225 CMR 9.00: APPLIANCE ENERGY-EFFICIENCY STANDARDS, TESTING AND CERTIFICATION PROGRAM

Section

9.01: Statutory Authorization

M.G.L. c. 25B, §§ 5 through 10 require the Commissioner of Energy Resources to adopt procedures for testing the energy efficiency of appliances and lamps covered by 225 CMR 9.00 if such procedures are not covered by the state plumbing code, and to certify those in compliance with 225 CMR 9.00.

9.02: Definitions

Terms defined in 42 U.S.C. § 6291 and M.G.L. c. 25B, §2, which are also used in 225 CMR 9.00, shall have the same meaning as set forth in 42 U.S.C. § 6291 and M.G.L c. 25B, §2, unless said term is otherwise defined in 225 CMR 9.02.

~~ANSI, the American National Standards Institute.~~

~~Automatic Defrost, a defrost system in which the defrosting action for all refrigerated surfaces is initiated and terminated automatically.~~

Ballast, a device used with an electric discharge lamp to obtain necessary circuit conditions (voltage, current and waveform) for starting and operating the lamp.

Ballast Factor, the ratio of the relative light output of a ballast expressed as a per cent to the rate of energy consumption expressed in watts at the test conditions specified in M.G.L. c. 25B, § 6.

Boiler, a space heater that is a self-contained appliance for supplying steam or hot water primarily intended for space heating. This term does not include hot water supply boilers.

Central Furnace, a self-contained space heater designed to supply heated air through ducts of more than ten inches in length.

~~Chest Freezer, a freezer whose access door is at the top of the appliance.~~

Color Rendering Index (CRI), the measure of the degree of color-shift object undergo when illuminated by a light source as compared to the color of those same objects when illuminated by a reference source of comparable color temperature.

Commercial Dishwasher, a machine designed to clean and sanitize plates, pots, pans, glasses, cups, bowls, utensils, and trays by applying sprays of detergent solution (with or without blasting media granules) and a sanitizing rinse.

Commercial Fryer, an appliance, including a cooking vessel, in which oil is placed to such a depth that the cooking food is essentially supported by displacement of the cooking fluid rather than by the bottom of the vessel and heat is delivered to the cooking fluid by means of an immersed electric element of band-wrapped vessel, such as electric fryers, or by heat transfer from gas burners through either the walls of the fryer or through tube passing through the cooking fluid, such as gas fryers.

Commercial Hot-food Holding Cabinet, a heated, fully-enclosed compartment with one or more solid or transparent doors designed to maintain the temperature of hot food that has been cooked using a separate appliance; provided, however, that a "commercial hot-food holding cabinet" shall not include heated glass merchandizing cabinets, drawer warmers, or cook-and-hold appliances.

Commercial Oven, means a chamber designed for heating, roasting, or baking food by conduction, convection, radiation, or electromagnetic energy.

Commercial Steam Cooker or Compartment Steamer, a device with one or more food-steaming compartment in which the energy in the steam is transferred to the food by direct contact; provided, however, that "commercial steam cooker" or "compartment steamer" may include countertop models, wall-mounted models, and floor models mounted on a stand, pedestal, or cabinet-style base.

Compensation, money or any other valuable, regardless of form, received or to be received by a person for services rendered.

Computer, shall have the same meaning as set forth in section 1602(v) of Title 20 of the California Code of Regulations.

Computer Monitor, shall have the same meaning as set forth in section 1602(v) of Title 20 of the California Code of Regulations.

Dual-flush Effective Flush Volume, the average flush volume of two reduced flushes and one full flush.

Dual-flush Water Closet, a tank-type water closet incorporating a feature that allows the user to flush the water closet with either a reduced or a full volume of water.

Electric Vehicle Supply Equipment, an electric component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles by permitting the transfer of electric energy to a battery or other storage device in an electric vehicle.

Electricity Ratio (ER) the ratio of furnace electricity use to total furnace energy use. ER = (3.412*)/(1000*EF + 3.412*EAE) where EAE and EF are defined in Title 10 of the code of federal regulations.

Energy Conservation Standard, a performance standard which prescribes a minimum level of energy efficiency or a maximum quantity of energy use, or in the case of showerheads, faucets, water closets, and urinals, water use, for a covered product determined in accordance with test procedures~~prescribed~~ under 225 CMR 9.03~~42 U.S.C. §6293~~.

