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(i) The designation appearing on the lamp packaging; and

(ii) Marketing materials that identify the lamp as being vibration service only.

*Voltage range* means a band of operating voltages as marked on an incandescent lamp, indicating that the lamp is designed to operate at any voltage within the band.

*Wall electric heater* means an electric heater (excluding baseboard electric heaters) which is intended to be recessed in or surface mounted on walls, which transfers heat by radiation and/or convection (either natural or forced) and which includes forced convectors, natural convectors, radiant heaters, high wall or valance heaters.

*Water closet* means a plumbing fixture that has a water-containing receptor which receives liquid and solid body waste, and upon actuation, conveys the waste through an exposed integral trap seal into a gravity drainage system, except such term does not include fixtures designed for installation in prisons.

*Water heater* means a product which utilizes oil, gas, or electricity to heat potable water for use outside the heater upon demand, including—

(1) Storage type units which heat and store water at a thermostatically controlled temperature, including gas storage water heaters with an input of 75,000 Btu per hour or less, oil storage water heaters with an input of 105,000 Btu per hour or less, and electric storage water heaters with an input of 12 kilowatts or less;

(2) Instantaneous type units which heat water but contain no more than one gallon of water per 4,000 Btu per hour of input, including gas instantaneous water heaters with an input of 200,000 Btu per hour or less, oil instantaneous water heaters with an input of 210,000 Btu per hour or less, and electric instantaneous water heaters with an input of 12 kilowatts or less; and

(3) Heat pump type units, with a maximum current rating of 24 amperes at a voltage no greater than 250 volts, which are products designed to transfer thermal energy from one temperature level to a higher temperature level for the purpose of heating water, including all ancillary equipment such as fans,

storage tanks, pumps, or controls necessary for the device to perform its function.

*Water use* means the quantity of water flowing through a showerhead, faucet, water closet, or urinal at point of use, determined in accordance with test procedures under appendices S and T of subpart B of this part.

*Weatherized warm air furnace or boiler* means a furnace or boiler designed for installation outdoors, approved for resistance to wind, rain, and snow, and supplied with its own venting system.

*Whole-home dehumidifier* means a dehumidifier designed to be installed with ducting to deliver return process air to its inlet and to supply dehumidified process air from its outlet to one or more locations in the dehumidified space.

[42 FR 27898, June 1, 1977]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 430.2, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.govinfo.gov](http://www.govinfo.gov).

### § 430.3 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the U.S. Department of Energy (DOE) must publish a document in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the DOE and at the National Archives and Records Administration (NARA). Contact DOE at: The U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Sixth Floor, 950 L'Enfant Plaza SW, Washington, DC 20024, (202) 586-9127, [Buildings@ee.doe.gov](mailto:Buildings@ee.doe.gov), <https://www.energy.gov/eere/buildings/appliance-and-equipment-standards-program>. For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html). The material may be obtained from the sources in the following paragraphs of this section.

(b) Air Movement and Control Association International, Inc. (AMCA), 30 West University Drive, Arlington Heights, IL 60004, (847) 394-0150, or by going to <http://www.amca.org/store/item.aspx?ItemId=81>.

(1) ANSI/ASHRAE 51-07/ANSI/AMCA 210-07 (“ANSI/AMCA 210”), Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating, AMCA approved July 28, 2006; IBR approved for appendix X1 to subpart B.

(2) ANSI/AMCA Standard 208-18, (“AMCA 208-18”), Calculation of the Fan Energy Index, ANSI approved January 24, 2018, IBR approved for appendix U to this subpart.

(3) ANSI/AMCA 210-07, ANSI/ASHRAE 51-07 (“AMCA 210-2007”), Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating, ANSI approved August 17, 2007, Section 8—Report and Results of Test, Section 8.2—Performance graphical representation of test results, IBR approved for appendices M and M1 to subpart B, as follows:

(i) Figure 2A—Static Pressure Tap, and

(ii) Figure 12—Outlet Chamber Setup—Multiple Nozzles in Chamber.

(4) ANSI/AMCA Standard 230-15 (“AMCA 230-15”), *Laboratory Methods of Testing Air Circulating Fans for Rating and Certification*, ANSI-approved October 16, 2015; IBR approved for appendix U of subpart B.

(5) AMCA 230-15 Technical Errata 2021-05-05 (“AMCA 260-15 TE”), *Technical Errata Sheet for ANSI/AMCA Standard 230-15: Density Corrections*, dated May 5, 2021; IBR approved for appendix U of subpart B.

(c) AHRI. Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Blvd, Suite 500, Arlington, VA 22201, 703-524-8800, or go to <http://www.ahrinet.org>.

(1) ANSI/AHRI 210/240-2008 with Addenda 1 and 2 (“AHRI 210/240-2008”), 2008 Standard for Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment, ANSI approved October 27, 2011 (Addendum 1 dated June 2011 and Addendum 2 dated March 2012), IBR approved for appendices M and M1 to subpart B, as follows:

(i) Section 6—Rating Requirements, Section 6.1—Standard Ratings, 6.1.3—Standard Rating Tests, 6.1.3.2—Electrical Conditions;

(ii) Section 6—Rating Requirements, Section 6.1—Standard Ratings, 6.1.3—Standard Rating Tests, 6.1.3.4—Outdoor-Coil Airflow Rate;

(iii) Section 6—Rating Requirements, Section 6.1—Standard Ratings, 6.1.3—Standard Rating Tests, 6.1.3.5—Requirements for Separated Assemblies;

(iv) Figure D1—Tunnel Air Enthalpy Test Method Arrangement;

(v) Figure D2—Loop Air Enthalpy Test Method Arrangement; and

(vi) Figure D4—Room Air Enthalpy Test Method Arrangement.

