

CERTIFICATION OF ENROLLMENT
ENGROSSED SUBSTITUTE HOUSE BILL 1062

59th Legislature
2005 Regular Session

Passed by the House April 21, 2005
Yeas 85 Nays 13

Speaker of the House of Representatives

Passed by the Senate April 6, 2005
Yeas 34 Nays 15

President of the Senate

Approved

Governor of the State of Washington

CERTIFICATE

I, Richard Nafziger, Chief Clerk of the House of Representatives of the State of Washington, do hereby certify that the attached is **ENGROSSED SUBSTITUTE HOUSE BILL 1062** as passed by the House of Representatives and the Senate on the dates hereon set forth.

Chief Clerk

FILED

**Secretary of State
State of Washington**

ENGROSSED SUBSTITUTE HOUSE BILL 1062

AS AMENDED BY THE SENATE

Passed Legislature - 2005 Regular Session

State of Washington 59th Legislature 2005 Regular Session

By House Committee on Technology, Energy & Communications
(originally sponsored by Representatives Morris, Hudgins and Chase;
by request of Governor Locke)

READ FIRST TIME 02/07/05.

1 AN ACT Relating to energy efficiency; adding a new chapter to Title
2 19 RCW; and prescribing penalties.

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

4 NEW SECTION. **Sec. 1.** The legislature finds that:

5 (1) According to estimates of the department of community, trade,
6 and economic development, the efficiency standards set forth in this
7 act will save nine hundred thousand megawatt-hours of electricity,
8 thirteen million therms of natural gas, and one billion seven hundred
9 million gallons of water in the year 2020, fourteen years after the
10 standards have become effective, with a total net present value to
11 buyers of four hundred ninety million dollars in 2020.

12 (2) Efficiency standards for certain products sold or installed in
13 the state assure consumers and businesses that such products meet
14 minimum efficiency performance levels thus saving money on utility
15 bills.

16 (3) Efficiency standards save energy and reduce pollution and other
17 environmental impacts associated with the production, distribution, and
18 use of electricity and natural gas.

1 (4) Efficiency standards contribute to the economy of Washington by
2 helping to better balance energy supply and demand, thus reducing
3 pressure for higher natural gas and electricity prices. By saving
4 consumers and businesses money on energy bills, efficiency standards
5 help the state and local economy, since energy bill savings can be
6 spent on local goods and services.

7 (5) Efficiency standards can make electricity systems more reliable
8 by reducing the strain on the electricity grid during peak demand
9 periods. Furthermore, improved energy efficiency can reduce or delay
10 the need for new power plants, power transmission lines, and power
11 distribution system upgrades.

12 NEW SECTION. **Sec. 2.** The definitions in this section apply
13 throughout this chapter unless the context clearly requires otherwise.

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

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

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

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

34 (5)(a) "Commercial refrigerators and freezers" means refrigerators,
35 freezers, or refrigerator-freezers designed for use by commercial or
36 institutional facilities for the purpose of storing or merchandising
37 food products, beverages, or ice at specified temperatures that: (i)

1 Incorporate most components involved in the vapor-compression cycle and
2 the refrigerated compartment in a single cabinet; and (ii) may be
3 configured with either solid or transparent doors as a reach-in
4 cabinet, pass-through cabinet, roll-in cabinet, or roll-through
5 cabinet.

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

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

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

16 (8) "High-intensity discharge lamp" means a lamp in which light is
17 produced by the passage of an electric current through a vapor or gas,
18 and in which the light-producing arc is stabilized by bulb wall
19 temperature and the arc tube has a bulb wall loading in excess of three
20 watts per square centimeter.

21 (9) "Illuminated exit sign" means an internally illuminated sign
22 that is designed to be permanently fixed in place to identify a
23 building exit and consists of an electrically powered integral light
24 source that illuminates the legend "EXIT" and any directional
25 indicators and provides contrast between the legend, any directional
26 indicators, and the background.

27 (10)(a) "Low-voltage dry-type distribution transformer" means a
28 distribution transformer that: (i) Has an input voltage of 600 volts
29 or less; (ii) is air cooled; (iii) does not use oil as a coolant; and
30 (iv) is rated for operation at a frequency of 60 hertz.