~~Energy Use, the quantity of energy directly consumed by a consumer product at point of use, determined in accordance with test procedures under 42 U.S.C. §6293.~~

Energy Efficiency, the ratio of the useful output of services from a consumer product to the energy use of such product, determined in accordance with test procedures under ~~42 U.S.C. § 6293~~225 CMR 9.03.

~~Energy Conservation Standard, a performance standard which prescribes a minimum level of energy efficiency or a maximum quantity of energy use, or in the case of showereheads, faucets, water closets, and urinals, water use, for a covered product determined in accordance with tests procedures prescribed under 42 U.S.C. § 6293.~~

Energy Star Program, the voluntary program to identify and promote energy-efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution through voluntary labeling of, or other forms of communication about, products and buildings that meet the highest energy conservation standards, as defined in 42 U.S.C. § 6294a.

Energy Use, the quantity of energy directly consumed by a consumer product at point of use, determined in accordance with test procedures under ~~2 U.S.C. §6293~~ 225 CMR 9.03.

Faucet, a lavatory faucet, kitchen faucet, metering faucet, public lavatory faucet or replacement aerator for a lavatory or kitchen faucet.

Flow rate, the rate of water flow of a plumbing fitting.

General Service Lamp, shall have the same meaning as set forth in 10 CFR § 430.2.

Hand-held Showerhead, means a showerhead that can be held or fixed in place for the purpose of spraying water onto a bather and that is connected to a flexible hose.

High Color Rendering Index Fluorescent Lamp, a fluorescent lamp with a color rendering index of 87 or greater that is not a compact fluorescent lamp.

High-intensity Discharge Lamp, a lamp in which light is produced by the passage of an electric current through a vapor or gas and in which the light-producing arc is stabilized by bulb wall temperature and the arc tube has a bulb wall loading in excess of three watts per square centimeter.

~~Manual Defrost, a defrost system in which the defrosting action for all refrigerated surfaces is initiated manually.~~

Medium Voltage Dry-type Distribution Transformer, a transformer that:

(a) has an input voltage of more than 600 volts but less than or equal to 34,500 volts;
(b) is air-cooled;
(c) does not use oil as a coolant; and
(d) is rated for operation at a frequency of 60 Hertz.

Metal Halide Lamp, a high-intensity discharge lamp in which the major portion of the light is produced by radiation of metal halides and their products of dissociation, possibly in combination with metallic vapors.

Metal Halide Lamp Fixture, a light fixture designed to be operated with a metal halide lamp and a ballast for a metal halide lamp.

Model, all units of a given type of covered product (or class thereof) manufactured by one manufacturer. ~~and:~~

~~(a) with respect to refrigerators, refrigerator freezers and freezers, have the same primary energy source, have electrical characteristics that are essentially identical and do not have any differing physical or functional characteristics that affect energy consumption.~~

~~(b) with respect to water heaters, have the same primary energy source and, with the exception of immersed heating elements, do not have any differing electrical, physical, or functional characteristics that affect energy consumption.~~

~~Nominal Input Voltage, an input voltage within plus 5% or minus 5% of a specified value.~~

Metering faucet, a fitting that, when turned on, will gradually shut itself off over a period of several seconds.

Nominal Lamp Watts, the wattage at which a lamp is designed to operate and for which it is therefore rated.

On Demand, when the water cooler heats water as it is requested.

~~Partial Automatic Defrost, a defrost system in which the defrosting action for the refrigerated surfaces in the refrigerator compartment is initiated and terminated automatically and the defrosting action for the refrigerated surfaces in the freezer is initiated manually.~~

Plumbing Fitting, a device that controls and guides the flow of water in a supply system.

Plumbing Fixture, an exchangeable device, which connects to a plumbing system to deliver and drain away water and waste.

Portable Electric Spa, a factory-built electric spa or hot tub which may or may not include any combination of integral controls, water heating or water circulating equipment.

Probe-start Metal Halide Ballast, a ballast used to operate metal halide lamps which does not contain an igniter and which instead starts lamps by using a third starting electrode probe in the arc tube.

Public Lavatory Faucet, a plumbing fitting intended to be installed in nonresidential bathrooms that are accessible to walk-in traffic.

Relative Light Output, the test ballast light output divided by a reference ballast light output using the same reference lamp and expressing the value as a percent. These measurements are made at the ballast's rated primary voltage.

Replacement Aerator, an aerator sold as a replacement, separate from the faucet to which it is intended to be attached.

