H.600

Introduced by Representative James of Manchester

Referred to Committee on

Date:

Subject: Energy; commerce and trade; energy efficiency standards for appliances and equipment

Statement of purpose of bill as introduced: This bill proposes to amend Vermont's appliance efficiency standards to include updates to the federal regulations.

An act relating to appliance efficiency

It is hereby enacted by the General Assembly of the State of Vermont:

Sec. 1. 9 V.S.A. § 2795 is amended to read:

§ 2795. EFFICIENCY AND WATER CONSERVATION STANDARDS

(a) The Commissioner shall adopt rules in accordance with the provisions of 3 V.S.A. chapter 25 establishing minimum efficiency standards for the types of new products set forth in section 2794 of this title. The rules shall provide for the following minimum efficiency standards for products sold or installed in this State:

(1) ~~Medium-voltage dry-type distribution transformers shall at a minimum meet the efficiency requirements set forth for such transformers in~~

~~10 C.F.R. § 431.196, as those requirements may be amended from time to time.~~

~~(2) Metal halide lamp fixtures designed to be operated with lamps rated greater than or equal to 150 watts but less than or equal to 500 watts shall not contain a probe-start metal halide ballast.~~

~~(3)(A) Residential furnaces and residential boilers shall meet or exceed the following Annual Fuel Utilization Efficiency (AFUE) and electricity ratio values:~~

~~Product Type~~	~~Maximum AFUE~~	~~Maximum electricity ratio~~
~~Natural gas- and propane-fired furnaces~~	~~90%~~	~~2.0%~~
~~Oil-fired furnaces ≥ 94,000 Btus/hour in capacity~~	~~83%~~	~~2.0%~~
~~Oil-fired furnaces < 94,000 Btus/hour in capacity~~	~~83%~~	~~2.3%~~
~~Natural gas , oil , and propane-fired hot water residential boilers~~	~~84%~~	~~Not applicable~~

~~Natural gas-, oil-, and propane-fired steam residential boilers 82% Not applicable~~

~~(B) AFUE shall be measured in accordance with the federal test method for measuring the energy consumption of furnaces and boilers contained in Appendix N to subpart B of part 430, Title 10, Code of Federal Regulations.~~

~~(C) The Commissioner may adopt rules to exempt compliance with these residential furnace or residential boiler AFUE standards at any building, site, or location where complying with these standards would be in conflict with any local zoning ordinance, building or plumbing code, or other rule regarding installation and venting of residential boilers or residential furnaces.~~

~~(4)(A) Single-voltage external AC to DC power supplies shall meet the energy efficiency requirements of the following table:~~

~~Nameplate output power~~	~~Minimum efficiency in Active Mode~~
~~0 to < 1 watt~~	~~0.49* Nameplate Output~~
~~≥ 1 watt and ≤ 49 watts~~	~~0.09*Ln(Nameplate Output power) + 0.49~~
~~> 49 watts~~	~~0.84~~
	~~Maximum Energy Consumption in No-Load Mode~~
~~0 to < 10 watts~~	~~0.5 watts~~

~~≥ 10 watts and ≤ 250 watts 0.75 watts~~

~~* Where Ln (Nameplate Output) = Natural logarithm of the nameplate output expressed in watts.~~

~~(B) This standard applies to single voltage AC to DC power supplies that are sold individually and to those that are sold as a component of or in conjunction with another product. Single voltage AC to DC power supplies that are made available by a product manufacturer as accessories, service parts, or spare parts for its products manufactured prior to January 1, 2008 shall be exempt from the requirements of this standard.~~

~~(C) For purposes of this subdivision (4), the efficiency of single-voltage external AC to DC power supplies shall be measured in accordance with the test methodology specified by the ENERGY STAR Program, "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies (August 11, 2004)."~~

~~(5)(A) State-regulated incandescent reflector lamps shall meet the minimum average lamp efficacy requirements for federally regulated incandescent reflector lamps contained in 42 U.S.C. § 6295(i)(1)(A).~~

~~(B) The following types of incandescent reflector lamps are exempt from these requirements:~~

~~(i) lamps rated at 50 watts or less of the following types: BR30, ER30, BR40, and ER40;~~

~~(ii) lamps rated at 65 watts of the following types: BR30, BR40, and ER40; and~~

~~(iii) R20 lamps of 45 watts or less.~~

~~(6)~~ In the rules, the Commissioner shall adopt minimum efficiency and water conservation standards for each product that is subject to a standard under 10 C.F.R. §§ 430 and 431 as those provisions existed on January 19, ~~2017~~ 2025. The minimum standard and the testing protocol for each product shall be the same as adopted in those sections of the Code of Federal Regulations, except that for faucets, showerheads, and urinals, the minimum standard and testing protocol shall be as otherwise set forth in this section.