(2) AHRI Standard 1160-2009 (“AHRI 1160”), Performance Rating of Heat Pump Pool Heaters, 2009, IBR approved for appendix P to subpart B.

(3) ANSI/AHRI 1230-2010 with Addendum 2 (“AHRI 1230-2010”), 2010 Standard for Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment (including Addendum 1 dated March 2011), ANSI approved August 2, 2010 (Addendum 2 dated June 2014), IBR approved for appendices M and M1 to subpart B, as follows:

(i) Section 3—Definitions (except 3.8, 3.9, 3.13, 3.14, 3.15, 3.16, 3.23, 3.24, 3.26, 3.27, 3.28, 3.29, 3.30, and 3.31);

(ii) Section 5—Test Requirements, Section 5.1 (untitled), 5.1.3-5.1.4;

(iii) Section 6—Rating Requirements, Section 6.1—Standard Ratings, 6.1.5—Airflow Requirements for Systems with Capacities <65,000 Btu/h [19,000 W];

(iv) Section 6—Rating Requirements, Section 6.1—Standard Ratings, 6.1.6—Outdoor-Coil Airflow Rate (Applies to all Air-to-Air Systems);

(v) Section 6—Rating Requirements, Section 6.2—Conditions for Standard Rating Test for Air-cooled Systems < 65,000 Btu/h [19,000W] (except Table 8); and

(vi) Table 4—Refrigerant Line Length Correction Factors.

(d) AATCC. American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709, (919) 549-3526, or go to [www.aatcc.org](http://www.aatcc.org).

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(1) AATCC Test Method 79-2010, Absorbency of Textiles, Revised 2010, IBR approved for Appendix J3 to Subpart B.

(2) AATCC Test Method 118-2007, Oil Repellency: Hydrocarbon Resistance Test, Revised 2007, IBR approved for Appendix J3 to Subpart B.

(3) AATCC Test Method 135-2010, Dimensional Changes of Fabrics after Home Laundering, Revised 2010, IBR approved for Appendix J3 to Subpart B.

(e) ANSI. American National Standards Institute, 25 W. 43rd Street, 4th Floor, New York, NY 10036, 212-642-4900, or go to <http://www.ansi.org>.

(1) ANSI C78.3-1991 (“ANSI C78.3”), American National Standard for Fluorescent Lamps—Instant-start and Cold-Cathode Types—Dimensional and Electrical Characteristics, approved July 15, 1991; IBR approved for § 430.32.

(2) ANSI C78.20-2003, Revision of ANSI C78.20-1995 (“ANSI C78.20”), American National Standard for electric lamps—A, G, PS, and Similar Shapes with E26 Medium Screw Bases, approved October 30, 2003; IBR approved for § 430.2.

(3) ANSI C78.21-1989, American National Standard for Electric Lamps—PAR and R Shapes, approved March 3, 1989, IBR approved for § 430.2.

(4) ANSI C78.21-2011 (R2016) (“ANSI C78.21-2016”), *American National Standard for Electric Lamps—PAR and R Shapes*, ANSI-approved August 23, 2016; IBR approved for § 430.2.

(5) ANSI C78.79-2014 (R2020) (“ANSI C78.79-2020”), *American National Standard for Electric Lamps—Nomenclature for Envelope Shapes Intended for Use with Electric Lamps*, ANSI-approved January 17, 2020; IBR approved for § 430.2.

(6) ANSI ANSLG C78.81-2010, (“ANSI C78.81-2010”), American National Standard for Electric Lamps—Double-Capped Fluorescent Lamps—Dimensional and Electrical Characteristics, approved January 14, 2010, IBR approved for §§ 430.2 and 430.32 and appendix R to subpart B.

(7) ANSI C78.81-2016, American National Standard for Electric Lamps—Double-Capped Fluorescent Lamps—Dimensional and Electrical Characteristics, approved June 29, 2016, IBR approved for appendices Q and R to subpart B.

(8) ANSI C78.375-1997, Revision of ANSI C78.375-1991 (“ANSI C78.375”), American National Standard for Fluorescent Lamps—Guide for Electrical Measurements, first edition, approved September 25, 1997; IBR approved for appendix R to subpart B.

(9) ANSI C78.375A-2014 (R2020) (“ANSI C78.375A-2020”) *American National Standard for Electric Lamps—Fluorescent Lamps—Guide for Electrical Measures*, ANSI-approved January 17, 2020; IBR approved for appendix R to subpart B.

(10) ANSI IEC C78.901-2005, (“ANSI C78.901-2005”), American National Standard for Electric Lamps—Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics, approved March 23, 2005; IBR approved for § 430.2 and appendix R to subpart B.

(11) ANSI C78.901-2014, American National Standard for Electric Lamps—Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics, ANSI approved July 2, 2014; IBR approved for appendix W to subpart B.

(12) ANSI/NEMA C78.901-2016 (“ANSI C78.901-2016”), American National Standard for Electric Lamps—Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics, ANSI approved August 23, 2016, IBR approved for appendices Q and R to subpart B.

(13) ANSI C79.1-1994, American National Standard for Nomenclature for Glass Bulbs—Intended for Use with Electric Lamps, approved March 24, 1994, IBR approved for § 430.2.

(14) ANSI C79.1-2002, American National Standard for Electric Lamps—Nomenclature for Glass Bulbs Intended for Use with Electric Lamps, approved September 16, 2002, IBR approved for § 430.2.

(15) ANSI ANSLG C81.61-2006, Revision of ANSI C81.61-2005, (“ANSI C81.61”), American National Standard for electrical lamp bases—Specifications for Bases (Caps) for Electric Lamps, approved August 25, 2006, IBR approved for §§ 430.2; 430.32.

(16) ANSI C82.1-2004 (R2008, R2015), (“ANSI C82.1”), American National Standard for Lamp Ballasts—Line Frequency Fluorescent Lamp Ballasts, approved November 20, 2015; IBR approved for appendix Q to subpart B.

