CERTIFICATION OF ENROLLMENT

ENGROSSED SUBSTITUTE HOUSE BILL 1004

Chapter 501, Laws of 2009

61st Legislature 2009 Regular Session

ENERGY EFFICIENCY CODE--ADDITIONS--REMOVAL

EFFECTIVE DATE: 07/26/09

Passed by the House April 16, 2009 Yeas 86 Nays 11

FRANK CHOPP

Speaker of the House of Representatives

Passed by the Senate April 13, 2009 Yeas 38 Nays 8

CERTIFICATE

I, Barbara Baker, Chief Clerk of the House of Representatives of the State of Washington, do hereby certify that the attached is **ENGROSSED SUBSTITUTE HOUSE BILL** 1004 as passed by the House of Representatives and the Senate on the dates hereon set forth.

BARBARA BAKER

BRAD OWEN Chief Clerk

President of the Senate

Approved May 15, 2009, 1:59 p.m.

FILED

May 18, 2009

CHRISTINE GREGOIRE

Governor of the State of Washington

Secretary of State State of Washington

ENGROSSED SUBSTITUTE HOUSE BILL 1004

AS AMENDED BY THE SENATE

Passed Legislature - 2009 Regular Session

State of Washington 61st Legislature 2009 Regular Session

By House Technology, Energy & Communications (originally sponsored by Representatives Morris, Chase, Morrell, Upthegrove, Hudgins, and Moeller)

READ FIRST TIME 02/05/09.

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- 1 AN ACT Relating to adding products to the energy efficiency code;
- 2 and amending RCW 19.260.020, 19.260.030, 19.260.040, and 19.260.050.
- 3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:
- 4 **Sec. 1.** RCW 19.260.020 and 2006 c 194 s 1 are each amended to read 5 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.
- 16 (3) "Commercial clothes washer" means a soft mount horizontal or
 17 vertical-axis—clothes—washer—that: (a)—Has—a—clothes—container
 18 compartment no greater than 3.5 cubic feet in the case of a horizontal—
 19 axis—product—or—no—greater—than—4.0—cubic—feet—in—the—case—of—a

p. 1

- 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)) "Bottle-type water dispenser" means a water dispenser that uses a bottle or reservoir as the source of potable water.
 - (3) "Commercial hot food holding cabinet" means a heated, fully enclosed compartment, with one or more solid or partial glass doors, that is designed to maintain the temperature of hot food that has been cooked in a separate appliance. "Commercial hot food holding cabinet" does not include heated glass merchandising cabinets, drawer warmers, or cook and hold appliances.
 - (((5))) (4)(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))) (5) "Compensation" means money or any other valuable thing, regardless of form, received or to be received by a person for services rendered.
- 34 (6) "Cook and hold appliance" means a multiple mode appliance
 35 intended for cooking food that may be used to hold the temperature of
 36 the food that has been cooked in the same appliance.
- 37 (7) "Department" means the department of community, trade, and 38 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) "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) "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)) "Drawer warmer" means an appliance that consists of one or more heated drawers and that is designed to hold hot food that has been cooked in a separate appliance at a specified temperature.
- (9) "Heated glass merchandising cabinet" means an appliance with a heated cabinet constructed of glass or clear plastic doors which, with seventy percent or more clear area, is designed to display and maintain the temperature of hot food that has been cooked in a separate appliance.
- 20 (10) "Hot water dispenser" means a small electric water heater that
 21 has a measured storage volume of no greater than one gallon.
 - (11) "Mini-tank electric water heater" means a small electric water heater that has a measured storage volume of more than one gallon and a rated storage volume of less than twenty gallons.
 - $((\frac{11}{11}))$ <u>(12)</u> "Pass-through cabinet" means a commercial refrigerator or freezer with hinged or sliding doors on both the front and rear of the unit.
 - ((12) "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.))
- 32 (13) "Point-of-use water dispenser" means a water dispenser that
 33 uses a pressurized water utility connection as the source of potable
 34 water.
- 35 (14) "Pool heater" means an appliance designed for heating
 36 nonpotable water contained at atmospheric pressure for swimming pools,
 37 spas, hot tubs, and similar applications.

