

22. Subpart O of Part 431 is amended by revising the undesignated center heading following § 431.262 and adding new §§ 431.263, 431.264 and 431.265, to read as follows:

**Test Procedures**

**§ 431.263 Materials incorporated by reference.**

(a) *General.* The Department incorporates by reference the following test procedures into Subpart O of Part 431. The Director of the Federal Register has approved the material listed in paragraph (b) of this section for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Any subsequent amendment to this material by the standard-setting organization will not affect the DOE test procedures unless DOE amends its test procedures. The Department incorporates the material as it exists on the date of the approval by the **Federal Register** and a notice of any change in the material will be published in the **Federal Register**.

(b) *Test procedures incorporated by reference.* American Society for Testing

and Materials (ASTM) Standard F2324–2003, "Standard Test Method for Prerinse Spray Valves."

(c) *Availability of references.* (1) *Inspection of test procedures.* The test procedures incorporated by reference are available for inspection at:

(i) National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

(ii) U.S. Department of Energy, Forrestal Building, Room 1J–018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585–0121, (202) 586–9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

(2) *Obtaining copies of standards.* Standards incorporated by reference may be obtained from the following source: Copies of ASTM Standard F2324–2003 can be obtained from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428–2959, or telephone (610) 832–9585.

**§ 431.264 Uniform test method for the measurement of flow rate for commercial prerinse spray valves.**

(a) *Scope.* This section provides the test procedure for measuring, pursuant to EPCA, the water consumption flow rate of commercial prerinse spray valves.

(b) *Testing and calculations.* The test procedure to determine the water consumption flow rate for prerinse spray valves, expressed in gallons per minute (gpm) or liters per minute (L/min), shall be conducted in accordance with the test requirements specified in sections 4.1 and 4.2 (Summary of Test Method), 5.1 (Significance and Use), 6.1 through 6.4 (Apparatus), 8.1 (Sampling), 9.1 through 9.5 (Preparation of Apparatus), and 10.1 through 10.2.5. (Procedure), and calculations in accordance with sections 11.1 through 11.3.2 (Calculation and Report) of the ASTM F2324–2003, "Standard Test Method for Prerinse Spray Valves." Perform only the procedures pertinent to the measurement of flow rate. Record measurements at the resolution of the test instrumentation. Round off calculations to the same number of significant digits as the previous step. Round the final water consumption value to one decimal place as follows:

(1) A fractional number at or above the midpoint between two consecutive decimal places shall be rounded up to the higher of the two decimal places; or

(2) A fractional number below the midpoint between two consecutive decimal places shall be rounded down to the lower of the two decimal places.

**§ 431.265 Units to be tested.**

For each basic model of commercial prerinse spray valves selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that (Components of similar design may be substituted without requiring additional testing if the represented measures of energy continue to satisfy the applicable sampling provision.)—

(a) Any represented value of estimated water consumption or other measure of water consumption of a basic model for which consumers would favor lower values shall be no less than the higher of:

(1) The mean of the sample, or  
(2) The upper 95 percent confidence limit of the true mean divided by 1.10; and

(b) Any represented value of the water efficiency or other measure of water consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of:

(1) The mean of the sample, or  
(2) The lower 95 percent confidence limit of the true mean divided by 0.90.

23. Part 431 is amended by adding a new Subpart Q to read as follows:

**Subpart Q—Refrigerated Bottled or Canned Beverage Vending Machines**

Sec.

431.291 Scope.

431.292 Definitions concerning refrigerated bottled or canned beverage vending machines.

**Test Procedures**

431.293 Materials incorporated by reference.

431.294 Uniform test method for the measurement of energy consumption of refrigerated bottled or canned beverage vending machines.

431.295 Units to be tested.

**Subpart Q—Refrigerated Bottled or Canned Beverage Vending Machines**

**§ 431.291 Scope.**

This subpart specifies test procedures and energy conservation standards for certain commercial refrigerated bottled or canned beverage vending machines, pursuant to Part C of Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6311–6316.

**§ 431.292 Definitions concerning refrigerated bottled or canned beverage vending machines.**

*Basic model* means, with respect to refrigerated bottled or canned beverage vending machines, all units of a given



type of refrigerated bottled or canned beverage vending machine (or class thereof) manufactured by one manufacturer and which have the same primary energy source, which have electrical characteristics that are essentially identical, and which do not have any differing electrical, physical, or functional characteristics that affect energy consumption.

*Refrigerated bottled or canned beverage vending machine* means a commercial refrigerator that cools bottled or canned beverages and dispenses the bottled or canned beverages on payment.

