

Model Act for Establishing State Appliance and Equipment Energy and Water Efficiency Standards

**Prepared by the
Appliance Standards Awareness Project, Boston, MA, and
American Council for an Energy-Efficient Economy, Washington, DC**

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This model act sets specific, up-to-date efficiency standards for selected residential and commercial products. These energy and water efficiency standards are based on various sources, including standards already adopted in one or more states or Canada and ENERGY STAR® and WaterSense specifications that have achieved high market shares. If you have questions regarding this model act, contact [Marianne DiMascio](#) or [Brian Fadie](#) at the Appliance Standards Awareness Project.

An Act Establishing Minimum Energy and Water Efficiency Standards for
Certain Products Sold in the State

1) Section 1. General Purpose.

- a) This Act establishes minimum efficiency standards for certain products sold or installed in the state.

2) Section 2. Findings.

- a) The legislature finds that:
 - i) Efficiency standards for certain products sold or installed in the state assure consumers and businesses that such products meet minimum efficiency performance levels, thus reducing energy and water waste and saving consumers and businesses money on utility bills.
 - ii) Such efficiency standards save energy and thus reduce climate-changing emissions and other environmental impacts associated with the production, distribution, and use of electricity, natural gas, and other fuels.
 - iii) Such efficiency standards save water, mitigating the effects of short- and long-term droughts and helping to conserve fresh water supplies.
 - iv) Bill savings resulting from more-efficient products benefit all consumers but are especially important to low-income families, who spend a disproportionate share of their income on utilities. Efficiency standards also help the state and local economies because bill savings can be spent on local goods and services.
 - v) Energy and water savings help reduce or delay the need for expensive investments in new power plants, transmission lines, and distribution system upgrades, new and expanded gas pipelines, and water and sewer infrastructure improvements.

3) Section 3. Definitions.

- a) As used in the Act:
 - i) "Commissioner" means the **[Commissioner of Energy Resources or the head of another appropriate implementing agency]**.
 - ii) The following definitions refer to air purifiers:
 - (1) "Air purifier," also known as "room air cleaner," means an electric, cord-connected, portable appliance with the primary function of removing particulate matter from the air and which can be moved from room to room.
 - (2) "Industrial air purifier" means an indoor air cleaning device manufactured, advertised, marketed, labeled, and used solely for industrial use that is marketed solely through

- industrial supply outlets or businesses and prominently labeled as "Solely for industrial use. Potential health hazard: emits ozone."
- iii) "Cold temperature fluorescent lamp" means a fluorescent lamp that is not a compact fluorescent lamp that:
 - (1) Is specifically designed to start at -20°F when used with a ballast conforming to the requirements of ANSI C78.81 and ANSI C78.901; and
 - (2) Is expressly designated as a cold temperature lamp both in markings on the lamp and in marketing materials, including catalogs, sales literature, and promotional material.
 - iv) "Commercial dishwasher" means 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.
 - v) "Commercial fryer" means 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. Heat is delivered to the cooking fluid by means of an immersed electric element or band-wrapped vessel (electric fryers) or by heat transfer from gas burners through either the walls of the fryer or through tubes passing through the cooking fluid (gas fryers).
 - vi) "Commercial hot-food holding cabinet" means 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. "Commercial hot-food holding cabinet" does not include heated glass merchandizing cabinets, drawer warmers, or cook-and-hold appliances.
 - vii) "Commercial oven" means a chamber designed for heating, roasting, or baking food by conduction, convection, radiation, and/or electromagnetic energy.
 - viii) "Commercial steam cooker," also known as "compartment steamer," means a device with one or more food-steaming compartments in which the energy in the steam is transferred to the food by direct contact. Models may include countertop models, wall-mounted models, and floor models mounted on a stand, pedestal, or cabinet-style base.
 - ix) "Compensation" means money or any other valuable thing, regardless of form, received or to be received by a person for services rendered.
 - x) "Electric vehicle supply equipment" means the conductors, including the ungrounded, grounded, and equipment grounding conductors, the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatuses installed specifically for the purpose of delivering energy from the premises wiring to the electric vehicle. .
Excludes conductors, connectors, and fittings that are part of a vehicle.
 - xi) The following definitions refer to faucets:
 - (1) "Faucet" means a private lavatory faucet, residential kitchen faucet, metering faucet, public lavatory faucet, or replacement aerator for a private lavatory, public lavatory or residential kitchen faucet.
 - (2) "Public lavatory faucet" means a fitting designed to be installed in nonresidential bathrooms that are exposed to walk-in traffic.
 - (3) "Metering faucet" means a self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.
 - (4) "Replacement aerator" means an aerator sold as a replacement, separate from the faucet to which it is intended to be attached.
 - xii) The following definitions refer to gas fireplaces:
 - (1) "Gas fireplace" means a decorative gas fireplace or a heating gas fireplace.
 - (2) "Decorative gas fireplace" means a vented fireplace, including appliances that are freestanding, recessed, zero clearance, or a gas fireplace insert, that is fueled by natural gas or propane, is marked for decorative use only, and is not equipped with a thermostat or intended for use as a heater.
 - (3) "Heating gas fireplace" means a vented fireplace, including appliances that are freestanding, recessed, zero clearance, or a gas fireplace insert, that is fueled by natural gas or propane and is not a decorative fireplace.
 - xiii) "High color rendering index (CRI) fluorescent lamp" means a fluorescent lamp with a color rendering index of 87 or greater that is not a compact fluorescent lamp.