Residential Furnace or Boiler, a product which utilizes only single-phase electric current, or single-phase electric current or DC current in conjunction with natural gas, propane, or home heating oil, and which:

(a) is designed to be the ~~principle~~ principal heating source for the living space of a residence;
(b) is not contained within the same cabinet with a central air conditioner with a rated cooling capacity exceeding 65,000 Btu per hour;
(c) is an electric central furnace, electric boiler, forced-air central furnace, gravity central furnace or low-pressure steam or hot water boiler~~s~~; and
(d) has a heat input rate of less than 300,000 Btu per hour for electric boilers and low-pressure steam or hot water boilers, and less than 225,000 Btu per hour for forced-air central furnaces, gravity central furnace and electric central furnaces.

Residential Ventilating Fan, a ceiling, wall-mounted, or remotely mounted in-line fan designed to be used in a bathroom or utility room, whose purpose is to move air from inside the building to the outdoors.

Showerhead, a device through which water is discharged for a shower bath and includes a handheld showerhead, but does not include a safety showerhead.

Single-voltage External AC to DC Power Supply, a device that:

(a) is designed to convert line voltage AC input into lower voltage DC output;
(b) is able to convert to only one DC output voltage at a time;
(c) is sold with, or intended to be used with, a separate end-use product that constitutes the primary power load;
(d) is contained within a separate physical enclosure from the end-use product;

(e) is connected to the end-use product via a removable or hard-wired male/female electrical connection, cable, cord or other wiring;
(f) does not have batteries or battery backs, including those that are removable, that physically attach directly to the power supply unit;
(g) does not have a battery chemistry or type selector switch and indicator light, or does not have a battery chemistry or type selector switch and a state of charge meter; and
(h) has a nameplate output power less than or equal to 250 watts.

Spray Sprinkler Body, the exterior case or shell of a sprinkler incorporating a means of connection to the piping system designed to convey water to a nozzle or orifice.

Standby Power, the average power in standby mode, measured in watts.

State-regulated General Service Lamp, includes:
(a) Shatter-resistant incandescent lamps, 3-way incandescent lamps and high lumen output incandescent lamps rated at more than 2600 lumens or, in the case of a modified spectrum lamp, more than 1950 lumens, and less than or equal to 3,300 lumens.
(b) Incandescent reflector lamps that are:
1. ER30, BR30, BR40, or ER40 lamps rated at 50 watts or less;
2. BR30, BR40, or ER40 lamps rated at 65 watts;
3. R20 lamps rated at 45 watts or less.
(c) Incandescent lamps that are:
1. T shape lamps rated at ≤ 40 watts or ≥ 10 inches in length;
2. B, BA, CA, F, G-16 ½, G-25, G-30, and S shape lamps;
3. M-14 lamps rated at ≤ 40 watts.

State-regulated Incandescent Reflector Lamp, a lamp, not colored or designed for rough or vibration service applications, with an inner reflective coating on the outer bulb to direct the light, an E26 medium screw base, a rated voltage or voltage range that lies at least partially within 115 to 130 volts and that falls into either of the following categories: a bulged reflector, elliptical reflector, blown parabolic aluminized reflector or similar bulb shape with a diameter equal to or greater than 2.25 inches; or a reflector, parabolic aluminized reflector, bulged reflector or similar bulb shape with a diameter of 2.25 through 2.75 inches.

State Plumbing Code, the uniform state plumbing code, amendments and rules and regulations thereto, as promulgated by the board of state examiners of plumbers and gas fitters under M.G.L. c. 142 § 13 and 248 CMR 10.00.

Storage-type, thermally conditioned water that is stored in a tank in the water cooler and is available instantaneously, including, but not limited to, point of use, dry storage compartment, and bottled water coolers.

Transformer, a device consisting of two or more coils of insulated wire and that is designed to transfer alternating current by electromagnetic induction from one coil to another to change the original voltage or current value. This term does not include:

(a) devices with multiple voltage taps, with the highest voltage tap equaling at least 20% more than the lowest voltage tap; or
(b) devices, such as those commonly known as drive transformers, rectifier transformers, auto-transformers, uninterruptible power system transformers, impedance transformers, regulating transformers, sealed and non-ventilating transformers, machine tool transformers, welding transformers, grounding transformers or testing transformers, that are designed to be used in a special-purpose application and are unlikely to be used in general-purpose applications.

~~Upright Freezer, a freezer whose access door is at the front of the appliance.~~

Trough-type urinal, a urinal designed for simultaneous use by 2 or more persons.

Urinal, a plumbing fixture that receives only liquid body waste and conveys the waste through a trap into a drainage system.

