



Colorado Efficiency Standards for Appliances

Colorado Revised Statutes Title 6, Article 7.5 - Water and Energy Efficiency Standards

Colorado has adopted water and energy efficiency standards for many consumer and commercial products. Standards are based on federal Energy Star and WaterSense specifications, industry standards, and as otherwise specified by statute as listed below.

The standards apply to new products sold, leased, or rented in Colorado. Products designed for recreational vehicles, installed in mobile homes at the time of construction, or held in inventory before the effective date of the applicable standard are exempted. The standards will be phased-in over a period of 3 years as listed below.

Item	Definition	Standard	Date
Lavatory faucet		WaterSense-listed	September 1, 2019
Shower head		WaterSense-listed	September 1, 2019
Flushing urinal		WaterSense-listed	September 1, 2019
Tank-type toilet or tank-type water closet		WaterSense-listed	September 1, 2019
Air Compressors	A compressor that: (a) is designed to compress air; (b) has an inlet that is open to the atmosphere or other source of air; and (c) consists of a compression element, also known as a bare compressor; one or more drivers; mechanical equipment to drive the compression element; and any ancillary equipment.	Air compressors that meet the twelve criteria listed on page 350 to 351 of the "Energy Conservation Standards for Air Compressors" Final Rule issued by the United States Department of Energy on December 5, 2016, must meet the requirements in Table 1 on page 352 following the instructions on page 353 and as measured in accordance with 10 CFR 431, Subpart T, Appendix A, "Uniform Test Method for Certain Air Compressors", as in effect on July 3, 2017.	February 1, 2022
Commercial dishwashers	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 dishwashers included in the scope of the Energy Star Program Requirements Product Specification for Commercial Dishwashers, Version 2.0, must meet the qualification criteria of that specification.	January 1, 2021
Commercial fryers	Means an appliance, including a cooking vessel, in which: (a) oil is placed to such a depth that the food to be cooked is essentially supported by displacement of the cooking fluid rather than by the bottom of the vessel; and (b) heat is delivered to the cooking fluid by means of either: (i) an immersed electric element or band-wrapped vessel; or (ii) heat transfer from gas burners through either the walls of the vessel	Commercial fryers included in the scope of the Energy Star Program Requirements Product Specification for Commercial Fryers, Version 2.0, must meet the qualification criteria of that specification.	January 1, 2021



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	or tubes passing through the cooking fluid.		
Commercial hot food holding cabinets	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 merchandising cabinets, drawer warmers, or cook and hold appliances.	Commercial hot food holding cabinets must have a maximum idle energy rate of forty watts per cubic foot of interior volume, as determined by the "Idle Energy Rate-dry Test" in ASTM Standard F2140-11, "Test Method for the Performance of Hot Food Holding Cabinets", published by ASTM International, formerly known as the American Society for Testing and Materials. Interior volume must be measured as prescribed in the Energy Star Program Requirements Product Specification for Commercial Hot Food Holding Cabinets, Version 2.0.	January 1, 2021
Commercial steam cookers	A device with one or more food-steaming compartments in which thermal energy is transferred from the steam to the food by direct contact. "Commercial steam cooker" includes countertop models, wall-mounted models, and floor models mounted on a stand, pedestal, or cabinet-style base.	Commercial steam cookers must meet the requirements of the Energy Star Program Requirements Product Specification for Commercial Steam Cookers, Version 1.2.	January 1, 2021
Computers and computer monitors	<p>"Computer" means a device that performs logical operations and processes data. A computer includes both stationary and portable units and includes a desktop computer, a portable all-in-one, a notebook computer, a mobile gaming system, a high expandability computer, a small-scale server, a thin client, and a workstation. Although a computer is capable of using input devices and displays, such devices are not required to be included with the computer when the computer is shipped. A computer is composed of, at a minimum:</p> <ol style="list-style-type: none"> (1) A central processing unit (CPU) to perform operations or, if no CPU is present, then the device must function as a client gateway to a server and the server acts as a computational CPU; (2) Ability to support user input devices such as a keyboard, mouse, or touchpad; and (3) An integrated display screen or the ability to support an external display screen to output information. <p>The term "computer" does not include a tablet, a game console, a television, a small computer device, a server other than a small-scale server, or an industrial computer.</p> <p>"Computer monitor" means an analog or digital device of diagonal screen size greater than or equal to 17 inches and less than or equal to 61 inches, that</p>	Computers and Computer Monitors must meet the requirements of Section 1605.3 (v) of Title 20 of the CCR, and compliance with those requirements must be as measured in accordance with test methods prescribed in Section 1604 (v) of those regulations.	January 1, 2021