- xiv) "Impact-resistant fluorescent lamp" means a fluorescent lamp that is not a compact fluorescent lamp that:
 - (1) Has a coating or equivalent technology that is compliant with NSF/ANSI 51 and is designed to contain the glass if the glass envelope of the lamp is broken; and
 - (2) Is designated and marketed for the intended application, with:
 - (a) The designation on the lamp packaging; and
 - (b) Marketing materials that identify the lamp as being impact-resistant, shatter-resistant, shatterproof, or shatter-protected.
- i) "Portable electric spa" means 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.
- ii) "Residential ventilating fan" means a ceiling or wall-mounted fan, or remotely mounted in-line fan, designed to be used in a bathroom or utility room for the purpose of moving air from inside the building to the outdoors.
- iii) The following definitions refer to showerheads:
 - (1) "Showerhead" means a component or set of components distributed in commerce for attachment to a single supply fitting, for spraying water onto a bather, typically from an overhead position, excluding safety shower showerheads.
 - (2)
- iv) The following definitions refer to spray sprinkler bodies:
 - (1) "Pressure regulator" means a device that maintains constant operating pressure immediately downstream from the device, given higher pressure upstream.
 - (2) "Spray sprinkler body" means 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.
- v) "State-regulated general service lamp" means any of the following medium-based incandescent light bulbs:
 - (1) Reflector lamps that are:
 - (a) ER30, BR30, BR40, or ER40 lamps rated at 50 Watts or less;
 - (b) BR30, BR40, or ER40 lamps rated at 65 watts; or
 - (c) R20 lamps rated at 45 watts or less.
 - (2) B, BA, CA, F and G shape lamps as defined in ANSI C79.1:2002 with a lumen output of greater than or equal to 200 and rated at 40 watts or less.
 - (3) A and C shape lamps as defined in ANSI C79.1:2002 with lumen output greater than or equal to 200 and less than 310.
 - (4) Shatter-resistant lamps.
 - (5) 3-way lamps.
- vi) The following definitions refer to urinals and water closets:
 - (1) "Plumbing fixture" means an exchangeable device, which connects to a plumbing system to deliver and drain away water and waste.
 - (2) "Urinal" means a plumbing fixture that receives only liquid body waste and conveys the waste through a trap into a drainage system.
 - (3) "Water closet" means a plumbing fixture having a water-containing receptor that receives liquid and solid body waste through an exposed integral trap into a drainage system.
 - (4) "Dual-flush effective flush volume" means the average flush volume of two reduced flushes and one full flush.
 - (5) "Dual-flush water closet" means a water closet incorporating a feature that allows the user to flush the water closet with either a reduced or a full volume of water.
 - (6) "Trough-type urinal" means a urinal designed for simultaneous use by two or more persons.
- vii) The following definitions refer to water coolers:
 - (1) "Water cooler" means a freestanding device that consumes energy to cool and/or heat potable water.
 - (a) "Cold only units" dispense cold water only.
 - (b) "Hot and cold units" dispense both hot and cold water. Some units also offer room-temperature water.
 - (c) "Cook and cold units" dispense both cold and room-temperature water.

- (2) "Storage-type" means thermally conditioned water is stored in a tank in the water cooler and is available instantaneously. Point-of-use, dry storage compartment, and bottled water coolers are included in this category.
- (3) "On demand" means the water cooler heats water as it is requested, which typically takes a few minutes to deliver.