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(17) ANSI C82.2–2002 (R2007, R2016), (“ANSI C82.2”), American National Standard for Lamp Ballasts—Method of Measurement of Fluorescent Lamp Ballasts, approved July 12, 2016, IBR approved for appendix Q to subpart B.

(18) ANSI C82.3–2016, (“ANSI C82.3”), American National Standard for Reference Ballasts for Fluorescent Lamps, approved April 8, 2016; IBR approved for appendices Q and R to subpart B.

(19) ANSI/NEMA C82.11–2017, (“ANSI C82.11”), American National Standard for Lamp Ballasts—High-Frequency Fluorescent Lamp Ballasts, approved January 23, 2017; IBR approved for appendix Q to subpart B.

(20) ANSI C82.13–2002 (“ANSI C82.13”), American National Standard for Lamp Ballasts—Definitions for Fluorescent Lamps and Ballasts, approved July 23, 2002; IBR approved for appendix Q to subpart B.

(21) ANSI C82.77–2002, (“ANSI C82.77”) Harmonic Emission Limits—Related Power Quality Requirements for Lighting Equipment, approved January 17, 2002; IBR approved for appendix Q to subpart B.

(22) ANSI/NEMA WD 6–2016, *Wiring Devices—Dimensional Specifications*, ANSI approved February 11, 2016, IBR approved for appendices Y and Y1 to subpart B; as follows:

(i) Figure 1–15—Plug and Receptacle; and

(ii) Figure 5–15—Plug and Receptacle.

(23) ANSI Z21.56–2006, section 2.10 (“ANSI Z21.56”), Standard for Gas-Fired Pool Heaters, approved December 13, 2005, IBR approved for appendix P to subpart B.

(24) ANSI Z21.50–2007 (CSA 2.22–2007), (“ANSI Z21.50”), Vented Gas Fireplaces, Fifth Edition, Approved February 22, 2007, IBR approved for § 430.2.

(25) [Reserved]

(26) ANSI Z21.88–2009 (CSA 2.33–2009), (“ANSI Z21.88”), Vented Gas Fireplace Heaters, Fifth Edition, Approved March 26, 2009, IBR approved for § 430.2.

NOTE 1 TO PARAGRAPH (e): The standards referenced in paragraphs (e)(4), (5), (7), (9), (12), (16), (17), (18), (19), and (21) of this section were all published by National Electrical Manufacturers Association (NEMA) and are also available from National Electrical Manufacturers Association, 1300 North 17th Street, Suite 900, Rosslyn, Virginia

22209, <https://www.nema.org/Standards/Pages/default.aspx>.

(f) AS/NZS. Australian/New Zealand Standard, GPO Box 476, Sydney NSW 2001, (02) 9237–6000 or (12) 0065–4646, or go to [www.standards.org.au/Standards](http://www.standards.org.au/Standards) New Zealand, Level 10 Radio New Zealand House 144 The Terrace Wellington 6001 (Private Bag 2439 Wellington 6020), (04) 498–5990 or (04) 498–5991, or go to [www.standards.co.nz](http://www.standards.co.nz).

(1) AS/NZS 4474.1:2007, Performance of Household Electrical Appliances—Refrigerating Appliances; Part 1: Energy Consumption and Performance, Second edition, published August 15, 2007, IBR approved for Appendix A to Subpart B.

(2) [Reserved]

(g) ASHRAE. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 180 Technology Parkway NW, Peachtree Corners, GA 30092; (800) 527–4723 or (404) 636–8400; [www.ashrae.org](http://www.ashrae.org).

(1) ANSI/ASHRAE Standard 16–2016 (“ANSI/ASHRAE 16”), Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity, ANSI approved November 1, 2016, IBR approved for appendix F to subpart B.

(2) ANSI/ASHRAE 23.1–2010, (“ASHRAE 23.1–2010”), Methods of Testing for Rating the Performance of Positive Displacement Refrigerant Compressors and Condensing Units that Operate at Subcritical Temperatures of the Refrigerant, ANSI approved January 28, 2010, IBR approved for appendices M and M1 to subpart B, as follows:

(i) Section 5—Requirements;

(ii) Section 6—Instruments;

(iii) Section 7—Methods of Testing; and

(iv) Section 8—Compressor Testing.

(3) ANSI/ASHRAE Standard 37–2009, (“ASHRAE 37–2009”), Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment, ANSI approved June 25, 2009, IBR approved for appendices AA and CC to subpart B.

(4) ANSI/ASHRAE Standard 37–2009, (“ANSI/ASHRAE 37–2009”), Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat

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Pump Equipment, ANSI approved June 25, 2009, IBR approved for appendices M and M1 to subpart B, as follows:

(i) Section 5—Instruments, Section 5.1—Temperature Measuring Instruments: 5.1.1;

(ii) Section 5—Instruments, Section 5.2—Refrigerant, Liquid, and Barometric Pressure Measuring Instruments;

(iii) Section 5—Instruments, Section 5.5—Volatile Refrigerant Flow Measurement;

(iv) Section 6—Airflow and Air Differential Pressure Measurement Apparatus, Section 6.1—Enthalpy Apparatus (Excluding Figure 3): 6.1.1–6.1.2 and 6.1.4;

(v) Section 6—Airflow and Air Differential Pressure Measurement Apparatus, Section 6.2—Nozzle Airflow Measuring Apparatus (Excluding Figure 5);

(vi) Section 6—Airflow and Air Differential Pressure Measurement Apparatus, Section 6.3—Nozzles (Excluding Figure 6);

(vii) Section 6—Airflow and Air Differential Pressure Measurement Apparatus, Section 6.4—External Static Pressure Measurements;

(viii) Section 6—Airflow and Air Differential Pressure Measurement Apparatus, Section 6.5—Recommended Practices for Static Pressure Measurements;