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	<p>has a pixel density of greater than 5000 pixels per square inch, and that is designed primarily for the display of computer generated signals for viewing by one person in a desk-based environment. A computer monitor is composed of a display screen and associated electronics.</p> <p>A computer monitor does not include:</p> <p>(1) Displays with integrated or replaceable batteries designed to support primary operation without AC mains or external DC power, (e.g., electronic readers, mobile phones, tablets, battery-powered digital picture frames); or</p> <p>(2) A television or a signage display.</p>		
Faucets	<p>A lavatory faucet, kitchen faucet, metering faucet, or public lavatory faucet; and a replacement aerator for a lavatory faucet, public lavatory faucet, or kitchen faucet.</p>	<p>Faucets, except for metering faucets, must meet the following standards when tested in accordance with 10 CFR 430, Subpart B, Appendix S, and compliance with those standards must be established using the "Uniform Test Method for Measuring the Water Consumption of Faucets and Showerheads", as in effect on January 3, 2017:</p> <p>(I) residential kitchen faucets and replacement aerators must not exceed a maximum flow rate of 1.8 gpm at sixty psi, with optional temporary flow of 2.2 gpm, provided they default to a maximum flow rate of 1.8 gpm at sixty psi after each use.</p> <p>(II) public lavatory faucets and replacement aerators must not exceed a maximum flow rate of 0.5 gpm at sixty psi.</p>	January 1, 2021
Flushometer-valve water closets	<p>A type of commercial toilet that uses a valve for flushing by operation of a handle that discharges a definite quantity of water under pressure directly into the fixture.</p>	<p>Flushometer-valve water closets included within the scope of the WaterSense Specification for Flushometer-valve Water Closets, Version 1.0, must meet the water efficiency and performance criteria and other requirements of that specification.</p>	January 1, 2021
General service lamps	<p>(a) A lamp that:</p> <p>(i) has a base that complies with ANSI standards;</p> <p>(ii) is able to operate at a voltage:</p> <p>(a) of twelve or twenty-four volts;</p> <p>(b) at or between one hundred and one hundred thirty volts;</p> <p>(c) at or between two hundred twenty and two hundred forty volts; or</p> <p>(d) of two hundred seventy-seven volts for integrated lamps or any voltage for nonintegrated lamps;</p> <p>(iii) has an initial lumen output greater than or equal to three hundred ten lumens, or two hundred thirty-two lumens for modified spectrum general service incandescent lamps, and less than or equal to three thousand three hundred lumens; and</p>	<p>Either:</p> <p>(a) is subject to federal preemption; or</p> <p>(b) meets or exceeds a lamp efficacy of forty-five lumens per watt, when tested in accordance with the applicable federal test procedures for general service lamps prescribed in 10 CFR 430.23 (gg), as in effect on January 3, 2017.</p>	January 1, 2020



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(iv) is not a light fixture or an led
downlight retrofit kit;
(v) is used in general lighting
applications;
(b) includes general service
incandescent lamps, compact
fluorescent lamps, general service led
lamps, and general service organic led
lamps;
(c) does not include:
(i) appliance lamps;
(ii) black light lamps;
(iii) bug lamps;
(iv) colored lamps;
(v) G-shape lamps with a diameter of
five inches or more as defined in ANSI
C79.1-2002;
(vi) general service fluorescent lamps;
(vii) high-intensity discharge lamps;
(viii) infrared lamps;
(ix) J, JC, JCD, JCS, JCV, JCX, JD, JS,
and JT-shape lamps that do not have
Edison screw bases;
(x) lamps that have a wedge base or
prefocus base;
(xi) left-hand thread lamps;
(xii) marine lamps;
(xiii) marine signal service lamps;
(xiv) mine service lamps;
(xv) MR-shape lamps that:
(a) have a first number symbol equal to
sixteen (diameter equal to two inches),
as defined in ANSI C79.1-2002;
(b) operate at twelve volts; and
(c) have a lumen output greater than
or equal to eight hundred;
(xvi) other fluorescent lamps not
described in subsection (19)(b) of this
section;
(xvii) plant light lamps;
(xviii) R20 short lamps;
(xix) reflector lamps that have a first
number symbol less than sixteen
(diameter less than two inches) as
defined in ANSI C79.1-2002 and that do
not have E26/E24, E26D, E26/50X39,
E26/53X39, E29/28, E29/53X39, E39,
E39D, EP39, or EX39 bases;
(xx) S-shape or G-shape lamps that
have a first number symbol less than or
equal to twelve and one-half (diameter
less than or equal to 1.5625 inches) as
defined in ANSI C79.1-2002;
(xxi) sign service lamps;
(xxii) silver bowl lamps;
(xxiii) showcase lamps;
(xxiv) specialty MR lamps;
(xxv) T-shape lamps that:
(a) have a first number symbol less
than or equal to eight (diameter less
than or equal to one inch), as defined
in ANSI C79.1-2002;and