4) Section 4. Scope.

- a) The provisions of this Act apply to:
 - i) Air purifiers;
 - ii) Commercial dishwashers;
 - iii) Commercial fryers;
 - iv) Commercial hot-food holding cabinets;
 - v) Commercial ovens;
 - vi) Commercial steam cookers;
 - vii) Computers and computer monitors;
 - viii) Electric vehicle supply equipment;
 - ix) Faucets;
 - x) Gas fireplaces;
 - xi) High CRI, cold temperature, and impact-resistant fluorescent lamps;
 - xii) Portable electric spas;
 - xiii) Residential ventilating fans;
 - xiv) Showerheads;
 - xv) Spray sprinkler bodies;
 - xvi) State-regulated general service lamps;
 - xvii) Urinals;
 - xviii) Water closets;
 - xix) Water coolers; and
 - xx) Any other products as may be designated by the Commissioner in accordance with Section 7 or by operation of law under Section 9.
- b) The provisions of this Act do not apply to:
 - i) New products manufactured in the state and sold outside the state;
 - ii) New products manufactured outside the state and sold at wholesale inside the state for final retail sale and installation outside the state;
 - iii) Products installed in mobile manufactured homes at the time of construction; or
 - iv) Products designed expressly for installation and use in recreational vehicles.

5) Section 5. Standards.

- a) Not later than one year after the date of enactment of this Act, the Commissioner, **in consultation with [heads of other appropriate agencies], shall adopt regulations, in accordance with the provisions of Chapter [number of section in state law governing the process for setting regulations.],** establishing minimum efficiency standards for the types of new products set forth in Section 4.
- b) The regulations shall provide for the following minimum efficiency standards:
 - i) Air purifiers, except industrial air purifiers, shall meet the following requirements as measured in accordance with the ENERGY STAR Program Requirements Product Specification for Room Air Cleaners, Version 2.0:
 - (1) Clean air delivery rate for smoke shall be 30 or greater;
 - (2) For models with a clean air delivery rate for smoke less than 100, clean air delivery rate per watt for smoke shall be greater than or equal to 1.7;
 - (3) For models with a clean air delivery rate for smoke greater than or equal to 100 and less than 150, clean air delivery rate per watt for smoke shall be greater than or equal to 1.9;
 - (4) For models with a clean air delivery rate for smoke greater than or equal to 150, clean air delivery rate per watt for smoke shall be greater than or equal to 2.0;

Commented [1]: We recommend including the phrase: "in consultation with [heads of other appropriate agencies]" but states may opt to leave this out

- (5) For ozone-emitting models, measured ozone shall be less than or equal to 50 parts per billion (ppb);
- (6) For models with a Wi-Fi network connection enabled by default when shipped, partial on mode power shall not exceed 2 watts; and
- (7) For models without a Wi-Fi network connection enabled by default when shipped, partial on mode power shall not exceed 1 watt.
- i) 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.
- ii) 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.
- iii) Commercial hot-food holding cabinets shall meet the qualification criteria of the ENERGY STAR Program Requirements Product Specification for Commercial Hot Food Holding Cabinets, Version 2.0.
- iv) Commercial ovens included in the scope of the ENERGY STAR Program Requirements Product Specification for Commercial Ovens, Version 2.2, shall meet the qualification criteria of that specification.
- v) Commercial steam cookers shall meet the requirements of the ENERGY STAR Program Requirements Product Specification for Commercial Steam Cookers, Version 1.2.
- vi) Computers and computer monitors shall meet the requirements of § 1605.3(v) of Title 20 of the California Code of Regulations (C.C.R.) and compliance with those requirements shall be as measured in accordance with test methods prescribed in § 1604(v) of those regulations.
 - (1) The rules shall define “computer” and “computer monitor” to have the same meaning as set forth in 20 C.C.R. § 1602(v).
 - (2) The referenced portions of the C.C.R. shall be those adopted on or before the effective date of this Act. 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.
- vii) 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.
- viii) Faucets, except for metering faucets, shall meet the standards shown in this paragraph when tested in accordance with Appendix S to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations and compliance with those requirements shall be—“Uniform Test Method for Measuring the Water Consumption of Faucets and Showerheads”—as in effect on January 1, 2021.
 - (1) Lavatory faucets and replacement aerators shall not exceed a maximum flow rate of 1.5 gallons per minute at 60 pounds per square inch.
 - (2) Residential kitchen faucets and replacement aerators shall not exceed a maximum flow rate of 1.8 gallons per minute at 60 pounds per square inch, with optional temporary flow of 2.2 gallons per minute, provided they default to a maximum flow rate of 1.8 gallons per minute at 60 pounds per square inch after each use.
 - (3) Public lavatory faucets and replacement aerators shall not exceed a maximum flow rate of 0.5 gallons per minute at 60 pounds per square inch.
- ix) Gas fireplaces shall comply with the following requirements:
 - (1) Gas fireplaces shall be capable of automatically extinguishing any pilot flame when the main gas burner flame is extinguished;
 - (2) Gas fireplaces must prevent any ignition source for the main gas burner flame from operating continuously for more than seven days from last use of the main burner;
 - (3) Decorative gas fireplaces must have a direct vent configuration, unless marked for replacement use only; and,