Water closet, a plumbing fixture with a water-containing receptor that receives liquid and solid body waste through an exposed integral trap into a drainage system.

Water Conservation Standard, a performance standard which prescribes a minimum level of water efficiency or a maximum quantity of water use, for a covered product determined in accordance with test procedures under 225 CMR 9.03.

Water cooler, a freestanding device that consumes energy to cool or heat potable water; provided however, that such device shall not be wall-mounted, under-sink or otherwise building integrated.

Water Efficiency, the Water Use as a function of performance of a plumbing fixture, determined in accordance with test procedures under 225 CMR 9.03.

Water Use, the quantity of water flowing through a showerhead, faucet, water closet or urinal at point of use determined in accordance with test procedures under 225 CMR 9.03.

9.03: Product Standards and Test Methods

~~(1)~~ Product standards and test methods shall be as indicated in 225 CMR 9.03 for those appliances and lamps expressly addressed by the Commonwealth in 225 CMR 9.03. Those product standards and test methods not otherwise explicitly mandated by the Commonwealth shall be prescribed under 42 U.S.C. § 6295 and 10 C.F.R. § 430 ~~as of January 1, 2006~~ , and shall be the minimum standards and methods to be used until such time as more stringent standards are enacted by the Commonwealth or Federal government and shall become a part of Appliance Testing and Certification Program guidelines issued from time to time by DOER.

~~(2)~~ The manufacturer shall cause the testing of all new appliances and lamps to be sold for final retail sale in Massachusetts ~~on or after January 1, 1988~~ in accordance with the following product standards and test methods ~~by manufacturers as described above~~.

~~(3) Refrigerators, Refrigerator-Freezers and Freezers.~~

~~(a) The annual energy consumption of a refrigerator, refrigerator-freezer or freezer (excluding the following types: those designed to be used without doors; those which do not include a compressor and a condesor unit as an integral part of the cabinet assembly; refrigerator and refrigerator-freezers with total refrigerated volume exceeding 30 cubic feet; top-mounted refrigerator-freezers with total refrigerated volume less than 16.6 cubic feet; and freezers with total refrigerated volume exceeding 30 cubic feet) shall not exceed the values derived from the formulas in 42 U.S.C. § 6295.~~

~~(b) Fresh food refrigerated volume, freezer refrigerated volume, total refrigerated volume, energy consumption and energy factor shall be determined using the test procedures for refrigerators and freezers in 10 CFR § 430.22 and § 430.23 (2006).~~

~~(c) When a refrigerator, refrigerator-freezer or freezer can be operated using either alternating current electricity or one or more other sources of primary power, the test shall be performed using alternating current electricity only.~~

~~(4) Water Heaters.~~

~~(a) The energy efficiency of all new electric, gas or oil water heaters shall meet or exceed the energy factor specified in 42 U.S.C. § 6295(e).~~

~~(b) The manufacturer shall cause the testing of samples of each model of oil, gas, or electric water heater, to be sold for final retail sale in Massachusetts on or after January 1, 1988, in accordance with test procedures 10 C.F.R. § 430.23(e) and 10 C.F.R. § 430-B, app E.~~

~~(5) Showerheads.~~

~~(a) The maximum flow rate for all new showerheads shall not exceed the values specified in 42 U.S.C. § 6295(j).~~

~~(b) The manufacturer shall cause the testing of samples of each model of showerheads by a laboratory approved by the Commissioner. The method of testing shall be the federal standard pursuant to 42 U.S.C. § 6295(j) and the laboratory shall complete and submit a Laboratory Certification form available from the Commissioner.~~

~~(6) Fluorescent Ballasts. The product standard for fluorescent ballasts shall be the federal standard prescribed under 42 U.S.C. § 6295 g(5).~~

The following product standards and test methods are to be used:

~~(7)~~(1) General Service Fluorescent Lamps and Incandescent Reflector Lamps. ~~The product standards for general~~

General service fluorescent lamps and incandescent reflector lamps shall meet or exceed the lamp efficacy and CRI standards specified in 42 U.S.C. § 6295(i).

~~(8)~~(2) Medium Voltage Dry-type Distribution Transformers.

