H-1022.1

HOUSE BILL 1524

State of Washington 60th Legislature 2007 Regular Session

By Representatives Chase, Morris and B. Sullivan

Read first time 01/22/2007. Referred to Committee on Technology, Energy & Communications.

AN ACT Relating to the sale of light-emitting diode holiday lights; amending RCW 19.260.020, 19.260.030, 19.260.040, and 19.260.050; and creating a new section.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

NEW SECTION. **Sec. 1.** The legislature finds and declares that meeting the state's future energy needs through conservation efforts, both large and small, is a priority. Small changes on the part of Washington consumers, such as switching from conventional, incandescent holiday lights to light-emitting diode holiday lights, has the potential to save hundreds of kilowatts of electricity each holiday season.

The legislature further finds that light-emitting diode holiday lights are more efficient, last longer, emit less heat, and draw less current than conventional incandescent holiday lights, which makes them a safer and more cost-effective option for use in the home. Therefore, it is the intent of the legislature to encourage its citizens to participate in cost-effective energy conservation by establishing efficiency standards for holiday lights sold in the state.

Sec. 2. RCW 19.260.020 and 2006 c 194 s 1 are each amended to read as follows:

The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

(1) "Automatic commercial ice cube machine" means a factory-made assembly, not necessarily shipped in one package, consisting of a condensing unit and ice-making section operating as an integrated unit with means for making and harvesting ice cubes. It may also include integrated components for storing or dispensing ice, or both.

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

(3) "Commercial clothes washer" means a soft mount horizontal or vertical-axis clothes washer that: (a) Has a clothes container compartment no greater than 3.5 cubic feet in the case of a horizontal-axis product or no greater than 4.0 cubic feet in the case of a vertical-axis product; and (b) is designed for use by more than one household, such as in multifamily housing, apartments, or coin laundries.

(4) "Commercial prerinse spray valve" means a handheld device designed and marketed for use with commercial dishwashing and warewashing equipment and that sprays water on dishes, flatware, and other food service items for the purpose of removing food residue prior to their cleaning.

(5)(a) "Commercial refrigerators and freezers" means refrigerators, freezers, or refrigerator-freezers designed for use by commercial or institutional facilities for the purpose of storing or merchandising food products, beverages, or ice at specified temperatures that: (i) Incorporate most components involved in the vapor-compression cycle and the refrigerated compartment in a single cabinet; and (ii) may be configured with either solid or transparent doors as a reach-in cabinet, pass-through cabinet, roll-in cabinet, or roll-through cabinet.

(b) "Commercial refrigerators and freezers" does not include: (i) Products with 85 cubic feet or more of internal volume; (ii) walk-in refrigerators or freezers; (iii) consumer products that are federally regulated pursuant to 42 U.S.C. Sec. 6291 et seq.; (iv) products without doors; or (v) freezers specifically designed for ice cream.

(6) "Compensation" means money or any other valuable thing, regardless of form, received or to be received by a person for services rendered.

(7) "Department" means the department of community, trade, and economic development.

(8) "High-intensity discharge lamp" means 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.

(9) "Incandescent holiday lights" means a string of conventional, incandescent lamps used primarily during the holiday season that produce a broad-spectrum white light and are colored by coating the glass envelope which acts as a color filter.

(10) "Light-emitting diode lights" means a string of lamps that emit light from a small semiconducting chip when current is applied.

(11) "Metal halide lamp" means 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.

((~~(10)~~)) (12) "Metal halide lamp fixture" means a light fixture designed to be operated with a metal halide lamp and a ballast for a metal halide lamp.

((~~(11)~~)) (13) "Pass-through cabinet" means a commercial refrigerator or freezer with hinged or sliding doors on both the front and rear of the unit.

((~~(12)~~)) (14) "Probe-start metal halide ballast" means 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.

((~~(13)~~)) (15) "Reach-in cabinet" means a commercial refrigerator or freezer with hinged or sliding doors or lids, but does not include roll-in or roll-through cabinets or pass-through cabinets.

((~~(14)~~)) (16)(a) "Roll-in cabinet" means a commercial refrigerator or freezer with hinged or sliding doors that allow wheeled racks of product to be rolled into the unit.

(b) "Roll-through cabinet" means a commercial refrigerator or

freezer with hinged or sliding doors on two sides of the cabinet that allow wheeled racks of product to be rolled through the unit.