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	(b) have a nominal overall length less than twelve inches; (c) are not compact fluorescent lamps; or (xxvi) traffic signal lamps.		
High CRI fluorescent lamps	A fluorescent lamp with a color-rendering index (CRI) of eighty-seven or greater that is not a compact fluorescent lamp.	High CRI fluorescent lamps must meet the minimum efficacy requirements contained in 10 CFR 430.32 (n)(4) as in effect on January 3, 2017, as measured in accordance with 10 CFR 430, Subpart B, Appendix R, "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 3, 2017.	January 1, 2021
Portable air conditioners	A portable encased assembly, other than a packaged terminal air conditioner, ductless portable air conditioner, room air conditioner, or dehumidifier, that: (a) delivers cooled, conditioned air to an enclosed space; (b) is powered by single-phase electric current; (c) includes a source of refrigeration; (d) may be a single-duct or dual-duct portable air conditioner; and (e) may include additional means for air circulation and heating.	New portable air conditioners must have a combined energy efficiency ratio (CEER), as measured in accordance with 10 CFR 430, Subpart B, Appendix CC, "Uniform Test Method for Measuring the Energy Consumption of Portable Air Conditioners", as in effect on January 3, 2017, that is greater than or equal to: $1.04 \times \text{SACC} / (3.7117 \times \text{SACC}0.6384)$ Where SACC is the Seasonally Adjusted Cooling Capacity in British Thermal units per hour (Btu/h).	February 1, 2022
Portable electric spas	A factory-built electric spa or hot tub. It may or may not include any combination of integral controls, water heating, and water circulating equipment.	Portable electric spas must meet the requirements of the "American National Standard for Portable Electric Spa Energy Efficiency" (ANSI/APSP/ICC-14).	January 1, 2021
Residential ventilating fans	An inline fan designed to be used in a bathroom or utility room and whose purpose is to move air from inside the building to the outdoors. It may be ceiling-mounted, wall-mounted, or remotely mounted.	New residential ventilating fans must meet the Qualification Criteria of the Energy Star Program Requirements Product Specification for Residential Ventilating Fans, Version 3.2.	January 1, 2021
Spray sprinkler bodies	The exterior case or shell of a sprinkler, which case or shell: and (a) incorporates a means of connection to the piping system; (b) is designed to convey water to a nozzle or orifice.	Spray sprinkler bodies that are not specifically excluded from the scope of the WaterSense Specification for Spray Sprinkler Bodies, Version 1.0, must include an integral pressure regulator and must meet the water efficiency and performance criteria and other requirements of that specification.	January 1, 2021
Uninterruptible power supplies	A power system for maintaining continuity of load power in case of input power failure. It may consist of a combination of one or more battery chargers, convertors, switches, and batteries or other energy storage devices.	Uninterruptible power supplies that utilize a NEMA 1-15p or 5-15p input plug and have an alternating current output must have an average load-adjusted efficiency that meets or exceeds the values shown on page 193 of the prepublication final rule "Energy Conservation Program: Energy Conservation Standards for Uninterruptible Power Supplies" issued by the United States Department of Energy on December	January 1, 2021



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		<p>28, 2016, as measured in accordance with test procedures prescribed in 10 CFR 430, Subpart B, Appendix Y, "Uniform Test Method for Measuring the Energy Consumption of Battery Chargers", as in effect on January 11, 2017.</p>	
<p>Water coolers</p>	<p>A freestanding device that consumes energy to cool or heat, or both cool and heat, potable water.</p>	<p>Water coolers included in the scope of the Energy Star Program Requirements Product Specification for Water Coolers, Version 2.0, must have an "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:</p> <ul style="list-style-type: none"> (i) 0.16 kilowatt-hours per day for cold-only units and cook and cold units; (ii) 0.87 kilowatt-hours per day for storage-type hot and cold units; and (iii) 0.18 kilowatt-hours per day for on-demand hot and cold units. 	<p>January 1, 2021</p>