## Test Procedures

### § 431.293 Materials incorporated by reference.

(a) *General.* The Department incorporates by reference the following test procedures into Subpart Q of Part 431. The Director of the Federal Register has approved the material listed in paragraph (b) of this section for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Any subsequent amendment to this material by the standard-setting organization will not affect the DOE test procedures unless DOE amends its test procedures. The Department incorporates the material as it exists on the date of the approval by the **Federal Register** and a notice of any change in the material will be published in the **Federal Register**.

(b) *Test procedures incorporated by reference.* American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) Standard 32.1–2004, “Methods of Testing for Rating Vending Machines for Bottled, Canned, and Other Sealed Beverages.”

(c) *Availability of references.* (1) *Inspection of test procedures.* The test procedures incorporated by reference are available for inspection at:

(i) National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

(ii) U.S. Department of Energy, Forrestal Building, Room 1J–018 (Resource Room of the Building Technologies Program), 1000 Independence Avenue, SW., Washington, DC 20585–0121, (202) 586–9127, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

(2) *Obtaining copies of standards.* Standards incorporated by reference may be obtained from the following sources: Copies of ASHRAE Standard

32.1–2004 can be obtained from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle NE, Atlanta, GA 30329–2305, (404) 636–8400, or <http://www.ashrae.org>.

### § 431.294 Uniform test method for the measurement of energy consumption of refrigerated bottled or canned beverage vending machines.

(a) *Scope.* This section provides test procedures that must be followed for measuring, pursuant to EPCA, the energy consumption of refrigerated bottled or canned beverage vending machines.

(b) *Testing and Calculations.* The test procedure for energy consumption of refrigerated bottled or canned beverage vending machines shall be conducted in accordance with the test procedures specified in section 4, “Instruments,” section 5, “Vending Machine Capacity,” section 6, “Test Conditions,” and sections 7.1 through 7.2.3.2, under “Test Procedures,” of ANSI/ASHRAE Standard 32.1–2004, “Methods of Testing for Rating Vending Machines for Bottled, Canned, and Other Sealed Beverages.”

### § 431.295 Units to be tested.

For each basic model of refrigerated bottled or canned beverage vending machine selected for testing, a sample of sufficient size shall be selected at random and tested to ensure that (Components of similar design may be substituted without requiring additional testing if the represented measures of energy continue to satisfy the applicable sampling provision.)—

(a) Any represented value of estimated energy consumption or other measure of energy consumption of a basic model for which consumers would favor lower values shall be no less than the higher of:

- (1) The mean of the sample, or
- (2) The upper 95 percent confidence limit of the true mean divided by 1.10; and

(b) Any represented value of the energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values shall be no greater than the lower of:

- (1) The mean of the sample, or
- (2) The lower 95 percent confidence limit of the true mean divided by 0.90.

24. Part 431 is amended by adding a new Subpart T to read as follows:

## Subpart T—Certification and Enforcement

- Sec.  
431.370 Purpose and scope.  
431.371 Submission of data.  
431.372 Sampling.

- 431.373 Enforcement.  
Appendix A to Subpart T of Part 431—Compliance Statement for Certain Commercial Equipment  
Appendix B to Subpart T of Part 431—Certification Report for Certain Commercial Equipment  
Appendix C to Subpart T of Part 431—Certification Report for Distribution Transformers  
Appendix D to Subpart T of Part 431—Enforcement for performance standards; Compliance Determination Procedure for Certain Commercial Equipment

## Subpart T—Certification and Enforcement

### § 431.370 Purpose and scope.

This subpart sets forth the procedures to be followed for manufacturer compliance certifications of all covered equipment except electric motors, and for DOE enforcement action to determine whether a basic model of covered equipment, other than electric motors and distribution transformers, complies with the applicable energy or water conservation standard set forth in this part. Energy and water conservation standards include minimum levels of efficiency and maximum levels of consumption (also referred to as performance standards), and prescriptive design requirements (also referred to as design standards). This subpart does not apply to electric motors.

### § 431.371 Submission of data.

(a) *Certification.* (1) Except as provided in paragraph (a)(2) of this section, each manufacturer or private labeler before distributing in commerce any basic model of covered equipment, covered by this subpart and subject to an energy or water conservation standard set forth in this part, shall certify by means of a compliance statement and a certification report that each basic model meets the applicable energy or water conservation standard. The compliance statement, signed by the company official submitting the statement, and the certification report(s) shall be sent by certified mail to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585–0121, or e-mailed to the Department at: [certification.report@ee.doe.gov](mailto:certification.report@ee.doe.gov).

