
HOUSE BILL 1004

State of Washington 61st Legislature 2009 Regular Session

By Representatives Morris, Chase, Morrell, Upthegrove, Hudgins, and Moeller

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1 AN ACT Relating to adding products to the energy efficiency code;
2 and amending RCW 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 19.260.030 and 2006 c 194 s 2 are each amended to read
5 as follows:

6 (1) This chapter applies to the following types of new products
7 sold, offered for sale, or installed in the state: (a) Automatic
8 commercial ice cube machines; (b) ~~((commercial clothes washers; (c)
9 commercial prerinse spray valves; (d))~~ commercial refrigerators and
10 freezers; ~~((e) metal halide lamp fixtures; (f) single voltage external
11 AC to DC power supplies; (g))~~ (c) state-regulated incandescent
12 reflector lamps; ((and (h) unit heaters)) (d) wine chillers for use by
13 an individual; (e) illumination of remote reach-in cabinets, cabinets
14 without doors, and wine chillers that are not consumer products; (f)
15 hot water dispensers and minitank electric water heaters; (g) bottle-
16 type water dispensers and point-of-use water dispensers; (h) pool
17 heaters, residential pool pumps, and portable electric spas; (i) tub
18 spout diverters; and (j) commercial hot food holding cabinets. This

1 chapter applies equally to products whether they are sold, offered for
 2 sale, or installed as a stand-alone product or as a component of
 3 another product.

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

11 **Sec. 2.** RCW 19.260.040 and 2006 c 194 s 3 are each amended to read
 12 as follows:

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

15 (1)(a) Automatic commercial ice cube machines must have daily
 16 energy use and daily water use no greater than the applicable values in
 17 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

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

35 "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 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

1 institute/American society of heating, refrigerating and air-
 2 conditioning engineers test method 117-2002, except that the back-
 3 loading doors of pass-through and roll-through refrigerators and
 4 freezers must remain closed throughout the test, and except that the
 5 controls of all appliances must be adjusted to obtain the following
 6 product temperatures.

7 Product or compartment type	8 Integrated average product temperature in degrees Fahrenheit
9 Refrigerator	38±2
Freezer	0±2

10 ~~((5) Metal halide lamp fixtures designed to be operated with lamps~~
 11 ~~rated greater than or equal to 150 watts but less than or equal to 500~~
 12 ~~watts shall not contain a probe start metal halide lamp ballast.~~

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

15 Nameplate output	16 Minimum Efficiency in Active Mode
17 <1 Watt	0.49 * Nameplate Output
18 >or= 1 Watt and <or= 49 Watts	0.09 * Ln (Nameplate Output) + 0.49
19 >49 Watts	0.84
	20 Maximum Energy Consumption in No-Load Mode
21 <10 Watts	0.5 Watts
>or= 10 Watts and <or= 250 Watts	0.75 Watts

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

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

29 ~~(7)) (3)(a) The lamp electrical power input of state-regulated~~
 30 ~~incandescent reflector lamps shall meet the minimum average lamp~~
 31 ~~efficacy requirements for federally regulated incandescent reflector~~
 32 ~~lamps contained in 42 U.S.C. Sec. 6295(i)(1)(A)-(B).~~

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

1 (i) Lamps rated at fifty watts or less of the following types: BR
2 30, ER 30, BR 40, and ER 40;

3 (ii) Lamps rated at sixty-five watts of the following types: BR
4 30, BR 40, and ER 40; and

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

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

9 (4) Wine chillers designed and sold for use by an individual must
10 not exceed the applicable requirements listed in the following table:

<u>Equipment Type</u>	<u>Maximum Annual Appliance Energy Consumption (kWh)</u>
<u>Wine chillers with manual defrost</u>	<u>13.7V + 267</u>
<u>Wine chillers with automatic defrost</u>	<u>17.4V + 344</u>

16 V = volume in ft³.

17 (5) The internal illumination of the following appliances,
18 manufactured on or after January 1, 2010, shall be only by (a) T-8
19 fluorescent lamps with electronic ballasts, or (b) a lighting system
20 that has no fewer lumens per watt than a system using only T-8
21 fluorescent lamps with electronic ballasts:

22 (i) Remote reach-in cabinets with transparent doors, remote
23 pass-through cabinets with transparent doors, and remote roll-in or
24 roll-through cabinets with transparent doors;

25 (ii) Cabinets without doors; and

26 (iii) Wine chillers that are not consumer products.

27 (6) The standby energy consumption of bottle-type water dispensers,
28 and point-of-use water dispensers, dispensing both hot and cold water,
29 manufactured on or after January 1, 2010, shall not exceed 1.2 kWh/day.

30 (7)(a) The standby loss of hot water dispensers and minitank
31 electric water heaters manufactured on or after January 1, 2010, shall
32 be not greater than 35 watts.