~~(a) Medium voltage dry-type transformers shall have efficiencies not less than the applicable values in the following table when tested at 50% of the rated output power and at 75°C. (Following table copies Table 4-2 of NEMA standard TP 1-2002, but adds 3/10 point for each value per the Massachusetts law. The NEMA standard is available on their website at: www.nema.org)~~

~~Single Phase~~	~~Three phase~~

~~Rated power output in kVa~~	~~Minimum efficiency %~~		~~Rated power output in kVa~~	~~Minimum efficiency %~~	
	~~≤ 60 kV BIL~~	~~>60 kV BIL~~		~~≤ 60 kV BIL~~	~~>60 kV BIL~~
~~≥ 15 <25~~	~~97.9~~	~~97.9~~	~~≥ 15 <30~~	~~97.1~~	~~97.1~~
~~≥25 <37.5~~	~~98.2~~	~~98.2~~	~~≥ 30 <45~~	~~97.6~~	~~97.6~~
~~≥37.5 <50~~	~~98.4~~	~~98.4~~	~~≥ 45 <75~~	~~97.9~~	~~97.9~~
~~≥50 <75~~	~~98.5~~	~~98.5~~	~~≥ 75 <112.5~~	~~98.2~~	~~98.2~~
~~≥75 <100~~	~~98.7~~	~~98.7~~	~~≥ 112.5 <150~~	~~98.4~~	~~98.4~~
~~≥100 <167~~	~~98.8~~	~~98.8~~	~~≥ 150 <225~~	~~98.5~~	~~98.5~~
~~≥167 <250~~	~~99.1~~	~~99~~	~~≥ 225 <300~~	~~98.7~~	~~98.7~~
~~≥250 <333~~	~~99.2~~	~~99.1~~	~~≥ 300 <500~~	~~99.1~~	~~98.8~~
~~≥333 <500~~	~~99.3~~	~~99.2~~	~~≥ 500 <750~~	~~99.1~~	~~99~~
~~≥667 <833~~	~~99.4~~	~~99.3~~	~~≥ 750 <1000~~	~~99.2~~	~~99.1~~
~~833~~	~~99.5~~	~~99.3~~	~~≥ 1000 <1500~~	~~99.3~~	~~99.2~~
	~~99.5~~	~~99.4~~	~~≥ 1500 <2000~~	~~99.4~~	~~99.3~~
			~~≥ 2000 <2500~~	~~99.5~~	~~99.3~~
			~~2500~~	~~99.5~~	~~99.4~~

~~kVa = kilovolt amperes~~
~~kV = kilovolts~~
~~BIL = basic impulse insulation level~~

~~(b) The manufacturer shall cause the testing of samples of medium-voltage dry-type distribution transformers to be sold for final retail sale in Massachusetts on or after January 1, 2008 in accordance with the National Electrical Manufacturers Association (NEMA) standard TP2-2005, *Standard Test Method for Measuring the Energy Consumption of Distribution Transformers*. This test method is available from NEMA at www.nema.org.~~
Medium voltage dry-type distribution transformers shall meet or exceed the distribution transformer standards specified in 42 U.S.C. § 6317.

~~(9)~~(3) Metal Halide Lamp Fixtures.

The product standards for Metal ~~halide~~ Halide ~~lamp~~ Lamp ~~fixtures designed to be operated with lamps greater than or equal to 150 watts but less than or equal to 500 watts shall not contain a probe-start metal halide ballast~~shall meet or exceed the Metal Halide Lamp fixture standards specified in 42 U.S.C. § 6295(hh).

~~(10)~~(4) Residential Furnaces or Boilers.

~~(a)~~ Residential furnaces or boilers shall meet or exceed the following Annual Fuel Utilization Efficiency (AFUE):

Product Type	Minimum Efficiency Level
Gas and propane furnaces	*90% AFUE
Oil furnaces	*83% AFUE
Gas and propane hot water boilers	*84% AFUE
Oil-fired hot water boilers	*84% AFUE
Gas and propane steam boilers	*82% AFUE
Oil-fired steam boilers	*82% AFUE

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

~~(c)~~(b) Residential furnace air handler shall have an ER of 2% or less, except residential oil furnaces with a capacity of less than 94,000 Btu per hour shall have an ER of 2.3% or less.

~~(d)~~(c) The manufacturer shall cause the testing of samples of each model of residential furnaces and boilers to be sold for final retail sale in Massachusetts in accordance with the federal test method contained in 10 CFR § 430, Subpart B, Appendix N. The test method includes the testing methods required for both elements of Massachusetts standards (*i.e.* minimum AFUE standards and maximum electricity ratio standard.)

~~(11)~~(5) Single-voltage External AC to DC Power Supplies.