- 1 (15) "Portable electric spa" means a factory-built electric spa or 2 hot tub, supplied with equipment for heating and circulating water.
 - (16) "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.
 - ((\frac{(14)}{)}) (17) "Residential pool pump" means a pump used to circulate and filter pool water in order to maintain clarity and sanitation.
 - (18)(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)(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.
- 31 (16))) (19) "Showerhead" means a device through which water is discharged for a shower bath.
 - (20) "Showerhead tub spout diverter combination" means a group of plumbing fittings sold as a matched set and consisting of a control valve, a tub spout diverter, and a showerhead.
- 36 (21) "State-regulated incandescent reflector lamp" means a lamp 37 that is not colored or designed for rough or vibration service 38 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:

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- (a) A bulged reflector or elliptical reflector bulb shape and which has a diameter which equals or exceeds 2.25 inches; or
- (b) A reflector, parabolic aluminized reflector, or similar bulb shape and which has a diameter of 2.25 to 2.75 inches.
- (((17) "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.
- 12 (18)(a)-"Unit-heater"-means-a-self-contained,-vented-fan-type 13 commercial space heater that uses natural gas or propane, and that is 14 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)) (22) "Tub spout diverter" means a device designed to stop the flow of water into a bathtub and to divert it so that the water discharges through a showerhead.
- 21 (23) "Wine chillers designed and sold for use by an individual"
 22 means refrigerators designed and sold for the cooling and storage of
 23 wine by an individual.
- 24 Sec. 2. RCW 19.260.030 and 2006 c 194 s 2 are each amended to read 25 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)))
- 33 <u>(c) S</u>tate-regulated incandescent reflector lamps; ((and (h) unit heaters))
- 35 (d) Wine chillers designed and sold for use by an individual;
- 36 (e) Hot water dispensers and mini-tank electric water heaters;
- 37 <u>(f) Bottle-type water dispensers and point-of-use water dispensers;</u>

- 1 (g) Pool heaters, residential pool pumps, and portable electric 2 spas;
 - (h) Tub spout diverters; and

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- (i) Commercial hot food holding cabinets.
- (2) This chapter applies equally to products whether they are sold, offered for sale, or installed as ((a)) stand-alone products or as ((a)) components of ((another)) other products.
 - $((\frac{2}{2}))$ (3) This chapter does not apply to:
- 9 (a) New products manufactured in the state and sold outside the 10 state((τ)):
- 11 (b) New products manufactured outside the state and sold at wholesale inside the state for final retail sale and installation outside the state(()):
- 14 (c) Products installed in mobile manufactured homes at the time of construction((τ)); or
- 16 (d) Products designed expressly for installation and use in recreational vehicles.
- 18 **Sec. 3.** RCW 19.260.040 and 2006 c 194 s 3 are each amended to read 19 as follows:
 - The ((legislature establishes the following)) minimum efficiency standards ((for)) specified in this section apply to 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:

26				Maximum	Maximum condenser
27			Harvest rate	energy use	water use
28	Equipment type	Type of cooling	(lbs. ice/24 hrs.)	(kWh/100 lbs.)	(gallons/100 lbs.ice)
29	Ice-making head	water	<500	7.800055H	200022H
30			>=500<1436	5.580011H	200022H
31			>=1436	4.0	200022H
32	Ice-making head	air	450	10.260086Н	Not applicable
33			>=450	6.890011H	Not applicable
34	Remote condensing but	air	<1000	8.850038	Not applicable
35	not remote compressor		>=1000	5.10	Not applicable

Remote condensing and	air	<934	8.850038H	Not applicable
remote compressor		>=934	5.3	Not applicable
Self-contained models	water	<200	11.400190H	1910315H
		>=200	7.60	1910315H
Self-contained models	air	<175	18.00469H	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.