(ix) Section 7—Methods of Testing and Calculation, Section 7.3—Indoor and Outdoor Air Enthalpy Methods (Excluding Table 1);

(x) Section 7—Methods of Testing and Calculation, Section 7.4—Compressor Calibration Method;

(xi) Section 7—Methods of Testing and Calculation, Section 7.5—Refrigerant Enthalpy Method;

(xii) Section 7—Methods of Testing and Calculation, Section 7.7—Airflow Rate Measurement, Section 7.7.2—Calculations—Nozzle Airflow Measuring Apparatus (Excluding Figure 10), 7.7.2.1–7.7.2.2;

(xiii) Section 8—Test Procedures, Section 8.1—Test Room Requirements: 8.1.2–8.1.3;

(xiv) Section 8—Test Procedures, Section 8.2—Equipment Installation;

(xv) Section 8—Test Procedures, Section 8.6—Additional Requirements for

the Outdoor Air Enthalpy Method, Section 8.6.2;

(xvii) Section 8—Test Procedures, Section 8.6—Additional Requirements for the Outdoor Air Enthalpy Method, Table 2a—Test Tolerances (SI Units), and

(xviii) Section 8—Test Procedures, Section 8.6—Additional Requirements for the Outdoor Air Enthalpy Method, Table 2b—Test Tolerances (I-P Units);

(xix) Section 9—Data to be Recorded, Section 9.2—Test Tolerances; and

(xx) Section 9—Data to be Recorded, Table 3—Data to be Recorded.

(5) ASHRAE 41.1–1986 (Reaffirmed 2006), Standard Method for Temperature Measurement, approved February 18, 1987, IBR approved for appendices E and AA to subpart B.

(6) ANSI/ASHRAE 41.1–2013 (“ANSI/ASHRAE 41.1”), Standard Method for Temperature Measurement, ANSI approved January 30, 2013; IBR approved for appendices F and X1 to subpart B.

(7) ANSI/ASHRAE Standard 41.1–2013, (“ANSI/ASHRAE 41.1–2013”), Standard Method for Temperature Measurement, ANSI approved January 30, 2013, IBR approved for appendix M to subpart B, as follows:

(i) Section 4—Classifications;

(ii) Section 5—Requirements, Section 5.3—Airstream Temperature Measurements;

(iii) Section 6—Instruments; and

(iv) Section 7—Temperature Test Methods (Informative).

(8) ANSI/ASHRAE Standard 41.2–1987 (RA 92), (“ASHRAE 41.2–1987 (RA 1992)”), Standard Methods for Laboratory Airflow Measurement, ANSI reaffirmed April 20, 1992, IBR approved for appendix F to subpart B.

(9) ANSI/ASHRAE Standard 41.2–1987 (RA 1992), (“ASHRAE 41.2–1987 (RA 1992)”), Standard Methods for Laboratory Airflow Measurement, ANSI reaffirmed April 20, 1992, Section 5—Section of Airflow-Measuring Equipment and Systems, IBR approved for appendix M to subpart B, as follows:

(i) Section 5.2—Test Ducts., Section 5.2.2—Mixers, 5.2.2.1—Performance of Mixers (excluding Figures 11 and 12 and Table 1); and

(ii) Figure 14—Outlet Chamber Setup for Multiple Nozzles in Chamber.

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(10) ANSI/ASHRAE Standard 41.3–2014, (“ASHRAE 41.3–2014”), Standard Methods for Pressure Measurement, ANSI approved July 3, 2014, IBR approved for appendix F to subpart B.

(11) ANSI/ASHRAE Standard 41.6–2014, (“ASHRAE 41.6–2014”), Standard Method for Humidity Measurement, ANSI approved July 3, 2014, IBR approved for appendix F to subpart B.

(12) ANSI/ASHRAE Standard 41.6–2014, (“ASHRAE 41.6–2014”), Standard Method for Humidity Measurement, ANSI approved July 3, 2014, IBR approved for appendix M to subpart B, as follows:

- (i) Section 4—Classifications;
- (ii) Section 5—Requirements;
- (iii) Section 6—Instruments and Calibration; and
- (iv) Section 7—Humidity Measurement Methods.

(13) ANSI/ASHRAE 41.9–2011, (“ASHRAE 41.9–2011”), Standard Methods for Volatile-Refrigerant Mass Flow Measurements Using Calorimeters, ANSI approved February 3, 2011, IBR approved for appendix M to subpart B, as follows:

- (i) Section 5—Requirements;
- (ii) Section 6—Instruments;
- (iii) Section 7—Secondary Refrigerant Calorimeter Method;
- (iv) Section 8—Secondary Fluid Calorimeter Method;
- (v) Section 9—Primary Refrigerant Calorimeter Method; and
- (vi) Section 11—Lubrication Circulation Measurements.

(14) ANSI/ASHRAE Standard 41.11–2014, (“ASHRAE 41.11–2014”), Standard Methods for Power Measurement, ANSI approved July 3, 2014, IBR approved for appendix F to subpart B.

(15) ANSI/ASHRAE Standard 103–1993, (“ASHRAE 103–1993”), Methods of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers, (with Errata of October 24, 1996), except for sections 7.1, 7.2.2.2, 7.2.2.5, 7.2.3.1, 7.8, 8.2.1.3, 8.3.3.1, 8.4.1.1, 8.4.1.1.2, 8.4.1.2, 8.4.2.1.4, 8.4.2.1.6, 8.6.1.1, 8.7.2, 8.8.3, 9.1.2.2.1, 9.1.2.2.2, 9.5.1.1, 9.5.1.2.1, 9.5.1.2.2, 9.5.2.1, 9.7.1, 9.7.4, 9.7.6, 9.10, 11.5.11.1, 11.5.11.2 and appendices B and C, approved October 4, 1993, IBR approved for § 430.23 and appendix N to subpart B.