(2) Each manufacturer or private labeler of a basic model of commercial clothes washer, distribution transformer, traffic signal module, pedestrian module, and commercial prerinse spray valve shall file a compliance statement and its first certification report with DOE on or

before [Date 1 Year After Publication of the Final Rule in the **Federal Register**]. Each manufacturer or private labeler of a basic model of low-voltage dry-type distribution transformer shall file a compliance statement and its first certification report with DOE on or before January 1, 2008.

(3) Amendment of information. If information in a compliance statement or certification report previously submitted to the Department under this section is found to be incorrect, each manufacturer or private labeler (or an authorized representative) must submit the corrected information to the Department at the address and in the manner described in this section.

(4) Notices designating a change of third-party representative must be sent to the Department at the address and in the manner described in this section.

(5) The compliance statement, which each manufacturer or private labeler need not submit more than once, shall include all information specified in the format set forth in Appendix A of this subpart and shall certify, with respect to each basic model currently produced by the manufacturer and new basic models it introduces in the future, that:

(i) Each basic model complies and will comply with the applicable energy or water conservation standard;

(ii) All representations as to efficiency in the manufacturer's certification report(s) are and will be based on testing and/or use of an AEDM in accordance with 10 CFR Part 431;

(iii) All information reported in the certification report(s) is and will be true, accurate, and complete; and

(iv) The manufacturer or private labeler is aware of the penalties associated with violations of the Act, the regulations thereunder, and 18 U.S.C. 1001, which prohibits knowingly making false statements to the Federal Government.

(6) Each manufacturer must submit to DOE a certification report for all of its basic models.

(i) For covered equipment that are subject to standards other than distribution transformers and electric motors, the certification report (for which a suggested format is set forth in Appendix B of this subpart) shall include for each basic model the product type, product class, manufacturer's name, private labeler's name(s) (if applicable), and the manufacturer's model number(s), and:

(A) The thermal efficiency in percent and the maximum rated capacity (rated maximum input) in Btu/h of commercial warm air furnaces;

(B) The combustion efficiency in percent and the capacity (rated

maximum input) in Btu/h of commercial package boilers;

(C) The seasonal energy efficiency ratio and the cooling capacity in Btu/h of small commercial, air cooled, three-phase, packaged air conditioners less than 65,000 Btu/h;

(D) The energy efficiency ratio and the cooling capacity in Btu/h of small commercial water-cooled and evaporatively cooled packaged air conditioners less than 65,000 Btu/h;

(E) The energy efficiency ratio and the cooling capacity in Btu/h of large and very large commercial air cooled, water-cooled, and evaporatively cooled packaged air conditioners;

(F) The energy efficiency ratio and the cooling capacity in Btu/h of packaged terminal air conditioners;

(G) The seasonal energy efficiency ratio, the heating seasonal performance factor and the cooling capacity in Btu/h of small commercial air cooled, three-phase packaged air conditioning heat pumps less than 65,000 Btu/h;

(H) The energy efficiency ratio, the coefficient of performance and the cooling capacity in Btu/h of small commercial water-source packaged air conditioning heat pumps;

(I) The energy efficiency ratio, the coefficient of performance and the cooling capacity in Btu/h of large and very large air cooled commercial package air conditioning heat pumps;

(J) The energy efficiency ratio, coefficient of performance and the cooling capacity in Btu/h of packaged terminal heat pumps;

(K) The maximum standby loss in percent per hour of electric storage water heaters;

(L) The minimum thermal efficiency in percent, the maximum standby loss in Btu/h, and the size (input capacity) in Btu/h of gas- and oil-fired storage water heaters;

(M) The minimum thermal efficiency in percent, maximum standby loss in Btu/h, and the size (storage capacity) in gallons of gas- and oil-fired instantaneous water heaters and gas- and oil-fired hot water supply boilers greater than or equal to 10 gallons;

(N) The minimum thermal efficiency in percent and the size (storage capacity) in gallons of gas- and oil-fired instantaneous water heaters and gas- and oil-fired hot water supply boilers less than 10 gallons;

(O) The minimum thermal insulation and the storage capacity of unfired hot water storage tanks;

(P) The maximum daily energy consumption in kilowatt hours per day and volume in cubic feet of refrigerators with solid doors, refrigerators with transparent doors, freezers with solid

doors, and freezers with transparent doors;

(Q) The maximum daily energy consumption in kilowatt hours per day and adjusted volume in cubic feet of refrigerator-freezers with solid doors;

(R) The equipment type, type of cooling, maximum energy use in kilowatt hours per 100 pounds of ice, maximum condenser water use in gallons per 100 pounds of ice, and harvest rate in pounds of ice per 24 hours of commercial ice makers;

(S) The modified energy factor and water consumption factor of commercial clothes washers;

(T) The input power demand in watts of illuminated exit signs;

(U) The nominal and maximum wattage in watts and signal type of traffic signal modules and pedestrian modules; and

(V) The flow rate in gallons per minute of commercial prerinse spray valves.