31 (b) "Low-voltage dry-type transformer" does not include: (i)
32 Transformers with multiple voltage taps, with the highest voltage tap
33 equaling at least twenty percent more than the lowest voltage tap; or
34 (ii) transformers, such as those commonly known as drive transformers,
35 rectifier transformers, auto transformers, uninterruptible power system
36 transformers, impedance transformers, regulating transformers, sealed
37 and nonventilating transformers, machine tool transformers, welding

1 transformers, grounding transformers, or testing transformers, that are
2 designed to be used in a special purpose application and are unlikely
3 to be used in general purpose applications.

4 (11) "Metal halide lamp" means a high-intensity discharge lamp in
5 which the major portion of the light is produced by radiation of metal
6 halides and their products of dissociation, possibly in combination
7 with metallic vapors.

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

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

14 (14) "Probe-start metal halide ballast" means a ballast used to
15 operate metal halide lamps which does not contain an igniter and which
16 instead starts lamps by using a third starting electrode "probe" in the
17 arc tube.

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

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

24 (b) "Roll-through cabinet" means a commercial refrigerator or
25 freezer with hinged or sliding doors on two sides of the cabinet that
26 allow wheeled racks of product to be rolled through the unit.

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

37 (b) "Single-voltage external AC to DC power supply" does not
38 include: (i) Products with batteries or battery packs that physically

1 attach directly to the power supply unit; (ii) products with a battery
2 chemistry or type selector switch and indicator light; or (iii)
3 products with a battery chemistry or type selector switch and a state
4 of charge meter.

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

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

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

15 (19) "Torchiere" means a portable electric lighting fixture with a
16 reflective bowl that directs light upward onto a ceiling so as to
17 produce indirect illumination on the surfaces below. "Torchiere" may
18 include downward directed lamps in addition to the upward, indirect
19 illumination.

20 (20) "Traffic signal module" means a standard (a) 8-inch or 200 mm
21 or (b) 12-inch or 300 mm traffic signal indication, consisting of a
22 light source, a lens, and all other parts necessary for operation.

23 (21) "Transformer" means a device consisting of two or more coils
24 of insulated wire and that is designed to transfer alternating current
25 by electromagnetic induction from one coil to another to change the
26 original voltage or current value.

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

30 (b) "Unit heater" does not include any products covered by federal
31 standards established pursuant to 42 U.S.C. Sec. 6291 et seq. or any
32 product that is a direct vent, forced flue heater with a sealed
33 combustion burner.

34 NEW SECTION. **Sec. 3.** (1) This chapter applies to the following
35 types of new products sold, offered for sale, or installed in the
36 state: (a) Automatic commercial ice cube machines; (b) commercial
37 clothes washers; (c) commercial prerinse spray valves; (d) commercial

1 refrigerators and freezers; (e) illuminated exit signs; (f) low-voltage
 2 dry-type distribution transformers; (g) metal halide lamp fixtures; (h)
 3 single-voltage external AC to DC power supplies; (i) state-regulated
 4 incandescent reflector lamps; (j) torchieres; (k) traffic signal
 5 modules; and (l) unit heaters. This chapter applies equally to
 6 products whether they are sold, offered for sale, or installed as a
 7 stand-alone product or as a component of another product.

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

15 NEW SECTION. **Sec. 4.** The legislature establishes the following
 16 minimum efficiency standards for the types of new products set forth in
 17 section 3 of this act.

18 (1)(a) Automatic commercial ice cube machines must have daily
 19 energy use and daily water use no greater than the applicable values in
 20 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	
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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 (ft³)

AV = adjusted volume = [1.63 x freezer volume (ft³)] + refrigerator volume (ft³)

(b) For purposes of this section, "pulldown" designates products designed to take a fully stocked refrigerator with beverages at 90

1 degrees F and cool those beverages to a stable temperature of 38
 2 degrees F within 12 hours or less. Daily energy consumption shall be
 3 measured in accordance with the American national standards
 4 institute/American society of heating, refrigerating and air-
 5 conditioning engineers test method 117-2002, except that the back-
 6 loading doors of pass-through and roll-through refrigerators and
 7 freezers must remain closed throughout the test, and except that the
 8 controls of all appliances must be adjusted to obtain the following
 9 product temperatures.