Commented [2]: Note: Some states have adopted more stringent standards for lavatory faucets at 1.2 gpm including California, Hawaii, Oregon, and Washington.

- (4) Heating gas fireplaces shall have a fireplace efficiency greater than or equal to 50% when tested in accordance with CSA P.4.1-15, "Testing Method for Measuring Annual Fireplace Efficiency."
- x) High CRI, cold temperature, and impact-resistant fluorescent lamps shall meet the minimum efficacy requirements contained in Section 430.32(n)(4) of Title 10 of the Code of Federal Regulations as in effect on January 1, 2021, as measured in accordance with Appendix R to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations—"Uniform Test Method for Measuring Average Lamp Efficacy (LE), Color Rendering Index (CRI), and Correlated Color Temperature (CCT) of Electric Lamps"—as in effect on January 1, 2021.
- xii) Portable electric spas shall meet the requirements of the "American National Standard for Portable Electric Spa Energy Efficiency" (ANSI/APSP/ICC 14-2019).
- xiii) In-line residential ventilating fans shall have a fan motor efficacy of no less than 2.8 cubic feet per minute per watt. All other residential ventilating fans shall have a fan motor efficacy of no less than 1.4 cubic feet per minute per watt for airflows less than 90 cubic feet per minute and no less than 2.8 cubic feet per minute per watt for other airflows when tested in accordance with Home Ventilation Institute Publication 916 "HVI Airflow Test Procedure."
- xiv) Showerheads shall not exceed a maximum flow rate of 2.0 gallons per minute at 80 pounds per square inch when tested in accordance with Appendix S to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations and compliance with those requirements shall be—"Uniform Test Method for Measuring the Water Consumption of Faucets and Showerheads"—as in effect on January 1, 2021.
- xv) Spray sprinkler bodies that are not specifically excluded from the scope of the 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.
- xvi) State-regulated general service lamps shall meet or exceed a lamp efficacy of 45 lumens per watt, when tested in accordance with the federal test procedures for general service lamps, prescribed in Section 430.23(gg) of Title 10 of the Code of Federal Regulations as in effect on January 1, 2021.
- xii) Urinals and water closets, other than those designed and marketed exclusively for use at prisons or mental health facilities, shall meet the standards shown in subparagraphs (1) to (4) when tested in accordance with Appendix T to Subpart B of Part 430 of Title 10 of the Code of Federal Regulations—"Uniform Test Method for Measuring the Water Consumption of Water Closets and Urinals"—as in effect on January 1, 2021, and water closets shall pass the waste extraction test for water closets (Section 7.9) of the American Society of Mechanical Engineers (ASME) A112.19.2/CSA B45.1-2018.
- (1) Wall-mounted urinals, except for trough-type urinals, shall have a maximum flush volume of 0.5 gallons per flush.
- (2) Floor-mounted urinals, except for trough-type urinals, shall have a maximum flush volume of 0.5 gallons per flush.
- (3) Water closets, except for dual-flush tank-type water closets, shall have a maximum flush volume of 1.28 gallons per flush.
- (4) Dual-flush tank-type water closets shall have a maximum dual flush effective flush volume of 1.28 gallons per flush.
- xiii) 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 as measured in accordance with the test requirements of that program:
- (1) 0.16 kilowatt-hours per day for cold-only units and cook and cold units;
- (2) 0.87 kilowatt-hours per day for storage type hot and cold units; and
- (3) 0.18 kilowatt-hours per day for on demand hot and cold units.

Commented [3]: Note: Some states have adopted more stringent standards for showerheads at 1.8 gpm including California, Hawaii, Oregon, and Washington.