33 (b) This subsection does not apply to any water heater:

34 (i) That is within the scope of 42 U.S.C. Sec. 6292(a)(4) or
35 6311(1)(F);

1 (ii) That has a rated storage volume of less than 20 gallons; and
2 (iii) For which there is no federal test method applicable to that
3 type of water heater.

4 (8) The following standards are established for pool heaters,
5 residential pool pumps, and portable electric spas:

6 (a) Natural gas pool heaters shall not be equipped with constant
7 burning pilots.

8 (b) Pool pump motors shall meet the following standards:

9 (i) Pool pump motors manufactured on or after January 1, 2010, may
10 not be split-phase or capacitor start -- induction run type.

11 (ii) Pool pump motors with a capacity of 1 HP or more which are
12 manufactured on or after January 1, 2010, shall have the capability of
13 operating at two or more speeds with a low speed having a rotation rate
14 that is no more than one-half of the motor's maximum rotation rate.

15 (iii) Pool pump motor controls manufactured on or after January 1,
16 2010, shall have the capability of operating the pool pump at at least
17 two speeds. The default circulation speed shall be the lowest speed,
18 with a high speed override capability being for a temporary period not
19 to exceed one normal cycle.

20 (c) The standby power of portable electric spas manufactured on or
21 after January 1, 2010, shall be not greater than $5(V^{2/3})$ watts where V
22 = the total volume, in gallons.

23 (9)(a) The leakage rate of tub spout diverters shall be no greater
24 than the applicable requirements shown in the following table:

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

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29 (b) Showerhead-tub spout diverter combinations shall meet both the
30 standard for showerheads and the standard for tub spout diverters.

31 (10) The idle energy rate of commercial hot food holding cabinets
32 manufactured on or after January 1, 2010, shall be no greater than 40
33 watts per cubic foot of measured interior volume.

1 **Sec. 3.** RCW 19.260.050 and 2006 c 194 s 4 are each amended to read
2 as follows:

3 (1) No new (~~commercial prerinse spray valve, commercial clothes~~
4 ~~washer,~~) commercial refrigerator or freezer(~~(,)~~) or state-regulated
5 incandescent reflector lamp(~~(, or unit heater)~~) manufactured on or
6 after January 1, 2007, may be sold or offered for sale in the state
7 unless the efficiency of the new product meets or exceeds the
8 efficiency standards set forth in RCW 19.260.040. No new automatic
9 commercial ice cube machine(~~(, single voltage external AC to DC power~~
10 ~~supply, or metal halide lamp fixtures)~~) manufactured on or after
11 January 1, 2008, may be sold or offered for sale in the state unless
12 the efficiency of the new product meets or exceeds the efficiency
13 standards set forth in RCW 19.260.040.

14 (2) On or after January 1, 2008, no new (~~commercial prerinse spray~~
15 ~~valve, commercial clothes washer,~~) commercial refrigerator or
16 freezer(~~(, single voltage external AC to DC power supply,~~) or state-
17 regulated incandescent reflector lamp(~~(, or unit heater)~~) manufactured
18 on or after January 1, 2007, may be installed for compensation in the
19 state unless the efficiency of the new product meets or exceeds the
20 efficiency standards set forth in RCW 19.260.040. On or after January
21 1, 2009, no new automatic commercial ice cube machine (~~(or metal halide~~
22 ~~lamp fixtures)~~) manufactured on or after January 1, 2008, may be
23 installed for compensation in the state unless the efficiency of the
24 new product meets or exceeds the efficiency standards set forth in RCW
25 19.260.040.

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

29 (4) The following products, if manufactured on or after January 1,
30 2010, may not be sold or offered in the state unless the efficiency of
31 the new product meets or exceeds the efficiency standards set forth in
32 RCW 19.260.040:

33 (a) Wine chillers for use by an individual;

34 (b) Illumination of remote reach-in cabinets, cabinets without
35 doors, and wine chillers that are not consumer products;

36 (c) Hot water dispensers and minitank electric water heaters;

37 (d) Bottle-type water dispensers and point-of-use water dispensers;

- 1 (e) Pool heaters, residential pool pumps, and portable electric
2 spas;
- 3 (f) Tub spout diverters; and
- 4 (g) Commercial hot food holding cabinets.
- 5 (5) The following products, if manufactured on or after January 1,
6 2010, may not be installed for compensation in the state on or after
7 January 1, 2011, unless the efficiency of the new product meets or
8 exceeds the efficiency standards set forth in RCW 19.260.040:
- 9 (a) Wine chillers for use by an individual;
- 10 (b) Illumination of remote reach-in cabinets, cabinets without
11 doors, and wine chillers that are not consumer products;
- 12 (c) Hot water dispensers and minitank electric water heaters;
- 13 (d) Bottle-type water dispensers and point-of-use water dispensers;
- 14 (e) Pool heaters, residential pool pumps, and portable electric
15 spas;
- 16 (f) Tub spout diverters; and
- 17 (g) Commercial hot food holding cabinets.

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