((~~(15)~~)) (17)(a) "Single-voltage external AC to DC power supply" means a device that: (i) Is designed to convert line voltage alternating current input into lower voltage direct current output; (ii) is able to convert to only one DC output voltage at a time; (iii) is sold with, or intended to be used with, a separate end-use product that constitutes the primary power load; (iv) is contained within a separate physical enclosure from the end-use product; (v) is connected to the end-use product via a removable or hard-wired male/female electrical connection, cable, cord, or other wiring; and (vi) has a nameplate output power less than or equal to 250 watts.

(b) "Single-voltage external AC to DC power supply" does not include: (i) Products with batteries or battery packs that physically attach directly to the power supply unit; (ii) products with a battery chemistry or type selector switch and indicator light; or (iii) products with a battery chemistry or type selector switch and a state of charge meter.

((~~(16)~~)) (18) "State-regulated incandescent reflector lamp" means a lamp that is not colored or designed for rough or vibration service applications, that has an inner reflective coating on the outer bulb to direct the light, an E26 medium screw base, and a rated voltage or voltage range that lies at least partially within 115 to 130 volts, and that falls into one of the following categories:

(a) A bulged reflector or elliptical reflector bulb shape and which has a diameter which equals or exceeds 2.25 inches;

(b) A reflector, parabolic aluminized reflector, or similar bulb shape and which has a diameter of 2.25 to 2.75 inches.

((~~(17)~~)) (19) "Transformer" means 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.

((~~(18)~~)) (20)(a) "Unit heater" means a self-contained, vented fan-type commercial space heater that uses natural gas or propane, and that is designed to be installed without ducts within a heated space.

(b) "Unit heater" does not include any products covered by federal standards established pursuant to 42 U.S.C. Sec. 6291 et seq. or any

product that is a direct vent, forced flue heater with a sealed combustion burner.

Sec. 3. RCW 19.260.030 and 2006 c 194 s 2 are each amended to read as follows:

(1) This chapter applies to the following types of new products sold, offered for sale, or installed in the state: (a) Automatic commercial ice cube machines; (b) commercial clothes washers; (c) commercial prerinse spray valves; (d) commercial refrigerators and freezers; (e) metal halide lamp fixtures; (f) single-voltage external AC to DC power supplies; (g) state-regulated incandescent reflector lamps; ((~~and~~)) (h) unit heaters; and (i) holiday lights. This chapter applies equally to products whether they are sold, offered for sale, or installed as a stand-alone product or as a component of another product.

(2) This chapter does not apply to (a) new products manufactured in the state and sold outside the state, (b) new products manufactured outside the state and sold at wholesale inside the state for final retail sale and installation outside the state, (c) products installed in mobile manufactured homes at the time of construction, or (d) products designed expressly for installation and use in recreational vehicles.

Sec. 4. RCW 19.260.040 and 2006 c 194 s 3 are each amended to read as follows:

The legislature establishes the following minimum efficiency standards for the types of new products set forth in RCW 19.260.030.

(1)(a) Automatic commercial ice cube machines must have daily energy use and daily water use no greater than the applicable values in the following table:

Equipment type	Type of cooling	Harvest rate (lbs. ice/24 hrs.)	Maximum energy use (kWh/100 lbs.)	Maximum condenser water use (gallons/100 lbs. ice)
Ice-making head	water	<500	7.80 - .0055H	200 - .022H
		>=500<1436	5.58 - .0011H	200 - .022H
		>=1436	4.0	200 - .022H

Ice-making head	air	450	10.26 - .0086H	Not applicable
		>=450	6.89 - .0011H	Not applicable
Remote condensing but not remote compressor	air	<1000	8.85 - .0038	Not applicable
		>=1000	5.10	Not applicable
Remote condensing and remote compressor	air	<934	8.85 - .0038H	Not applicable
		>=934	5.3	Not applicable
Self-contained models	water	<200	11.40 - .0190H	191 - .0315H
		>=200	7.60	191 - .0315H
Self-contained models	air	<175	18.0 - .0469H	Not applicable
		>=175	9.80	Not applicable

Where H= harvest rate in pounds per twenty-four hours which must be reported within 5% of the tested value.

"Maximum water use" applies only to water used for the condenser.

(b) For purposes of this section, automatic commercial ice cube machines shall be tested in accordance with ARI 810-2003 test method as published by the air-conditioning and refrigeration institute. Ice-making heads include all automatic commercial ice cube machines that are not split system ice makers or self-contained models as defined in ARI 810-2003.