(ii) For the least efficient basic model of distribution transformer within each "kVA grouping" for which this part prescribes an efficiency standard, the certification report (for which a suggested format is set forth in Appendix C of this subpart) shall include the kVA rating, the insulation type (i.e., low-voltage dry-type, medium-voltage dry-type or liquid-immersed), the number of phases (i.e., single-phase or three-phase), the BIL group rating (for medium-voltage dry-types), the model number(s), the efficiency, and the method used to determine the efficiency (i.e., actual testing or an AEDM). As used in this section, a "kVA grouping" is a group of basic models which all have the same kVA rating, have the same insulation type (i.e., low-voltage dry-type, medium-voltage dry-type or liquid-immersed), have the same number of phases (i.e., single-phase or three-phase), and, for medium-voltage dry-types, have the same BIL group rating (i.e., 20–45 kV BIL, 46–95 kV BIL or greater than 96 kV BIL).

(7) Copies of reports to the Federal Trade Commission that include the information specified in paragraph (a)(6) of this section could serve in lieu of the certification report.

(b) *Model modifications.* Any change to a basic model that affects energy or water consumption (in the case of prerinse spray valves) constitutes the addition of a new basic model. If such a change reduces consumption, the new model shall be considered in compliance with the standard without any additional testing. If, however, such a change increases consumption while meeting the standard, then

(1) For distribution transformers, the manufacturer must submit all information required by paragraph (a)(6)(ii) of this section for the new basic model, unless the manufacturer has previously submitted to DOE a certification report for a basic model of distribution transformer that is in the same kVA grouping as the new basic model, and that has a lower efficiency than the new basic model;

(2) For other equipment, the manufacturer must submit all information required by paragraph (a)(6) of this section for the new basic model; and

(3) Any such submission shall be by certified mail, to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121, or e-mailed to the Department at: [certification.report@ee.doe.gov](mailto:certification.report@ee.doe.gov).

(c) *Discontinued model.* For equipment other than distribution transformers, when production of a basic model has ceased and is no longer being distributed, the manufacturer shall report this, by certified mail, to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121, or e-mailed to the Department at: [certification.report@ee.doe.gov](mailto:certification.report@ee.doe.gov). For each basic model, the report shall include: equipment type, equipment class, the manufacturer's name, the private labeler's name(s), if applicable, and the manufacturer's model number. If the reporting of discontinued models coincides with the submittal of a certification report, such information can be included in the certification report.

(d) *Third-party representation.* A manufacturer or private labeler may elect to use a third party (such as a trade association or other authorized representative) to submit the certification report to DOE. Such certification reports shall include all the information specified in paragraph (a)(6) of this section. Third parties submitting certification reports shall include the names of the manufacturers or private labelers who authorized the submittal of the certification reports to DOE on their behalf. The third-party representative also may submit discontinued model information on behalf of an authorizing manufacturer.

#### **§ 431.372 Sampling.**

For purposes of a certification of compliance, the determination that a

basic model complies with the applicable energy conservation standard or water conservation standard shall be based upon the testing and sampling procedures, and other applicable rating procedures set forth in this part. For purposes of a certification of compliance, the determination that a basic model complies with the applicable design standard shall be based on the incorporation of specific design requirements specified in this part.

#### **§ 431.373 Enforcement.**

Process for Covered Equipment Other than Electric Motors. For covered equipment other than electric motors, this section sets forth procedures DOE will follow in pursuing alleged non-compliance with an applicable energy or water conservation standard. Paragraph (c) of this section applies to all such covered equipment, paragraphs (a)(1) and (a)(2) of this section apply to all such equipment except for distribution transformers and commercial heating, ventilating, and air conditioning equipment and commercial water heating equipment.

(a) *Performance standards*—(1) *Test notice.* Upon receiving information in writing concerning the energy performance or water performance (in the case of commercial prerinse spray valves) of a particular covered equipment sold by a particular manufacturer or private labeler, which indicates that the covered equipment may not be in compliance with the applicable energy-or water-performance standard, the Secretary may conduct a review of the test records. The Secretary may then conduct enforcement testing of that equipment by means of a test notice addressed to the manufacturer or private labeler in accordance with the following requirements:

(i) The test notice procedure will only be followed after the Secretary or his/her designated representative has examined the underlying test data (or, where appropriate, data about the use of an alternative efficiency determination method (AEDM)) provided by the manufacturer, and after the manufacturer has been offered the opportunity to meet with the Department to verify compliance with the applicable energy conservation standard or water conservation standard. When compliance of a basic model was certified based on an AEDM, the Department has the discretion to pursue other steps provided under this part for verifying the AEDM before invoking the test notice procedure. A representative designated by the Secretary must be permitted to observe

any reverification procedures undertaken according to this subpart, and to inspect the results of such reverification.