~~(a)~~ Single-voltage external AC to DC power supplies shall meet or exceed the standards specified in 42 U.S.C. § 6295(u). ~~the requirements in the following table copies from table U-1 of the April 2005 version of California's Title 20:~~

~~Nameplate output~~	~~Minimum Efficiency in Active Mode~~
~~< 1 watt~~	~~0.49 * Nameplate Output~~
~~> 1 watt and < or = 49 watts~~	~~0.09*Ln(Nameplate Output) + 0.49~~
~~> 49 watts~~	~~0.84~~
	~~Maximum Energy Consumption in No-Load Mode~~
~~< 10 watts~~	~~.5 watts~~
~~> or = 10 watts and < or = 250 watts~~	~~.75 watts~~
~~Where Ln (Nameplate Output) = Natural Logarithm of the nameplate output expressed in Watts~~	

~~(b) A single voltage external AC-to-DC power supply that is made available by a manufacturer directly to a consumer service or repair facility after and separate from the original sale of the product requiring the power supply as a service part or spare part shall not be required to meet the standards of 225 CMR 9.03(11) until January 1, 2013.~~

~~(c) The manufacturer shall cause the testing of samples of each model of single-voltage external AC to DC power supplies to be sold for final retail sale in Massachusetts on or after January 1, 2008 in accordance with the test methodology specified in the United States Environmental Protection Agency's *Energy Star Program Requirements for Single Voltage External AC-DC and AC-AC Power Supplies* as in effect on January 1, 2005 except that products do not have to be tested at 230 volts. This document is available from the U.S. EPA. Manufacturers can access this document at http://www.energystar.gov/indes.cfm?c=product_specs.pt_product_specs. Manufacturers can also review the underlying testing methodology, "Test Method for Calculating the Energy Efficiency of single Voltage External AC-DC and AC-AC Power Supplies (August 11, 2004)" at http://www.energystar.gov/index.cfm?c=ext_power_supplies.power_supplies_consumers.~~

~~(12)~~(6) State-regulated Incandescent Reflector Lamps.

~~(a)~~ State-regulated incandescent reflector lamps shall meet or exceed the general service fluorescent lamps, general service incandescent lamps, intermediate base incandescent lamps, candelabra base incandescent lamps, and incandescent reflector lamps standard specified in 42 U.S.C. § 6295(i).~~the minimum efficacies in the following table:~~

~~Nominal Lamp Wattage~~	~~Minimum average lamp efficacy (lumens per watt)~~
~~40-50~~	~~10.5~~
~~51-66~~	~~11~~
~~67-85~~	~~12.5~~
~~86-115~~	~~14~~
~~116-155~~	~~14.5~~
~~156-205~~	~~15~~

~~The following types of incandescent reflector lamps are exempt from 225 CMR 9.03(12):~~

~~1. lamps rated at 50 watts or less of the following types: BR30, ER30, BR40, and ER40;~~

~~2. lamps rated at 65 watts of the following types: BR30, BR40, and ER40; and~~

~~3. R20 lamps of 45 watts or less.~~

~~(b) The manufacturer shall cause the testing of each model of state-regulated incandescent reflector lamps to be sold for final retail sale in Massachusetts on or after January 1, 2008 in accordance with the federal test method found in 10 CFR § 430, Subpart B, Appendix R.~~

(7) Commercial hot-food holding cabinets.

Commercial hot-food holding cabinets shall meet the qualification criteria of the ENERGY STAR program product specifications for commercial hot-food holding cabinets, Version 2.0.

(8) Computers and computer monitors.

Computers and computer monitors shall meet the requirements of section 1605.3 of Title 20 of the California Code of Regulations, as in effect on the effective date of this section, as measured in

accordance with test methods prescribed in section 1604 of said Title 20 of the California Code of Regulations.

(9) State-regulated general service lamps.
State-regulated general service lamps shall meet or exceed a lamp efficacy of 45 lumens per watt, when tested in accordance with the applicable federal test procedures for general service lamps, prescribed in Section 430.23 (gg) of Title 10 of the Code of Federal Regulations.

(10) High CRI fluorescent lamps.
High CRI fluorescent lamps shall meet the minimum efficiency requirements contained in Section 430.32(n)(4) of Title 10 of the Code of Federal Regulations as in effect on January 3, 2019, when tested in accordance with the test procedure prescribed in Appendix R to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations as in effect on January 3, 2019.