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- (b) For purposes of this section, automatic commercial ice cube machines shall be tested in accordance with <u>the</u> 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:

26	Equipment Type	Doors	Maximum Daily Energy Consumption (kWh)
27	Reach-in cabinets, pass-through cabinets,	Solid	0.10V+ 2.04
28	and roll-in or roll-through cabinets that are	Transparent	0.12V+ 3.34
	refrigerators		
29	Reach-in cabinets, pass-through cabinets,	Transparent	.126V+ 3.51
30	and roll-in or roll-through cabinets that are		
31	"pulldown" refrigerators		
32	Reach-in cabinets, pass-through cabinets,	Solid	0.40V+ 1.38
33	and roll-in or roll-through cabinets that are	Transparent	0.75V+ 4.10
	freezers		

[&]quot;Maximum water use" applies only to water used for the condenser.

1	Reach-in cabinets that are refrigerator-freezers	Solid	0.27AV - 0.71
2	with an AV of 5.19 or higher		
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- kWh= kilowatt hours
- $V = total volume (ft^3)$

- 6 AV= adjusted volume= $[1.63 \text{ x freezer volume } (ft^3)]$ + 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 Fahrenheit and cool those beverages to a stable temperature of 38 degrees Fahrenheit 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 airconditioning engineers test method 117-2002, except that the backloading 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) 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)(a) Single voltage external AC to DC power supplies shall meet the requirements in the following table:

26	Nameplate output	Minimum Efficiency in Active Mode
27	<1Watt	0.49 * Nameplate Output
28	> or=1 Watt and < or= 49 Watts	0.09 * Ln (Nameplate Output)+0.49
29	> 49 Watts	0.84
30		Maximum Energy Consumption in No-Load Mode
31	< 10 Watts	0.5 Watts
32	> or=10 Watts and < or= 250 Watts	0.75 Watts

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

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- (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)) (3)(a) The lamp electrical power input of state-regulated incandescent reflector lamps shall meet the minimum average lamp efficacy requirements for federally regulated incandescent reflector lamps ((contained)) specified in 42 U.S.C. Sec. 6295(i)(l)(A)-(B).
- 12 (b) The following types of incandescent lamps are exempt from these requirements:
- 14 (i) Lamps rated at fifty watts or less of the following types: BR 15 30, ER 30, BR 40, and ER 40;
- 16 (ii) Lamps rated at sixty-five watts of the following types: BR 17 30, BR 40, and ER 40; and
- 18 (iii) R 20 lamps of forty-five watts or less.
- 19 (((8)-Unit-heaters-must-be-equipped-with-intermittent-ignition 20 devices-and-must-have-either-power-venting-or-an-automatic-flue 21 damper.))
- 22 (4)(a) Wine chillers designed and sold for use by an individual
 23 must meet requirements specified in the California Code of Regulations,
 24 Title 20, section 1605.3 in effect as of the effective date of this
 25 section.
 - (b) Wine chillers designed and sold for use by an individual shall be tested in accordance with the method specified in the California Code of Regulations, Title 20, section 1604 in effect as of the effective date of this section.
- 30 (5)(a) The standby energy consumption of bottle-type water 31 dispensers, and point-of-use water dispensers, dispensing both hot and 32 cold water, manufactured on or after January 1, 2010, shall not exceed 33 1.2 kWh/day.
- 34 <u>(b) The test method for water dispensers shall be the environmental</u>
 35 <u>protection agency energy star program requirements for bottled water</u>
 36 coolers version 1.1.
- 37 (6)(a) The standby energy consumption of hot water dispensers and

- 1 mini-tank electric water heaters manufactured on or after January 1,
 2 2010, shall be not greater than 35 watts.
 - (b) This subsection does not apply to any water heater:
- 4 <u>(i) That is within the scope of 42 U.S.C. Sec. 6292(a)(4) or</u> 5 6311(1);
- 6 (ii) That has a rated storage volume of less than 20 gallons; and
 7 (iii) For which there is no federal test method applicable to that
- 8 type of water heater.