(ii) The test notice will be signed by the Secretary or his/her designee and will be mailed or delivered by the Department to the plant manager or other responsible official designated by the manufacturer.

(iii) The test notice will specify the model or basic model to be selected for testing, the number of units to be tested, the method for selecting these units, the date and time at which testing is to begin, the date when testing is scheduled to be completed, and the facility at which testing will be conducted. The test notice may also provide for situations in which the selected basic model is unavailable for testing, and it may include alternative basic models. For equipment that this part allows to be rated by use of an AEDM, the specified basic model may be one that the manufacturer has rated by actual testing or that it has rated by the use of an AEDM.

(iv) The Secretary may require in the test notice that the manufacturer of a covered equipment shall ship at his expense a reasonable number of units of each basic model specified in the test notice to a testing laboratory designated by the Secretary. The number of units of a basic model specified in a test notice shall not exceed 20.

(v) Within five working days of the time the units are selected, the manufacturer must ship the specified test units of a basic model to the designated testing laboratory.

(2) *Testing Laboratory.* Whenever the Department conducts enforcement testing at a designated laboratory in accordance with a test notice under this section, the resulting test data shall constitute official test data for that basic model. The Department will use such test data to make a determination of compliance or noncompliance.

(3) *Sampling.* The Secretary will base the determination of whether a manufacturer's basic model complies with the applicable energy-or water-performance standard on testing conducted in accordance with the applicable test procedures specified in this part, and with the following statistical sampling procedures:

(i) For commercial prerinse spray valves, illuminated exit signs, traffic signal modules and pedestrian modules, refrigerated bottled or canned vending machines, and commercial clothes washers, the methods are described in Appendix B to Subpart F of Part 430 (Sampling Plan for Enforcement Testing).

(ii) For automatic commercial ice makers, as well as commercial refrigerators, freezers, and refrigerators-freezers, the methods are described in Appendix C to Subpart T of Part 431 and include the following provisions:

(A) Except as required or provided in paragraphs (a)(3)(ii)(B) and (a)(3)(ii)(C) of this section, initially, the Department will test four units.

(B) Except as provided in paragraph (a)(3)(ii)(C) of this section, if fewer than four units of basic model are available for testing when the manufacturer receives the test notice, then:

(1) DOE will test the available unit(s); or

(2) If one or more other units of the basic model are expected to become available within six months, DOE may instead at its discretion, test either:

(i) The available unit(s) and one or more of the other units that subsequently become available (up to a maximum of four); or

(ii) Up to four of the other units that subsequently become available.

(C) Notwithstanding paragraphs (a)(3)(ii)(A) and (a)(3)(ii)(B) of this section, if testing of the available or subsequently available units of a basic model would be impractical, as for example when a basic model is very large, has unusual testing requirements, or has limited production, the Department may in its discretion decide to base the determination of compliance on the testing of fewer than the available number of units, if the manufacturer so requests and demonstrates that the criteria of this paragraph are met.

(D) When testing units under paragraphs (a)(3)(ii)(A), (a)(3)(ii)(B), or (a)(3)(ii)(C) of this section, DOE shall perform the following number of tests:

(1) If DOE tests three or four units, it will test each unit once;

(2) If DOE tests two units, it will test each unit twice; or

(3) If DOE tests one unit, it will test each unit four times.

(E) When it tests three or fewer units, the Department will base the compliance determination on the results of such testing in a manner otherwise in accordance with this section.

(F) For the purposes of paragraphs (a)(3)(ii)(A) through (a)(3)(ii)(C) of this section, available units are those that are available for commercial distribution within the United States.

(4) *Test unit selection.* (i) For commercial prerinse spray valves, illuminated exit signs, traffic signal modules and pedestrian modules, refrigerated bottled or canned vending machines, and commercial clothes washers, the following applies:

(A) The Department shall select a batch, a batch sample, and test units from the batch sample in accordance with the following provisions of this paragraph and the conditions specified in the test notice:

(B) The batch may be subdivided by the Department using criteria specified in the test notice.

(C) The Department will then randomly select a batch sample of up to 20 units from one or more subdivided groups within the batch. The manufacturer shall keep on hand all units in the batch sample until the basic model is determined to be in compliance or non-compliance.

(D) The Department will randomly select individual test units comprising the test sample from the batch sample.

(E) All random selection shall be achieved by sequentially numbering all of the units in a batch sample and then using a table of random numbers to select the units to be tested.