(16) ANSI/ASHRAE Standard 103–2007 (“ASHRAE 103–2007”), Method of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers, ANSI-approved March 25, 2008; IBR approved for appendix AA to subpart B.

(17) ANSI/ASHRAE Standard 103–2017 (“ASHRAE 103–2017”), Method of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers, ANSI-approved July 3, 2017; IBR approved for appendix O to subpart B.

(18) ANSI/ASHRAE Standard 116–2010, (“ASHRAE 116–2010”), Methods of Testing for Rating Seasonal Efficiency of Unitary Air Conditioners and Heat Pumps, ANSI approved February 24, 2010, Section 7—Methods of Test, Section 7.4—Air Enthalpy Method—Indoor Side (Primary Method), Section 7.4.3—Measurements, Section 7.4.3.4—Temperature, Section 7.4.3.4.5, IBR approved for appendices M and M1 to subpart B.

(19) ANSI/ASHRAE Standard 146–2011 (“ASHRAE 146”), Method of Testing and Rating Pool Heaters, ASHRAE approved February 2, 2011, IBR approved for appendix P to subpart B.

(h) *ASME*. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016–5990, 1–800 843–2763, or go to [www.asme.org](http://www.asme.org).

(1) ASME A112.18.1–2012, (“ASME A112.18.1–2012”), “Plumbing supply fittings,” section 5.4, approved December, 2012, IBR approved for appendix S to subpart B.

(2) ASME A112.19.2–2008, (“ASME A112.19.2–2008”), “Ceramic plumbing fixtures,” sections 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.4, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.6, Table 5, and Table 6 approved August 2008, including Update No. 1, dated August 2009, and Update No. 2, dated March 2011, IBR approved for § 430.2 and appendix T to subpart B.

(3) ASME A112.19.2–2018/CSA B45.1–18 (“ASME A112.19.2–2018”), “Ceramic plumbing fixtures,” July 2018 (including Errata—October 2018); IBR approved for appendix T to subpart B.

(i) *AHAM*. Association of Home Appliance Manufacturers, 1111 19th Street NW, Suite 402, Washington, DC 20036, 202–872–5955, or go to <http://www.aham.org>.

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(1) ANSI/AHAM DH-1-2008 (“ANSI/AHAM DH-1”), Dehumidifiers, ANSI approved May 9, 2008, IBR approved for appendices X and X1 to subpart B of this part.

(2) ANSI/AHAM DW-1-2010, Household Electric Dishwashers, (ANSI approved September 18, 2010), IBR approved for § 430.32 and appendix C1 to subpart B of this part.

(3) ANSI/AHAM HLD-1-2010 (“AHAM HLD-1”), Household Tumble Type Clothes Dryers, ANSI-approved June 11, 2010, IBR approved for appendices D1 and D2 to subpart B of this part.

(4) AHAM HRF-1-2019 (“HRF-1-2019”), Energy and Internal Volume of Consumer Refrigeration Products, Copyright © 2019, IBR approved for appendices A and B to subpart B of this part.

(5) ANSI/AHAM PAC-1-2015, (“ANSI/AHAM PAC-1-2015”), Portable Air Conditioners, June 19, 2015, IBR approved for appendix CC to subpart B of this part.

(6) AHAM RAC-1-2020 (“AHAM RAC-1”), Energy Measurement Test Procedure for Room Air Conditioners, approved 2020, IBR approved for appendix F to subpart B.

(j) ASTM. American Society for Testing and Materials International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 ([www.astm.org](http://www.astm.org))

(1) ASTM D2156-09 (“ASTM D2156”), Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels, ASTM-approved December 1, 2009; IBR approved for appendix E to subpart B.

(2) ASTM D2156-09 (Reapproved 2013) (“ASTM D2156R13”), Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels, approved October 1, 2013, IBR approved for appendix N to subpart B.

(3) ASTM D2156-09 (Reapproved 2018) (“ASTM D2156-09 (R2018)”), Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels, approved October 1, 2018; IBR approved for appendix O to subpart B.

(k) Canadian Standards Association (CSA). CSA Group, 178 Rexdale Blvd., Toronto, ON, Canada M9W 1R3, 1-800-463-6727 or 416-747-4044, [www.csagroup.org](http://www.csagroup.org).

(1) ANSI Z21.86-2016 • CSA 2.32-2016 (“ANSI Z21.86-2016”), Vented gas-fired space heating appliances, ANSI-approved December 21, 2016; IBR approved for appendix O to subpart B.

(2) [Reserved]

(1) CEA. Consumer Electronics Association, Technology & Standards Department, 1919 S. Eads Street, Arlington, VA 22202, 703-907-7600, or go to [www.CE.org](http://www.CE.org).

(1) CEA Standard, CEA-770.3-D, *High Definition TV Analog Component Video Interface*, published February 2008; IBR approved for § 430.2.

(2) [Reserved]

(m) CIE. Commission Internationale de l’Eclairage (CIE), Central Bureau, Kegelgasse 27, A-1030, Vienna, Austria, 011 + 43 1 714 31 87 0, or go to <http://www.cie.co.at>.

(1) CIE 13.3-1995 (“CIE 13.3”), Technical Report: Method of Measuring and Specifying Colour Rendering Properties of Light Sources, 1995, ISBN 3 900 734 57 7; IBR approved for § 430.2 and appendices R and W to subpart B.

(2) CIE 15:2004 (“CIE 15”), Technical Report: Colorimetry, 3rd edition, 2004, ISBN 978 3 901906 33 6; IBR approved for appendix W to subpart B.

(3) CIE 015:2018 (“CIE 15:2018”), *Colorimetry*, 4th edition, copyright 2018; IBR approved for the appendix R to subpart B.