~~(7) In the rules, the Commissioner shall adopt a minimum efficacy standard for general service lamps of 45 lumens per watt, when tested in accordance with 10 C.F.R. § 430.23(gg) as that provision existed on January 19, 2017.~~

~~(8) In this subdivision (8), "final rule" means the document setting forth a final action by the U.S. Department of Energy (DOE) with respect to a final rule for "Energy Conservation Standards for Air Compressors," docket no. EERE-2013-BT-STD-0040, approved by DOE on December 5, 2016. Air compressors that meet the 12 criteria to be codified under 10 C.F.R. § 431.345(a) and set forth on pages 350 to 351 of the final rule shall meet the requirements contained in Table 1 on page 352 of the final rule using the~~

~~instructions to be codified under 10 C.F.R. § 431.345(b) and set forth on page 353 of the final rule. Compliance with these requirements shall be measured in accordance with 10 C.F.R. Part 431, Subpart T, Appendix A, entitled "Uniform Test Method for Certain Air Compressors," as in effect on July 3, 2017.~~

~~(9)~~(2) Commercial dishwashers included in the scope of the "ENERGY STAR Program Requirements Product Specification for Commercial Dishwashers," Version 2.0, shall meet the qualification criteria of that specification.

~~(10)~~(3) Commercial fryers included in the scope of the "ENERGY STAR Program Requirements Product Specification for Commercial Fryers," Version 2.0, shall meet the qualification criteria of that specification.

~~(11)~~(4) Commercial hot-food holding cabinets shall have a maximum idle energy rate of 40 watts per cubic foot of interior volume, as determined by the "idle energy rate-dry test" in ASTM F2140-11, "Standard Test Method for Performance of Hot-Food Holding Cabinets," ASTM International (2011). Interior volume shall be measured as prescribed in the "ENERGY STAR Program Requirements Product Specification for Commercial Hot-Food Holding Cabinets," Version 2.0.

~~(12)~~(5) Commercial steam cookers shall meet the requirements of the "ENERGY STAR Program Requirements Product Specification for Commercial Steam Cookers," Version 1.2.

~~(13)~~(6) Computers and computer monitors shall meet the requirements of 20 California Code of Regulations (C.C.R.) § 1605.3(v) and compliance with these requirements shall be measured in accordance with test methods prescribed in 20 C.C.R. § 1604(v).

(A) For the purposes of this subdivision ~~(13)~~(6), terms used in the referenced portions of the C.C.R. shall be as defined in 20 C.C.R. § 1602.

(B) The rules shall define "computer" and "computer monitor" to have the same meaning as set forth in 20 C.C.R. § 1602(v).

(C) The referenced portions of the C.C.R. shall be those adopted on or before July 1, 2018. However, the Commissioner shall have authority to amend the rules so that the definitions of "computer" and "computer monitor" and the minimum efficiency standards for computers and computer monitors conform to subsequently adopted modifications to the referenced sections of the C.C.R.

~~(14)~~(7) Faucets, except for metering faucets, and showerheads shall meet the standards set forth in this subdivision ~~(14)~~(7) when tested in accordance with 10 C.F.R. Part 430, Subpart B, Appendix S, entitled "Uniform Test Method for Measuring the Water Consumption of Faucets and Showerheads," as in effect on January 3, 2017.

(A) Lavatory faucets and replacement aerators shall not exceed a maximum flow rate of 1.5 gallons per minute (gpm) at 60 pounds per square inch (psi).

(B) Residential kitchen faucets and replacement aerators shall not exceed a maximum flow rate of 1.8 gpm at 60 psi, with optional temporary flow of 2.2 gpm, provided they default to a maximum flow rate of 1.8 gpm at 60 psi after each use.

(C) Public lavatory faucets and replacement aerators shall not exceed a maximum flow rate of 0.5 gpm at 60 psi.

(D) Showerheads shall not exceed a maximum flow rate of 2.0 gpm at 80 psi.