(11) Plumbing fittings.
Plumbing fittings shall meet the following requirements:

(a) When tested in accordance with the flow rate test procedure prescribed in Appendix S to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations:

1. the flow rate of lavatory faucets and replacement aerators shall not be greater than 1.5 gallons per minute, hereafter referred to as gpm, at 60 pounds per square inch, hereafter referred to as psi;
2. for sprayheads with independently controlled orifices and manual controls, the maximum flow rate of each orifice that manually turns on or off shall not exceed the maximum flow rate for a lavatory faucet;
3. for sprayheads with collectively controlled orifices and manual controls, the maximum flow rate of a sprayhead that manually turns on or off shall be the product of: (i) the maximum flow rate for a lavatory faucet; and (ii) the number of component lavatories, rim space of the lavatory in inches [millimeters] divided by 20 inches [508millimeters];
4. the flow rate of residential kitchen faucets and replacement aerators shall not be greater than 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi when tested in accordance with the flow rate test procedure prescribed in Appendix S to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations;
5. the flow rate of public lavatory faucets and replacement aerators shall not be greater than 0.5 gpm at 60 psi when tested in accordance with the flow rate test procedure prescribed in Appendix S to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations; and
6. the flow rate of showerheads shall not be greater than 2.0 gpm at 80 psi when tested in accordance with the flow rate test procedure prescribed in Appendix S to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations, effective on January 3, 2019.

(12) Plumbing fixtures.
Plumbing fixtures shall meet the following requirements:

(a) The water consumption of urinals and water closets, other than those designed and marketed exclusively for use at prisons or mental health care facilities, shall be no greater than the values shown in items (b) through (d), inclusive, when tested in accordance with the:

1. Water consumption test prescribed in Appendix T to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations; and
2. Waste extraction test for water closets, section 7.9 of ASMEA112.19.2/CSA B45.1-2018;

(b) Urinals shall have a maximum flush volume of 0.5 gallons per flush;

(c) Water closets, except for dual-flush tank-type water closets, shall have a maximum flush volume of 1.28 gallons per flush; and

(d) Dual-flush tank-type water closets shall have a maximum effective flush volume of 1.28 gallons per flush.

(13) Portable electric spas.

Portable electric spas shall meet the requirements of the American National Standard for Portable Electric Spa Energy Efficiency (ANSI/APSP/ICC-14-2019).

(14) Water coolers.

Water coolers shall have on mode with no water draw energy consumption, a test that records the 24-hour energy consumption of a water cooler with no water drawn during the test period, less than or equal to the following, as measured in accordance with the test criteria prescribed in Version 2.0 of the ENERGY STAR program product specifications for water coolers:

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

(b) 0.87 kilowatt-hours per day for hot-and-cold units—storage type; and

(c) 0.18 kilowatt-hours per day for hot and cold units—on demand.

(15) Residential ventilating fans.

Residential ventilating fans shall meet the qualification criteria of the ENERGY STAR Program Requirements Product Specification for Residential Ventilating Fans, Version 4.1.

(16) Commercial ovens.

Commercial ovens included in the scope of the ENERGYSTAR Program Requirements Product Specification for Commercial Ovens, Version 2.2, shall meet the qualification criteria of that specification.

(17) Commercial dishwashers.

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.

(18) Commercial fryers.

Commercial fryers included in the scope of the ENERGYSTAR Program Requirements Product Specification for Commercial Fryers, Version 2.0, shall meet the qualification criteria of that specification.

(19) Commercial steam cookers.

Commercial steam cookers shall meet the requirements of the ENERGY STAR Program Requirements Product Specification for Commercial Steam Cookers, Version 1.2.

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

(21) Electric vehicle supply equipment.
Electric vehicle supply equipment included in the scope of the ENERGY STAR Program Requirements Product Specification for Electric Vehicle Supply Equipment, Version 1.0 (Rev. Apr-2017), shall meet the qualification criteria of that specification.

9.04: Certification

(1) No new appliance or lamp covered by M.G.L. c. 25B, § 3 may be sold, offered for sale or installed in Massachusetts after the dates designated for the respective products in M.G.L. c. 25B, § 5 which is not certified pursuant to 225 CMR 9.04(2).

(2) The manufacturer shall submit to the Commissioner or to another state or third-party as designated by the Commissioner in guidelines a certification statement listing all new appliance models and lamps covered by 225 CMR 9.00. The certification statement requirements shall be set forth in the guidelines.