(ii) For automatic commercial ice makers, as well as commercial refrigerators, freezers, and refrigerator-freezers, the following applies:

(A) The Department will select a batch from all available units, and a test sample (i.e., the units to be tested) from the batch, in accordance with the provisions of this paragraph and the conditions specified in the test notice.

(B) DOE may select the batch by utilizing the criteria specified in the test notice, that is, date of manufacture, component-supplier, location of manufacturing facility, or other criteria which may differentiate one unit from another within a basic model.

(C) DOE will randomly select individual units to be tested, comprising the test sample, from the batch. DOE will achieve random selection by sequentially numbering all of the units in a batch and then using a table of random numbers to select the units to be tested. The manufacturer must keep on hand all units in the batch until such time as the inspector determines that the unit(s) selected for testing is(are) operative. Thereafter, once a manufacturer distributes or otherwise disposes of any unit in the batch, it may no longer claim under paragraph (a)(5)(iii) of this section that a unit selected for testing is defective due to a manufacturing defect or failure to operate in accordance with its design and operating instructions.

(5) *Test unit preparation.* (i) Before and during the testing, a test unit selected in accordance with paragraph (a)(4) of this section shall not be prepared, modified, or adjusted in any manner unless such preparation, modification, or adjustment is allowed

by the applicable DOE test procedure. DOE will test each unit in accordance with the applicable test procedures.

(ii) No one may perform any quality control, testing, or assembly procedures on a test unit, or any parts and subassemblies thereof, that is not performed during the production and assembly of all other units included in the basic model.

(iii) A test unit shall be considered defective if it is inoperative. A test unit is also defective if it is found to be in noncompliance due to a manufacturing defect or due to failure of the unit to operate according to the manufacturer's design and operating instructions, and the manufacturer demonstrates by statistically valid means that, with respect to such defect or failure, the unit is not representative of the population of production units from which it is obtained. Defective units, including those damaged due to shipping or handling, must be reported immediately to DOE. The Department will authorize testing of an additional unit on a case-by-case basis.

(6) *Testing at manufacturer's option.*

(i) If the Department determines a basic model to be in noncompliance with the applicable energy performance standard or water performance standard at the conclusion of its initial enforcement sampling plan testing, the manufacturer may request that the Department conduct additional testing of the basic model. Additional testing under this paragraph must be in accordance with the applicable test procedure, and:

(A) For commercial prerinse spray valves, illuminated exit signs, traffic signal modules and pedestrian modules, refrigerated bottled or canned vending machines, and commercial clothes washers, the applicable provisions in Appendix B to Subpart F of Part 430;

(B) For automatic commercial ice makers, as well as commercial refrigerators, freezers, and refrigerator-freezers, the applicable provisions in Appendix C of this subpart, and limited to a maximum of six additional units of basic model.

(ii) All units tested under this paragraph shall be selected and tested in accordance with paragraphs (a)(1)(v), (a)(2), (a)(4), and (a)(5) of this section.

(iii) The manufacturer shall bear the cost of all testing under this paragraph.

(iv) The Department will advise the manufacturer of the method for selecting the additional units for testing, the date and time at which testing is to begin, the date by which testing is scheduled to be completed, and the facility at which the testing will occur.

(v) The manufacturer shall cease distribution of the basic model tested

under the provisions of this paragraph from the time the manufacturer elects to exercise the option provided in this paragraph until the basic model is determined to be in compliance. The Department may seek civil penalties for all units distributed during such period.

(vi) If the additional testing results in a determination of compliance, the Department will issue a notice of allowance to resume distribution.

(b) *Design standard.* In the case of a design standard, the Department can determine that a model is noncompliant after the Department has examined the underlying design information of the manufacturer and has offered the manufacturer the opportunity to verify compliance with the applicable design standard.

(c) *Cessation of distribution of a basic model of commercial equipment other than electric motors.* (1) In the event the Department determines, in accordance with enforcement provisions set forth in this subpart, a model of covered equipment is noncompliant, or if a manufacturer or private labeler determines one of its models to be in noncompliance, the manufacturer or private labeler shall:

(i) Immediately cease distribution in commerce of all units of the basic model in question;

(ii) Give immediate written notification of the determination of noncompliance to all persons to whom the manufacturer has distributed units of the basic model manufactured since the date of the last determination of compliance; and

(iii) If requested by the Secretary, provide DOE within 30 days of the request, records, reports and other documentation pertaining to the acquisition, ordering, storage, shipment, or sale of a basic model determined to be in noncompliance.