~~(15) High CRI fluorescent lamps shall meet the minimum efficacy requirements contained in 10 C.F.R. § 430.32(n)(4) as that subdivision existed on January 3, 2017. Compliance with requirements shall be measured in accordance with 10 C.F.R. Part 430, Subpart B, Appendix R, entitled "Uniform Test Method for Measuring Average Lamp Efficacy (LE), Color Rendering Index (CRI), and Correlated Color Temperature (CCT) of Electric Lamps," as that appendix existed on January 3, 2017.~~

~~(16)~~(8) Urinals, other than trough-type urinals and urinals designed and marketed exclusively for use at prisons or mental health facilities, shall have a maximum flush volume of 0.5 gallons per flush when tested in accordance

with 10 C.F.R. Part 430, Subpart B, Appendix T, entitled "Uniform Test Method for Measuring the Water Consumption of Water Closets and Urinals," as in effect on January 3, 2017, and shall pass the waste extraction test for water closets set forth in Sec. 7.10 of the American Society of Mechanical Engineers (ASME) standard A112.19.2-2013/CSA B.45.1, as that standard exists on July 1, 2018.

~~(17) Portable air conditioners shall have a Combined Energy Efficiency Ratio (CEER), that is greater than or equal to: 1.04 x [SACC/(3.7177 x SACC0.638/f4)].~~

~~(A) In this subdivision (17), "SACC" means seasonally adjusted cooling capacity expressed in British thermal units per hour.~~

~~(B) The CEER shall be measured in accordance with 10 C.F.R. Part 430, Subpart B, Appendix CC, entitled "Uniform Test Method for Measuring the Energy Consumption of Portable Air Conditioners," as in effect on January 3, 2017.~~

~~(18)~~(9) Portable electric spas shall meet the requirements of the American National Standard for Portable Electric Spa Energy Efficiency, ANSI/APSP/ICC-14 2014, as that standard exists on July 1, 2018.

~~(19)~~(10) Residential ventilating fans shall meet the qualification criteria of the "ENERGY STAR Program Requirements Product Specification for Residential Ventilating Fans," Version 3.2.

~~(20)~~(11) Spray sprinkler bodies shall include an integral pressure regulator and shall meet the water efficiency and performance criteria and other requirements of the Environmental Protection Agency's "WaterSense Specification for Spray Sprinkler Bodies," Version 1.0. However, this subdivision ~~(20)~~(11) shall not apply to spray sprinkler bodies that are specifically excluded from the scope of that specification.

~~(21) In this subdivision (21), "final rule" means the document setting forth a final action by DOE with respect to a final rule for "Energy Conservation Standards for Uninterruptible Power Supplies," docket no. EERE-2016-BT-STD-0022, approved by DOE on December 28, 2016. Uninterruptible power supplies that use a National Electrical Manufacturer Association (NEMA) 1-15P or 5-15P input plug and have an alternating current (AC) output shall have an average load-adjusted efficiency that meets or exceed the values shown to be codified under 10 C.F.R. § 430.32(z)(3) and set forth on pages 193-194 of the final rule. Compliance with these requirements shall be measured in accordance with 10 C.F.R. Part 430, Subpart B, Appendix Y, entitled "Uniform Test Method for Measuring the Energy Consumption of Battery Chargers," as in effect on January 11, 2017.~~

~~(22)~~(12) Water coolers included in the scope of the "ENERGY STAR Program Requirements Product Specification for Water Coolers," Version 2.0, shall have "on mode with no water draw" energy consumption less than or

equal to the following values, measured in accordance with the test requirements of that specification:

(A) 0.16 kilowatt-hours (kWh) per day for cold-only units and cook and cold units;

(B) 0.87 kWh per day for storage type hot and cold units; and

(C) 0.18 kWh per day for on-demand hot and cold units.

(b) When a minimum efficiency standard as described in subsection (a) of this section sets forth requirements that change over time, the rules shall provide for compliance with the changed requirements as they come into effect.

(c) When a subdivision within subdivisions (a)~~(8)~~(2) through (a)~~(22)~~(12) of this section requires compliance with an efficiency standard or testing protocol contained in a document issued by an agency of the United States, another state, or a nationally or internationally recognized organization, the rules of the Commissioner may incorporate the specified standard or protocol by reference pursuant to 3 V.S.A. § 838 rather than setting forth its language.

(d) With respect to computers and computer monitors subject to subdivision (a)~~(13)~~(6) of this section, the Commissioner shall have authority to adopt official interpretations of the applicable efficiency standards published by the staff of the California Energy Commission (CEC). The rules shall state

the process for such adoption and the manner in which the Commissioner will make the adopted interpretations publicly available.

Sec. 2. EFFECTIVE DATE

This act shall take effect on July 1, 2026.