- 9 <u>(c) Hot water dispensers shall be tested in accordance with the</u>
 10 <u>method specified in the California Code of Regulations, Title 20,</u>
 11 section 1604 in effect as of the effective date of this section.
- (d) Mini-tank electric water heaters shall be tested in accordance
 with the method specified in the California Code of Regulations, Title
 20, section 1604 in effect as of the effective date of this section.
- 15 <u>(7) The following standards are established for pool heaters,</u>
 16 <u>residential pool pumps, and portable electric spas:</u>
- 17 <u>(a) Natural gas pool heaters shall not be equipped with constant</u>
 18 <u>burning pilots.</u>
- (b) Residential pool pump motors manufactured on or after January

 1, 2010, must meet requirements specified in the California Code of

 Regulations, Title 20, section 1605.3 in effect as of the effective

 date of this section.
- (c) Portable electric spas manufactured on or after January 1, 24 2010, must meet requirements specified in the California Code of Regulations, Title 20, section 1605.3 in effect as of the effective date of this section.
- 27 (d) Portable electric spas must be tested in accordance with the 28 method specified in the California Code of Regulations, Title 20, 29 section 1604 in effect as of the effective date of this section.
- 30 (8)(a) The leakage rate of tub spout diverters shall be no greater 31 than the applicable requirements shown in the following table:

32			Maximum Leakage Rate
33	<u>Appliance</u>	Testing Conditions	Effective January 1, 2009
34		When new	<u>0.01 gpm</u>
35	Tub spout diverters	After 15,000 cycles of diverting	<u>0.05 gpm</u>

(b) Showerhead tub spout diverter combinations shall meet both the federal standard for showerheads established pursuant to 42 U.S.C. Sec. 6291 et seq. and the standard for tub spout diverters specified in this section.

- (9)(a) The idle energy rate of commercial hot food holding cabinets manufactured on or after January 1, 2010, shall be no greater than 40 watts per cubic foot of measured interior volume.
- (b) The idle energy rate of commercial hot food holding cabinets shall be determined using ANSI/ASTM F2140-01 standard test method for the performance of hot food holding cabinets (test for idle energy rate dry test). Commercial hot food holding cabinet interior volume shall be calculated using straight line segments following the gross interior dimensions of the appliance and using the following equation: Interior height x interior width x interior depth. Interior volume shall not account for racks, air plenums, or other interior parts.
- **Sec. 4.** RCW 19.260.050 and 2006 c 194 s 4 are each amended to read 17 as follows:
 - (1) No new ((commercial prerinse spray valve, commercial clothes washer,)) commercial refrigerator or freezer((7)) or state-regulated incandescent reflector lamp((7-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.
 - (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,)) or 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 1 2 new product meets or exceeds the efficiency standards set forth in RCW 3 19.260.040.
 - (3) Standards for ((metal-halide-lamp-fixtures-and)) stateregulated incandescent reflector lamps are effective on the dates specified in subsections (1) and (2) of this section.
- (4) The following products, if manufactured on or after January 1, 7 2010, may not be sold or offered in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in RCW 19.260.040:
- (a) Wine chillers designed and sold for use by an individual; 11
- 12 (b) Hot water dispensers and mini-tank electric water heaters;
- (c) Bottle-type water dispensers and point-of-use water dispensers; 13
- 14 (d) Pool heaters, residential pool pumps, and portable electric 15 spas;
- 16 (e) Tub spout diverters; and

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- (f) Commercial hot food holding cabinets.
- (5) The following products, if manufactured on or after January 1, 18 2010, may not be installed for compensation in the state on or after 19 January 1, 2011, unless the efficiency of the new product meets or 20 21 exceeds the efficiency standards set forth in RCW 19.260.040:
- (a) Wine chillers designed and sold for use by an individual; 2.2
- (b) Hot water dispensers and mini-tank electric water heaters; 23
- 24 (c) Bottle-type water dispensers and point-of-use water dispensers;
- (d) Pool heaters, residential pool pumps, and portable electric 25 26 spas;
- 2.7 (e) Tub spout diverters; and
- (f) Commercial hot food holding cabinets. 28
- 29 Sec. 5. If any provision of this act or NEW SECTION. its 30 application to any person or circumstance is held invalid, the 31 remainder of the act or the application of the provision to other persons or circumstances is not affected. 32

Passed by the House April 16, 2009. Passed by the Senate April 13, 2009. Approved by the Governor May 15, 2009. Filed in Office of Secretary of State May 18, 2009.