(n) *Environmental Protection Agency (EPA)*, ENERGY STAR documents published by the Environmental Protection Agency are available online at <http://www.energystar.gov> or by contacting the Energy Star hotline at 1-888-782-7937.

(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, approved December 9, 2002, IBR approved for appendix U to subpart B.

(2) ENERGY STAR Program Requirements for Dehumidifiers, approved January 1, 2001, IBR approved for appendix X to subpart B.

(3) Energy Star Program Requirements for Single Voltage External Ac-Dc and Ac-Ac Power Supplies, Eligibility Criteria (Version 2.0), effective date for EPS Manufacturers November

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1, 2008, IBR approved for subpart C, § 430.32.

(4) Test Methodology for Determining the Energy Performance of Battery Charging Systems, approved December 2005, IBR approved for appendix Y to subpart B.

(o) *HDMI®*. High-Definition Multimedia Interface Licensing, LLC, 1140 East Arques Avenue, Suite 100, Sunnyvale, CA 94085, 408-616-1542, or go to [www.hdmi.org](http://www.hdmi.org).

(1) HDMI Specification Informational Version 1.0, *High-Definition Multimedia Interface Specification*, published September 4, 2003; IBR approved for § 430.2.

(2) [Reserved]

(p) *IEC*. International Electrotechnical Commission, 3 Rue de Varembe, Case Postale 131, 1211 Geneva 20, Switzerland; <https://webstore.iec.ch/>.

(1) IEC Standard 933-5:1992, (“IEC 60933-5 Ed. 1.0”), *Audio, video and audiovisual systems—Interconnections and matching values—Part 5: Y/C connector for video systems—Electrical matching values and description of the connector*, First Edition, 1992-12; IBR approved for § 430.2. (Note: IEC 933-5 is also known as IEC 60933-5.)

(2) IEC 60081:1997/AMD6, (“IEC 60081”), *Double-capped fluorescent lamps—Performance specifications* (Amendment 6, Edition 5.0, August 2017); IBR approved for appendix Q to subpart B.

(3) IEC 60350-2, (“IEC 60350-2”), *Household electric cooking appliances Part 2: Hobs—Methods for measuring performance*, Edition 2.1, 2021-05; IBR approved for appendix II to subpart B.

(4) IEC Standard 62040-3 Ed. 2.0, (“IEC 62040-3 Ed. 2.0”), *Uninterruptible power systems (UPS)—Part 3: Method of specifying the performance and test requirements*, Edition 2.0, 2011-03, IBR approved for appendices Y and Y1 to subpart B, as follows:

(i) Section 5, Electrical conditions, performance and declared values, Section 5.2, UPS input specification, Section 5.2.1—Conditions for normal mode of operation;

(ii) Clause 5.2.2.k;

(iii) Section 5.3, UPS output specification, Section 5.3.2, Characteristics to be declared by the manufacturer, Clause 5.3.2.d;

(iv) Clause 5.3.2.e;

(v) Section 5.3.4—Performance classification;

(vi) Section 6.2, Routine test procedure, Section 6.2.2.7—AC input failure;

(vii) Section 6.4, Type test procedure (electrical), Section 6.4.1—Input—a.c. supply compatibility (excluding 6.4.1.3, 6.4.1.4, 6.4.1.5, 6.4.1.6, 6.4.1.7, 6.4.1.8, 6.4.1.9 and 6.4.1.10);

(viii) Annex G—Input mains failure—Test method

(ix) Annex J—UPS Efficiency—Methods of measurement.

(5) IEC Standard 62087:2011, (“IEC 62087 Ed. 3.0”), *Methods of measurement for the power consumption of audio, video, and related equipment*, Edition 3.0, 2011-04, Sections 3.1.1, 3.1.18, 11.4.1, 11.4.2, 11.4.5, 11.4.6, 11.4.8, 11.4.9, 11.4.10, 11.4.11, 11.5.5, and annex 3; IBR approved for Appendix H to subpart B of this part.

(6) IEC 62301, *Household electrical appliances—Measurement of standby power*, first edition, June 2005; IBR approved for appendices I, II to subpart B.

(7) IEC 62301 (“IEC 62301”), *Household electrical appliances—Measurement of standby power*, (Edition 2.0, 2011-01), IBR approved for appendices C1, D1, D2, F, G, H, I, II, J, J2, N, O, P, Q, U, X, XI, Y, Y1, Z, BB, and CC to subpart B.

(8) IEC 62301, (“IEC 62301-DD”), *Household electrical appliances—Measurement of standby power*, (Edition 2.0, 2011-01); Section 5—Measurements, IBR approved for appendix DD to subpart B.

(9) [Reserved]

(10) IEC 62301, (“IEC 62301-W”), *Household electrical appliances—Measurement of standby power*, (Edition 2.0, 2011-01), Section 5—Measurements, IBR approved for appendix W to subpart B.

NOTE 1 TO PARAGRAPH (p): The standards referenced in paragraphs (p)(1) through (9) are also available from ANSI. See paragraph (e) of this section.

(q) *IES*. Illuminating Engineering Society (formerly Illuminating Engineering Society of North America—IESNA), 120 Wall Street, Floor 17, New York, NY 10005-4001, 212-248-5000, or go to [www.ies.org](http://www.ies.org).

(1) *The IESNA Lighting Handbook, Reference & Application*, (“The IESNA Lighting Handbook”), 9th ed., Chapter 6, “Light Sources,” July 2000, IBR approved for § 430.2.

(2) IES LM-9-09, (“IES LM-9”), *IES Approved Method for the Electrical and*



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Photometric Measurement of Fluorescent Lamps, approved January 31, 2009; IBR approved for § 430.2 and appendices V and V1 to subpart B.