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

13 (5) Illuminated exit signs must have an input power demand of five
 14 watts or less per illuminated face. For the purposes of this section,
 15 input power demand is measured in accordance with the United States
 16 environmental protection agency's energy star exit sign program's
 17 conditions for testing, version 3.0. Illuminated exit signs must meet
 18 all applicable building and safety codes.

19 (6)(a) Low-voltage dry-type distribution transformers shall have
 20 efficiencies not less than the applicable values in the following table
 21 when tested at thirty-five percent of the rated output power:

22 Single Phase			23 Three Phase		
24 Rated power output in kVa	25 Minimum efficiency %	26	27 Rated power output in kVa	28 Minimum efficiency %	29
≥ 15	<25	97.7	≥ 15	<30	97.0
≥ 25	<37.5	98.0	≥ 30	<45	97.5
≥ 37.5	<50	98.2	≥ 45	<75	97.7
≥ 50	<75	98.3	≥ 75	<112.5	98.0
≥ 75	<100	98.5	≥ 112.5	<150	98.2
≥ 100	<167	98.6	≥ 150	<225	98.3
≥ 167	<250	98.7	≥ 225	<300	98.5
≥ 250	<333	98.8	≥ 300	<500	98.6
333		98.9	≥ 500	<750	98.7
--		--	≥ 750	<1000	98.8

1	--	--	1000	98.9
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2 kVa = kilovolt amperes

3 (b) For the purposes of this section, low-voltage dry-type
 4 distribution transformer efficiency is measured in accordance with the
 5 national electrical manufacturers association TP 2-1998 test method.

6 (7) Metal halide lamp fixtures designed to be operated with lamps
 7 rated greater than or equal to 150 watts but less than or equal to 500
 8 watts shall not contain a probe-start metal halide lamp ballast.

9 (8)(a) Single-voltage external AC to DC power supplies shall meet
 10 the requirements in the following table:

11	Nameplate output	Minimum Efficiency in Active Mode
12	< 1 Watt	0.49 * Nameplate Output
13	> or = 1 Watt and < or = 49 Watts	0.09 * Ln (Nameplate Output) + 0.49
14	> 49 Watts	0.84
15		Maximum Energy Consumption in No-Load Mode
16	< 10 Watts	0.5 Watts
17	> or = 10 Watts and < or = 250 Watts	0.75 Watts

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

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

25 (9)(a) State-regulated incandescent reflector lamps that are not 50
 26 watt elliptical reflector lamps must meet the minimum efficacies in the
 27 following table:

28	Wattage	Minimum average lamp efficacy (lumens per watt)
29	40 - 50	10.5
30	51 - 66	11.0
31	67 - 85	12.5
32	86 - 115	14.0
33	116 - 155	14.5

(b) Lamp efficacy must be measured in accordance with the applicable federal test method as found at 10 C.F.R. Sec. 430.23.

(10) Torchieres may not use more than 190 watts. A torchiere is deemed to use more than 190 watts if any commercially available lamp or combination of lamps can be inserted in a socket and cause the torchiere to draw more than 190 watts when operated at full brightness.

(11)(a) Traffic signal modules must have maximum and nominal wattage that do not exceed the applicable values in the following table:

Module Type	Maximum Wattage (at 74°C)	Nominal Wattage (at 25°C)
12" red ball (or 300 mm circular)	17	11
8" red ball (or 200 mm circular)	13	8
12" red arrow (or 300 mm arrow)	12	9
12" green ball (or 300 mm circular)	15	15
8" green ball (or 200 mm circular)	12	12
12" green arrow (or 300 mm arrow)	11	11

mm = millimeter

(b) For the purposes of this section, maximum wattage and nominal wattage must be measured in accordance with and under the testing conditions specified by the institute for transportation engineers "Interim LED Purchase Specification, Vehicle Traffic Control Signal Heads, Part 2: Light Emitting Diode Vehicle Traffic Signal Modules."

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

NEW SECTION. Sec. 5. (1) On or after January 1, 2007, no new commercial prerinse spray valve, commercial clothes washer, commercial refrigerator or freezer, illuminated exit sign, low-voltage dry-type distribution transformer, single-voltage external AC to DC power supply, state-regulated incandescent reflector lamp, torchiere, traffic signal module, or unit heater 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 section 4 of this act. On or after January 1, 2008, no new automatic commercial ice cube machine or metal

1 halide lamp fixtures may be sold or offered for sale in the state
2 unless the efficiency of the new product meets or exceeds the
3 efficiency standards set forth in section 4 of this act.