(2) The manufacturer may modify the noncompliant basic model in such manner as to make it comply with the applicable performance standard. The manufacturer or private labeler must treat such a modified basic model as a new basic model and certify it in accordance with the provisions of this subpart. In addition to satisfying all requirements of this subpart, the manufacturer must also maintain records that demonstrate that modifications have been made to all units of the new basic model before its distribution in commerce.

(3) If a manufacturer or private labeler has a basic model that is not properly certified in accordance with the requirements of this subpart, the Secretary may seek, among other remedies, injunctive action to prohibit

distribution in commerce of the basic model.

#### Appendix A to Subpart T of Part 431— Compliance Statement for Certain Commercial Equipment

Product: \_\_\_\_\_  
Manufacturer's or Private Labeler's Name and  
Address: \_\_\_\_\_

[Company name] ("the company") submits this Compliance Statement under 10 CFR Part 431 (Energy Efficiency Program for Certain Commercial and Industrial Equipment) and Part C of the Energy Policy and Conservation Act (Pub. L. 94-163), and amendments thereto. I am signing this on behalf of and as a responsible official of the company. All basic models of commercial or industrial equipment subject to energy conservation standards specified in 10 CFR Part 431 that this company manufacturers comply with the applicable energy or water conservation standard(s). We have complied with the applicable testing requirements (prescribed in 10 CFR Part 431) in making this determination, and in determining the energy efficiency, energy use, or water use that is set forth in any accompanying Certification Report. All information in such Certification Report(s) and in this Compliance Statement is true, accurate, and complete. The company pledges that all this information in any future Compliance Statement(s) and Certification Report(s) will meet these standards, and that the company will comply with the energy conservation requirements in 10 CFR Part 431 with regard to any new basic model it distributes in the future. The company is aware of the penalties associated with violations of the Act and the regulations thereunder, and is also aware of the provisions contained in 18 U.S.C. 1001, which prohibits knowingly making false statements to the Federal Government.

Name of Company Official: \_\_\_\_\_  
Signature of Company Official: \_\_\_\_\_  
Title: \_\_\_\_\_  
Firm or Organization: \_\_\_\_\_  
Date: \_\_\_\_\_  
Name of Person to Contact for Further Information: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_

Third-Party Representation (if applicable)  
For a certification reports prepared and submitted by a third-party organization under the provisions of 10 CFR Part 431, the company official who authorized said third-party representation is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_  
Facsimile Number: \_\_\_\_\_

The third-party organization authorized to act as representative:

Third-Party Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Facsimile Number: \_\_\_\_\_

#### Appendix B to Subpart T to Part 431— Certification Report for Certain Commercial Equipment

All information reported in this Certification Report(s) is true, accurate, and complete. The company is aware of the penalties associated with violations of the Act, the regulations thereunder, and is also aware of the provisions contained in 18 U.S.C. 1001, which prohibits knowingly making false statements to the Federal Government.

Name of Company Official or Third-Party Representative: \_\_\_\_\_

Signature of Company Official or Third-Party Representative: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Equipment Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Private Labeler (if applicable): \_\_\_\_\_

Name of Person to Contact for Further Information: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Facsimile Number: \_\_\_\_\_

For Existing, New, or Modified Models: <sup>1</sup>

For Discontinued Models: <sup>2</sup>

Submit by Certified Mail to: U.S.

Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121.

Submit by E-mail to: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9127. E-mail: [certification.report@ee.doe.gov](mailto:certification.report@ee.doe.gov).

#### Appendix C to Subpart T of Part 431— Certification Report for Distribution Transformers

All information reported in this Certification Report(s) is true, accurate, and complete. The company is aware of the penalties associated with violations of the Act, the regulations thereunder, and is also aware of the provisions contained in 18 U.S.C. 1001, which prohibits knowingly making false statements to the Federal Government.

<sup>1</sup> Provide specific equipment information including, for each basic model, the product class, the manufacturer's model number(s), and the other information required in 431.371(a)(6)(i).

<sup>2</sup> Provide manufacturer's model number(s).

Name of Company Official or Third-Party Representative: \_\_\_\_\_

Signature of Company Official or Third-Party Representative: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Equipment Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Private Labeler (if applicable): \_\_\_\_\_

Name of Person to Contact for Further Information: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Facsimile Number: \_\_\_\_\_

For Existing, New, or Modified Models:<sup>1</sup>

Prepare tables that will list distribution transformer efficiencies. Each table should have a heading that provides the name of the manufacturer, as well as the type of transformer (i.e., low-voltage dry-type, liquid-immersed, or medium-voltage dry-type) and the number of phases for the transformers reported in that table. Each table should also have five columns, labeled "kVA rating," "BIL rating" for medium-voltage units, "Least efficient basic model (model number(s))," "Efficiency (%)" and "Test rating." Each table should have one row for each of the kVA groups that are produced by the manufacturer and that are subject to minimum efficiency standards. In the "Test Method Used" column, the manufacturer should report whether the efficiency of the reported least efficient basic model in that kVA grouping was determined by testing or through the application of an alternative efficiency determination method.