(3) IES LM-9-09 ("IES LM-9-09-DD"), IES Approved Method for the Electrical and Photometric Measurement of Fluorescent Lamps, approved January 31, 2009; IBR approved for appendix DD to subpart B, as follows:

(i) Section 4.0—Ambient and Physical Conditions;

(ii) Section 5.0—Electrical Conditions;

(iii) Section 6.0—Lamp Test Procedures; and

(iv) Section 7.0—Photometric Test Procedures: Section 7.5—Integrating Sphere Measurement.

(4) ANSI/IES LM-9-20 ("IES LM-9-20"), *Approved Method: Electrical and Photometric Measurements of Fluorescent Lamps*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(5) IESNA LM-16-1993 ("IESNA LM-16"), IESNA Practical Guide to Colorimetry of Light Sources, December 1993, IBR approved for § 430.2.

(6) IES LM-20-13, IES Approved Method for Photometry of Reflector Type Lamps, approved February 4, 2013; IBR approved for appendix DD to subpart B, as follows:

(i) Section 4.0—Ambient and Physical Conditions;

(ii) Section 5.0—Electrical and Photometric Test Conditions;

(iii) Section 6.0—Lamp Test Procedures; and

(iv) Section 8.0—Total Flux Measurements by Integrating Sphere Method.

(7) ANSI/IES LM-20-20 ("IES LM-20-20"), *Approved Method: Photometry of Reflector Type Lamps*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(8) IES LM-45-15, IES Approved Method for the Electrical and Photometric Measurement of General Service Incandescent Filament Lamps, approved August 8, 2015; IBR approved for appendix DD to subpart B as follows:

(i) Section 4.0—Ambient and Physical Conditions;

(ii) Section 5.0—Electrical Conditions;

(iii) Section 6.0—Lamp Test Procedures; and

(iv) Section 7.0—Photometric Test Procedures: Section 7.1—Total Luminous Flux Measurements with an Integrating Sphere.

(9) IES LM-45-20 ("IES LM-45-20"), *Approved Method: Electrical and Photometric Measurement of General Service Incandescent Filament Lamps*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(10) ANSI/IES LM-49-20 ("IES LM-49-20"), *Approved Method: Life Testing of Incandescent Filament Lamps*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(11) IES LM-54-12, IES Guide to Lamp Seasoning, approved October 22, 2012; IBR approved for appendix W to subpart B, as follows:

(i) Section 4—Physical/Environmental Test Conditions;

(ii) Section 5—Electrical Test Conditions;

(iii) Section 6—Test Procedure Requirements: Section 6.1—Test Preparation; and

(iv) Section 6—Test Procedure Requirements, Section 6.2—Seasoning Test Procedures: Section 6.2.2.1—Discharge Lamps: Discharge Lamps except T5 fluorescent.

(12) ANSI/IES LM-54-20 ("IES LM-54-20"), *Approved Method: IES Guide to Lamp Seasoning*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(13) ANSI/IES LM-58-20 ("IES LM-58-20"), *Approved Method: Spectroradiometric Measurement Methods for Light Sources*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(14) IES LM-65-14, IES Approved Method for Life Testing of Single-Based Fluorescent Lamps, approved December 30, 2014; IBR approved for appendix W to subpart B, as follows:

(i) Section 4.0—Ambient and Physical Conditions;

(ii) Section 5.0—Electrical Conditions; and

(iii) Section 6.0—Lamp Test Procedures

(15) IES LM-66-14, ("IES LM-66-14"), IES Approved Method for the Electrical and Photometric Measurements of Single-Based Fluorescent Lamps, approved December 30, 2014; IBR approved for appendix V to subpart B.

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(16) IES LM-66-14, (“IES LM-66”), IES Approved Method for the Electrical and Photometric Measurements of Single-Based Fluorescent Lamps, approved December 30, 2014; IBR approved for appendix W to subpart B, as follows:

(i) Section 4.0—Ambient and Physical Conditions;

(ii) Section 5.0—Power Source Characteristics; and

(iii) Section 6.0—Testing Procedures Requirements.

(17) IESNA LM-78-07, IESNA Approved Method for Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer, approved January 28, 2007; IBR approved for appendix W to subpart B.

(18) ANSI/IES LM-78-20 (“IES LM-78-20”) *Approved Method: Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer*, ANSI-approved February 7, 2020; IBR approved for appendix R to subpart B.

(19) IES LM-79-08, (“IES LM-79-08”), IES Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products, approved December 31, 2007; IBR approved for appendices V1 and BB to subpart B.

(20) IES LM-79-08 (“IES LM-79-08-DD”), *Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products*, approved December 31, 2007; IBR approved for appendix DD to subpart B as follows:

(i) Section 1.0 Introduction: Section 1.3—Nomenclature and Definitions (except section 1.3f);

(ii) Section 2.0—Ambient Conditions;

(iii) Section 3.0—Power Supply Characteristics;

(iv) Section 5.0—Stabilization of SSL Product;

(v) Section 7.0—Electrical Settings;

(vi) Section 8.0—Electrical Instrumentation;

(vii) Section 9.0—Test Methods for Total Luminous Flux measurement: Section 9.1 Integrating sphere with a spectroradiometer (Sphere-spectroradiometer system); and Section 9.2—Integrating sphere with a photometer head (Sphere-photometer system).

(21) IES LM-84-14, (“IES LM-84”), *Approved Method: Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and*

*Luminaires*, approved March 31, 2014; IBR approved for appendix BB to subpart B.

(22) ANSI/IES RP-16-10 (“ANSI/IES RP-16”), *Nomenclature and Definitions for Illuminating Engineering*, approved October 15, 2005; IBR approved for § 430.2.

(23) IES TM-28-14, (“IES TM-28”), *Projecting Long-Term Luminous Flux Maintenance of LED Lamps and Luminaires*, approved May 20, 2014; IBR approved for appendix BB to subpart B.