~~(3) On or after January 1, 2008, no new medium voltage dry-type distribution transformer, single voltage external AC to DC power supply or state regulated incandescent reflector lamp may be sold or offered for sale in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in 225 CMR 9.03.~~

~~(4) On or after January 1, 2009, no new metal halide lamp fixture may be sold or offered for sale in the commonwealth unless the efficiency of the product meets or exceeds the efficiency standards set forth in 225 CMR 9.03.~~

~~(5)~~(3) In accordance with M.G.L. c. 25B, § 9, the commissioner, in consultation with the attorney general, shall determine if implementation of state standards for residential furnaces or boilers requires a waiver from federal preemption, and shall apply for such waivers if necessary. If the commissioner determines that a waiver from federal preemption is necessary for a residential furnaces or boiler standards established by 225 CMR 9.03, the state standard shall go into effect at the earliest date permitted by federal law. If the commissioner determines that a waiver from federal preemption is not needed for residential furnaces or boilers, then such state standards shall go into effect on June 1, 2008.

~~(6)~~(4) One year after the date upon which the sale or offering for sale of certain products is limited pursuant to the preceding clauses of 225 CMR 9.04, no new products may be installed

for compensation in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in 225 CMR 9.03 adopted pursuant to M.G.L. c. 25B, § 5.

~~(7)~~(5) The commissioner may test products covered by M.G.L. c. 25B, § 3. If products so tested are found not to be in compliance with the minimum efficiency standards established under M.G.L. c. 25B, § 5, the commissioner shall:

(a) charge the manufacturer of such product for the cost of product purchase and testing; and

(b) provide information to the public on products found not to be in compliance with standards.

~~(8)~~(6) ~~In~~ When adopting test procedures for determining energy efficiency, the commissioner may consult with other appropriate department heads and may adopt updated test methods when new versions of test procedures become available.

9.05: Identification of Complying Appliances and Lamps

(1) Sufficient information shall be shown on the outside of the shipping carton for any appliance or lamp (and unit carton in the case of plumbing fittings) to permit the determination of whether the appliance or lamp complies with the requirements of 225 CMR 9.00. The appropriate measure of energy or water consumption ~~or~~, the model number as it has been certified, or any label earned as part of the certification process may be used for this purpose and shall be deemed as providing sufficient information to determine compliance.

~~For medium-voltage dry-type transformers and residential furnaces and boilers, the label information to be shown shall be marked with the words "Meets MA efficiency standards", using the two-letter identification for Massachusetts: MA.~~

~~For external power supplies, the label information to be shown shall employ the labeling regime as that described in the regulations of the State of California Energy Commission for appliance standards in California Code Regs Title 20, § 1607(9) (2006).~~

~~Additionally, the words "2.5 gpm max", the actual tested flow rate, or other conspicuous marking approved by the Commissioner, shall be marked on each showerhead sold or offered for sale, either by means of a permanent marking on the fitting or on a label attached to the fitting, and also upon the unit carton in which the fitting is offered for retail sale.~~

(2) The Commissioner or his/her designee may require additional information if necessary to permit determination of compliance.

(3) The manufacturer's name or brand name shall appear on each appliance or lamp.

9.06: Enforcement

(1) Notwithstanding the provisions of 225 CMR 9.04, the Commissioner shall have authority to challenge the efficiency test results provided by the manufacturer and cause the appliance model or lamp to be retested.

(2) The Commissioner ~~shall~~ may cause periodic inspections to be made of manufacturers, distributors or retailers of the new appliances covered by M.G.L. c. 25B, including appliances that have been or are to be installed by contractors or builders at building sites, in order to determine compliance with 225 CMR 9.00.

(3) Except as expressly provided in the guidelines, any test ordered by the Commissioner would involve one unit selected by the Commissioner or his/her designee.

(a) If the performance of the unit meets or exceeds the standard set forth in 225 CMR 9.00, no further action is necessary, and the ~~Division~~ Department of Energy Resources will pay the cost of testing.

(b) If the performance of the unit does not meet or exceed the standard set forth in 225 CMR 9.00, the manufacturer must pay the cost of testing and, if the certification for that model has been suspended, take whatever steps are necessary to recertify the appliance at an efficiency rating equal to or exceeding the applicable standard according to the process outlined in the guidelines.

(4) The Commissioner shall cause investigations to be made of complaints received concerning violations of M.G.L. c. 25B. All such complaints shall identify the complainant by name and address and should be in writing. The results of each investigation shall be reported to the complainant and to the attorney general.

~~REGULATORY AUTHORITY~~

~~225 CMR 9.00: M.G.L. c. 25B, §§ 3 through 10; St. 1986, c. 489 and St. 2005, c. 139.~~