Commented [MD4]: Note: Some states have adopted more stringent standards for urinals at 0.125 gpf including California, Hawaii, and Washington.

6) Section 6. Implementation.

- a) On or after January 1, 2024, no new air purifier, cold temperature fluorescent lamp, commercial dishwasher, commercial fryer, commercial hot-food holding cabinet, commercial oven, commercial steam cooker, computer or computer monitor, electrical vehicle supply equipment, faucet, gas fireplace, high CRI fluorescent lamp, impact-resistant fluorescent lamp, portable electric spa, residential ventilating fan, showerhead, spray sprinkler body, state-regulated general service lamp, urinal, water closet, or water cooler may be sold or offered for sale, lease, or rent in the state unless the new product meets the requirements of the standards provided in Section 5.
- b) One year after the date upon which the sale or offering for sale of certain products becomes subject to the requirements of paragraph (a) of this section, no such products may be installed for compensation in the state unless the efficiency of the new product meets or exceeds the efficiency standards provided in Section 5.

7) Section 7. New and Revised Standards.

The Commissioner may adopt regulations, in accordance with the provisions of Chapter [number of section in state law governing the process for setting regulations], to establish increased efficiency standards for the products listed or incorporated in Section 4. The Commissioner may also establish standards for products not specifically listed in Section 4. In considering such new or amended standards, the Commissioner, in consultation with the [heads of other appropriate departments], shall set efficiency standards upon a determination that increased efficiency standards would serve to promote energy or water conservation in the state and would be cost effective for consumers who purchase and use such new products, provided that no new or increased efficiency standards shall become effective within one year following the adoption of any amended regulations establishing such increased efficiency standards.

8) Section 8. Testing, Certification, Labeling, and Enforcement.

- a) The manufacturers of products covered by this Act shall test samples of their products in accordance with the test procedures adopted pursuant to this Act. The Commissioner may adopt updated test methods when new versions of test procedures become available.
- b) Manufacturers of new products covered by Section 4 of this Act shall certify to the Commissioner, or to an approved third party as determined by the Commissioner, that such products are in compliance with the provisions of this Act. Such certifications shall be based on test results. The Commissioner shall promulgate regulations governing the certification of such products and shall coordinate with the certification programs of other states and federal agencies with similar standards.
- c) Manufacturers of new products covered by Section 4 of this Act shall identify each product offered for sale or installation in the state as in compliance with the provisions of this Act by means of a mark, label, or tag on the product and packaging at the time of sale or installation. The Commissioner shall promulgate regulations governing the identification of such products and packaging, which shall be coordinated to the greatest practical extent with the labeling programs of other states and federal agencies with equivalent efficiency standards. The Commissioner shall allow the use of existing marks, labels, or tags, which connote compliance with the efficiency requirements of this Act.
- d) The Commissioner may test products covered by Section 4. If products so tested are found not to be in compliance with the minimum efficiency standards established under Section 5, the Commissioner shall: (1) charge the manufacturer of such product for the cost of product purchase and testing, and (2) make information available to the Attorney General and the public on products found not to be in compliance with the standards.
- e) With prior notice and at reasonable and convenient hours, the Commissioner may cause periodic inspections to be made of distributors or retailers of new products covered by Section 4 in order to determine compliance with the provisions of this Act. The Commissioner shall investigate complaints received concerning violations of this Act. If the Commissioner finds a first violation has occurred, the Commissioner shall issue a warning. The first violation after a warning shall be subject to a civil penalty of up to one hundred dollars for each offense issued by the

Commissioner. Repeat violations shall be subject to a civil penalty of not more than five hundred dollars for each offense. Each violation shall constitute a separate offense, and each day that such violation occurs shall constitute a separate offense. Penalties assessed under this paragraph are in addition to costs assessed under paragraph (d) of this section.

- f) If the Commissioner finds repeated violations have occurred, they shall report the results of such violations to the Attorney General. The Attorney General may institute proceedings to seek an injunction in state court to enforce the provisions of this Act.
- g) The Commissioner may adopt such further regulations as necessary to ensure the proper implementation and enforcement of the provisions of this Act.

9) Section 9. Severability of Provisions.

- a) The provisions of this Act shall be severable, and if the application of any clause, sentence, paragraph, subdivision, section, or part of this Act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the application of any other clause, sentence, paragraph, subdivision, section, or part of this Act.