(r) International Safety Equipment Association, 1901 North Moore Street, Suite 808, Arlington, Virginia 22209, (703) 525-1695, [www.safetysystem.org](http://www.safetysystem.org).

(1) ANSI/ISEA Z358.1-2014 (“ISEA Z358.1”), *American National Standard for Emergency Eyewash and Shower Equipment*, ANSI-approved January 8, 2015, IBR approved for § 430.2.

(2) [Reserved]

(s) *U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy*. Resource Room of the Building Technologies Program, 950 L’Enfant Plaza SW., 6th Floor, Washington, DC 20024, 202-586-2945, (Energy Star materials are also found at <http://www.energystar.gov>.)

(1) ITU-R BT.470-6, *Conventional Television Systems*, published November 1998; IBR approved for § 430.2.

(2) [Reserved]

(3) *International Efficiency Marking Protocol for External Power Supplies*, Version 3.0, September 2013, IBR approved for § 430.32.

(t) *NSF International*. NSF International, P.O. Box 130140, 789 North Dixboro Road, Ann Arbor, MI 48113-0140, 1-800-673-6275, or go to <http://www.nsf.org>.

(1) NSF/ANSI 51-2007 (“NSF/ANSI 51”), *Food equipment materials*, revised and adopted April 2007, IBR approved for §§ 430.2 and 430.32.

(2) [Reserved]

(u) *Optical Society of America. Optical Society of America*, 2010 Massachusetts Ave., NW., Washington, DC 20036-1012, 202-223-8130, or go to <http://www.opticsinfobase.org>;

(1) “Computation of Correlated Color Temperature and Distribution Temperature,” A.R. Robertson, *Journal of the Optical Society of America*, Volume 58, Number 11, November 1968, pages 1528–1535, IBR approved for § 430.2.

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(2) [Reserved]

(v) *SMPTE*. Society of Motion Picture and Television Engineers, 3 Barker Ave., 5th Floor, White Plains, NY 10601, 914-761-1100, or go to <http://standards.smpte.org>.

(1) *SMPTE 170M-2004*, (“*SMPTE 170M-2004*”), *SMPTE Standard for Television—Composite Analog Video Signal—NTSC for Studio Applications*, approved November 30, 2004; IBR approved for § 430.2.

(2) [Reserved]

(w) *UL*. Underwriters Laboratories, Inc., 2600 NW. Lake Rd., Camas, WA 98607-8542 ([www.UL.com](http://www.UL.com))

(1) *UL 729* (“*UL 729-2016*”), Standard for Safety for Oil-Fired Floor Furnaces, Sixth Edition, dated August 29, 2003, including revisions through November 22, 2016; IBR approved for appendix O to subpart B.

(2) *UL 730* (“*UL 730-2016*”), Standard for Safety for Oil-Fired Wall Furnaces, Fifth Edition, dated August 29, 2003, including revisions through November 22, 2016; IBR approved for appendix O to subpart B.

(3) *UL 896* (“*UL 896-2016*”), Standard for Safety for Oil-Burning Stoves, Fifth Edition, dated July 29, 1993; including revisions through November 22, 2016, IBR approved for appendix O to subpart B.

[74 FR 12066, Mar. 23, 2009]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 430.3, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.govinfo.gov](http://www.govinfo.gov).

### § 430.4 Sources for information and guidance.

(a) *General*. The standards listed in this paragraph are referred to in the DOE test procedures and elsewhere in this part but are not incorporated by reference. These sources are given here for information and guidance.

(b) *IESNA*. Illuminating Engineering Society of North America, 120 Wall Street, Floor 17, New York, NY 10005-4001, 212-248-5000, or go to <http://www.iesna.org>.

(1) *Illuminating Engineering Society of North America Lighting Handbook*, 8th Edition, 1993.

(2) [Reserved]

(c) *IEEE*. Institute of Electrical and Electronics Engineers, Inc., 3 Park Avenue, 17th Floor, New York, NY, 10016-5997, 212-419-7900, or go to <http://www.ieee.org>.

(1) *IEEE 1515-2000*, *IEEE Recommended Practice for Electronic Power Subsystems: Parameter Definitions, Test Conditions, and Test Methods*, March 30, 2000.

(2) *IEEE 100*, *Authoritative Dictionary of IEEE Standards Terms*, 7th Edition, January 1, 2006.

(d) *IEC*. International Electrotechnical Commission, available from the American National Standards Institute, 11 W. 42nd Street, New York, NY 10036, 212-642-4936, or go to <http://www.iec.ch>.

(1) *IEC 62301*, *Household electrical appliances—Measurement of standby power*, First Edition, June 13, 2005.

(2) *IEC 60050*, *International Electrotechnical Vocabulary*.

(e) *National Voluntary Laboratory Accreditation Program*, Standards Services Division, NIST, 100 Bureau Drive, Stop 2140, Gaithersburg, MD 20899-2140, 301-975-4016, or go to <http://ts.nist.gov/standards/accreditation>.

(1) *National Voluntary Laboratory Accreditation Program Handbook 150-01*, *Energy Efficient Lighting Products, Lamps and Luminaires*, August 1993.

(2) [Reserved]

[74 FR 12066, Mar. 23, 2009]

### § 430.5 Error correction procedures for energy conservation standards rules.

(a) *Scope and purpose*. The regulations in this section describe procedures through which the Department of Energy accepts and considers submissions regarding possible Errors in its rules under the Energy Policy and Conservation Act, as amended (42 U.S.C. 6291-6317). This section applies to rules establishing or amending energy conservation standards under the Act, except that this section does not apply to direct final rules issued pursuant to section 325(p)(4) of the Act (42 U.S.C. 6295(p)(4)).

(b) *Definitions*.

*Act* means the Energy Policy and Conservation Act of 1975, as amended (42 U.S.C. 6291-6317).