4 (2) On or after January 1, 2008, no new commercial prerinse spray
5 valve, commercial clothes washer, commercial refrigerator or freezer,
6 illuminated exit sign, low-voltage dry-type distribution transformer,
7 single-voltage external AC to DC power supply, state-regulated
8 incandescent reflector lamp, torchiere, traffic signal module, or unit
9 heater may be installed for compensation in the state unless the
10 efficiency of the new product meets or exceeds the efficiency standards
11 set forth in section 4 of this act. On or after January 1, 2009, no
12 new automatic commercial ice cube machine or metal halide lamp fixtures
13 may be installed for compensation in the state unless the efficiency of
14 the new product meets or exceeds the efficiency standards set forth in
15 section 4 of this act.

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

19 NEW SECTION. **Sec. 6.** The department may recommend updates to the
20 energy efficiency standards and test methods for products listed in
21 section 3 of this act. The department may also recommend establishing
22 state standards for additional nonfederally covered products. In
23 making its recommendations, the department shall use the following
24 criteria: (1) Multiple manufacturers produce products that meet the
25 proposed standard at the time of recommendation, (2) products meeting
26 the proposed standard are available at the time of recommendation, (3)
27 the products are cost-effective to consumers on a life-cycle cost basis
28 using average Washington resource rates, (4) the utility of the energy
29 efficient product meets or exceeds the utility of the comparable
30 product available for purchase, and (5) the standard exists in at least
31 two other states in the United States. For recommendations concerning
32 commercial clothes washers, the department must also consider the
33 fiscal effects on the low-income, elderly, and student populations.
34 Any recommendations shall be transmitted to the appropriate committees
35 of the legislature sixty days before the start of any regular
36 legislative session.

1 NEW SECTION. **Sec. 7.** (1) The manufacturers of products covered by
2 this chapter must test samples of their products in accordance with the
3 test procedures under this chapter or those specified in the state
4 building code.

5 (2) Manufacturers of new products covered by section 3 of this act,
6 except for single-voltage external AC to DC power supplies, shall
7 certify to the department that the products are in compliance with this
8 chapter. This certification must be based on test results unless this
9 chapter does not specify a test method. The department shall establish
10 rules governing the certification of these products and may coordinate
11 with the certification programs of other states and federal agencies
12 with similar standards.

13 (3) Manufacturers of new products covered by section 3 of this act
14 shall identify each product offered for sale or installation in the
15 state as in compliance with this chapter by means of a mark, label, or
16 tag on the product and packaging at the time of sale or installation.
17 The department shall establish rules governing the identification of
18 these products and packaging, which shall be coordinated to the
19 greatest practical extent with the labeling programs of other states
20 and federal agencies with equivalent efficiency standards.

21 (4) The department may test products covered by section 3 of this
22 act. If products so tested are found not to be in compliance with the
23 minimum efficiency standards established under section 4 of this act,
24 the department shall: (a) Charge the manufacturer of the product for
25 the cost of product purchase and testing; and (b) make information
26 available to the public on products found not to be in compliance with
27 the standards.

28 (5) The department shall obtain in paper form the test methods
29 specified in section 4 of this act, which shall be available for public
30 use at the department's energy policy offices.

31 (6) The department shall investigate complaints received concerning
32 violations of this chapter. Any manufacturer or distributor who
33 violates this chapter shall be issued a warning by the director of the
34 department for any first violation. Repeat violations are subject to
35 a civil penalty of not more than two hundred fifty dollars a day.
36 Penalties assessed under this subsection are in addition to costs
37 assessed under subsection (4) of this section.

1 (7) The department may adopt rules as necessary to ensure the
2 proper implementation and enforcement of this chapter.

3 (8) The proceedings relating to this chapter are governed by the
4 administrative procedure act, chapter 34.05 RCW.

5 NEW SECTION. **Sec. 8.** If any provision of this act or its
6 application to any person or circumstance is held invalid, the
7 remainder of the act or the application of the provision to other
8 persons or circumstances is not affected.

9 NEW SECTION. **Sec. 9.** Sections 1 through 8 of this act constitute
10 a new chapter in Title 19 RCW.

--- END ---