(2) Commercial clothes washers must have a minimum modified energy factor of 1.26. For the purposes of this section, capacity and modified energy factor are defined and measured in accordance with the current federal test method for clothes washers as found at 10 C.F.R. Sec. 430.23.

(3) Commercial prerinse spray valves must have a flow rate equal to or less than 1.6 gallons per minute when measured in accordance with the American society for testing and materials' "Standard Test Method for Prerinse Spray Valves," ASTM F2324-03.

(4)(a) Commercial refrigerators and freezers must meet the applicable requirements listed in the following table:

Equipment Type	Doors	Maximum Daily Energy Consumption (kWh)
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are refrigerators	Solid	0.10V+ 2.04
	Transparent	0.12V+ 3.34
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are "pulldown" refrigerators	Transparent	.126V+ 3.51

Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are freezers	Solid	0.40V+ 1.38
	Transparent	0.75V+ 4.10
Reach-in cabinets that are refrigerator-freezers with an AV of 5.19 or higher	Solid	0.27AV - 0.71

kWh= kilowatt hours

V= total volume (ft^3)

AV= adjusted volume= [1.63 x freezer volume (ft^3)]+ refrigerator volume (ft^3)

(b) For purposes of this section, "pulldown" designates products designed to take a fully stocked refrigerator with beverages at 90 degrees F and cool those beverages to a stable temperature of 38 degrees F within 12 hours or less. Daily energy consumption shall be measured in accordance with the American national standards institute/American society of heating, refrigerating and air-conditioning engineers test method 117-2002, except that the back-loading doors of pass-through and roll-through refrigerators and freezers must remain closed throughout the test, and except that the controls of all appliances must be adjusted to obtain the following product temperatures.

Product or compartment type	Integrated average product temperature in degrees Fahrenheit
Refrigerator	38± 2
Freezer	0± 2

(5) Holiday lights must be light-emitting diode lights.

(6) 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 lamp ballast.

((~~(6)~~)) (7)(a) Single-voltage external AC to DC power supplies shall meet the requirements in the following table:

Nameplate output	Minimum Efficiency in Active Mode
< 1 Watt	0.49 * Nameplate Output
> or= 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	0.5 Watts
> or= 10 Watts and < or= 250 Watts	0.75 Watts

Where Ln (Nameplate Output) - Natural Logarithm of the nameplate output expressed in Watts

(b) For the purposes of this section, efficiency of single-voltage external AC to DC power supplies shall be measured in accordance with the United States environmental protection agency's "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC to DC and AC to AC Power Supplies," by Ecos Consulting and Power Electronics Application Center, dated August 11, 2004.

((~~(7)~~)) (8)(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. Sec. 6295(i)(l)(A).

(b) The following types of incandescent lamps are exempt from these requirements:

(i) Lamps rated at fifty watts or less of the following types: BR 30, ER 30, BR 40, and ER 40;

(ii) Lamps rated at sixty-five watts of the following types: BR 30, BR 40, and ER 40; and

(iii) R 20 lamps of forty-five watts or less.

((~~(8)~~)) (9) Unit heaters must be equipped with intermittent ignition devices and must have either power venting or an automatic flue damper.

Sec. 5. RCW 19.260.050 and 2006 c 194 s 4 are each amended to read as follows:

(1)(a) No new commercial prerinse spray valve, commercial clothes washer, commercial refrigerator or freezer, state-regulated incandescent reflector lamp, or unit heater manufactured on or after January 1, 2007, 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 RCW 19.260.040. No new automatic commercial ice cube machine, single-voltage external AC to DC power supply, or metal halide lamp fixtures manufactured on or after January 1, 2008, 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 RCW 19.260.040.

(b) No new incandescent holiday lights manufactured after January 1, 2008, may be sold or offered for sale in this state unless the lights are light-emitting diode lights as required under RCW 19.260.040.

(2) On or after January 1, 2008, no new commercial prerinse spray valve, commercial clothes washer, commercial refrigerator or freezer, single-voltage external AC to DC power supply, state-regulated incandescent reflector lamp, or unit heater manufactured on or after January 1, 2007, may be installed for compensation in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in RCW 19.260.040. On or after January 1, 2009, no new automatic commercial ice cube machine or metal halide lamp fixtures manufactured on or after January 1, 2008, may be installed for compensation in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in RCW 19.260.040.

(3) Standards for metal halide lamp fixtures and state-regulated incandescent reflector lamps are effective on the dates in subsections (1) and (2) of this section.

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