Submit by Certified Mail to: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121.

Submit by E-mail to: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 1000 Independence Avenue, SW., Washington, DC 20585-0121, (202) 586-9127. E-mail: [certification.report@ee.doe.gov](mailto:certification.report@ee.doe.gov).

#### Appendix D to Subpart T of Part 431—Enforcement for Performance Standards; Compliance Determination Procedure for Certain Commercial Equipment

The Department will determine compliance as follows:

(a) After it has determined the sample size, the Department will measure the energy

performance for each unit in accordance with the following table:

| Sample size | Number of tests for each unit |
|-------------|-------------------------------|
| 4 .....     | 1                             |
| 3 .....     | 1                             |
| 2 .....     | 2                             |
| 1 .....     | 4                             |

(b) Compute the mean of the measured energy performance ( $x_1$ ) for all tests as follows:

$$x_1 = \frac{1}{n_1} \left\{ \sum_{i=1}^{n_1} x_i \right\} \quad [1]$$

Where  $x_i$  is the measured energy efficiency or consumption from test  $i$ , and  $n_1$  is the total number of tests.

(c) Compute the standard deviation ( $s_1$ ) of the measured energy performance from the  $n_1$  tests as follows:

$$S_1 = \sqrt{\frac{\sum_{i=1}^{n_1} (x_i - x_1)^2}{n_1 - 1}} \quad [2]$$

(d) Compute the standard error ( $S_{x_1}$ ) of the measured energy performance from the  $n_1$  tests as follows:

$$S_{x_1} = \frac{S_1}{\sqrt{n_1}} \quad [3]$$

(e)(1) For an energy efficiency standard, compute the lower control limit (LCL<sub>1</sub>) according to:

$$LCL_1 = EPS - ts_{x_1} \quad [4a]$$

or

$$LCL_1 = 97.5 \text{ EPS} \quad [4b]$$

(whichever is greater)

(2) For an energy use standard, compute the upper control limit (UCL<sub>1</sub>) according to:

$$UCL_1 = EPS + ts_{x_1} \quad [5a]$$

or

$$UCL_1 = 1.025 \text{ EPS} \quad [5b]$$

(whichever is less)

Where EPS is the energy performance standard and  $t$  is a statistic based on a 97.5-percent, one-sided confidence limit and a sample size of  $n_1$ .

(f)(1) Compare the sample mean to the control limit. The basic model is in compliance and testing is at an end if, for an energy efficiency standard, the sample mean

is equal to or greater than the lower control limit or, for an energy consumption standard, the sample mean is equal to or less than the upper control limit. If, for an energy efficiency standard, the sample mean is less than the lower control limit or, for an energy consumption standard, the sample mean is greater than the upper control limit, compliance has not been demonstrated. Unless the manufacturer requests manufacturer-option testing and provides the additional units for such testing, the basic model is in noncompliance and the testing is at an end.

(2) If the manufacturer does request additional testing, and provides the necessary additional units, DOE will test each unit the same number of times it tested previous units. DOE will then compute a combined sample mean, standard deviation, and standard error as described above. (The "combined sample" refers to the units DOE initially tested plus the additional units DOE has tested at the manufacturer's request.) DOE will determine compliance or noncompliance from the mean and the new lower or upper control limit of the combined sample. If, for an energy efficiency standard, the combined sample mean is equal to or greater than the new lower control limit or, for an energy consumption standard, the sample mean is equal to or less than the upper control limit, the basic model is in compliance, and testing is at an end. If the combined sample mean does not satisfy one of these two conditions, the basic model is in noncompliance and the testing is at an end.

25. Section 431.408 is added to Subpart V to read as follows:

#### **§ 431.408 Preemption of State regulations for covered equipment other than electric motors and commercial HVAC and WH products.**

This section concerns State regulations providing for any energy conservation standard, or water conservation standard (in the case of commercial prerinse spray valves or commercial clothes washers), or other requirement with respect to the energy efficiency, energy use, or water use (in the case of commercial prerinse spray valves or commercial clothes washers), for any covered equipment other than an electric motor or commercial HVAC and WH product. Any such regulation that contains a standard or requirement that is not identical to a Federal standard in effect under this subpart is preempted by that standard, except as provided for in sections 327(b) and (c) and 345 (e), (f) and (g) of the Act.

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<sup>1</sup> Provide specific equipment information including for each basic model, the product class, the manufacturer's model number(s), and the other information required in § 431.371(a)(6)(i).