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ENGROSSED SUBSTITUTE HOUSE BILL 2758

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State of Washington

60th Legislature

2008 Regular Session

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

READ FIRST TIME 02/05/08.

1 AN ACT Relating to adding products to the energy efficiency code;  
2 amending RCW 19.260.030, 19.260.040, and 19.260.050; and adding a new  
3 section to chapter 19.260 RCW.

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

5 **Sec. 1.** RCW 19.260.030 and 2006 c 194 s 2 are each amended to read  
6 as follows:

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

holding cabinets. 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. 2.** 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<sup>3</sup>)

AV= adjusted volume= [1.63 x freezer volume (ft<sup>3</sup>)]+ refrigerator volume (ft<sup>3</sup>)

(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))~~ (4)(a) Single-voltage external AC to DC power supplies shall  
 14 meet 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
	Maximum Energy Consumption in No-Load Mode
20 < 10 Watts	0.5 Watts
21 > 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))~~ (5)(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))~~ (6) Unit heaters must be equipped with intermittent  
7 ignition devices and must have either power venting or an automatic  
8 flue damper.

9 (7) 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 ft<sup>3</sup>.

17 (8) The internal illumination of the following appliances,  
18 manufactured on or after January 1, 2009, 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 (9) 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, 2009, shall not exceed 1.2 kWh/day.

30 (10)(a) The standby loss of hot water dispensers and minitank  
31 electric water heaters manufactured on or after January 1, 2009, 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 (11) 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, 2009, 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, 2009, 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 2009, 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, 2009, shall be not greater than  $5(V^{2/3})$  watts where V  
22 = the total volume, in gallons.

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

Appliance	Testing Conditions	Maximum Leakage Rate
		Effective January 1, 2009
	<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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26  
27  
28  
29 (b) Showerhead-tub spout diverter combinations shall meet both the  
30 standard for showerheads and the standard for tub spout diverters.

31 (13) The idle energy rate of commercial hot food holding cabinets  
32 manufactured on or after January 1, 2009, 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, state-regulated  
5 incandescent reflector lamp, or unit heater manufactured on or after  
6 January 1, 2007, may be sold or offered for sale in the state unless  
7 the efficiency of the new product meets or exceeds the efficiency  
8 standards set forth in RCW 19.260.040. No new automatic commercial ice  
9 cube machine(~~(<sub>7</sub>)~~) or single-voltage external AC to DC power supply,  
10 (~~or metal halide lamp fixtures~~) manufactured on or after January 1,  
11 2008, may be sold or offered for sale in the state unless the  
12 efficiency of the new product meets or exceeds the efficiency standards  
13 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 freezer,  
16 single-voltage external AC to DC power supply, state-regulated  
17 incandescent reflector lamp, or unit heater manufactured on or after  
18 January 1, 2007, may be installed for compensation in the state unless  
19 the efficiency of the new product meets or exceeds the efficiency  
20 standards set forth in RCW 19.260.040. On or after January 1, 2009, no  
21 new automatic commercial ice cube machine (~~or metal halide lamp~~  
22 ~~fixtures~~) manufactured on or after January 1, 2008, may be installed  
23 for compensation in the state unless the efficiency of the new product  
24 meets or exceeds the efficiency standards set forth in RCW 19.260.040.

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

28       (4) The following products, if manufactured on or after January 1,  
29 2009, may not be sold or offered in the state unless the efficiency of  
30 the new product meets or exceeds the efficiency standards set forth in  
31 RCW 19.260.040:

- 32       (a) Wine chillers for use by an individual;  
33       (b) Illumination of remote reach-in cabinets, cabinets without  
34 doors, and wine chillers that are not consumer products;  
35       (c) Hot water dispensers and minitank electric water heaters;  
36       (d) Bottle-type water dispensers and point-of-use water dispensers;  
37       (e) Pool heaters, residential pool pumps, and portable electric  
38 spas;

1       (f) Tub spout diverters; and

2       (g) Commercial hot food holding cabinets.

3       (5) The following products, if manufactured on or after January 1,  
4 2009, may not be installed for compensation in the state on or after  
5 January 1, 2010, unless the efficiency of the new product meets or  
6 exceeds the efficiency standards set forth in RCW 19.260.040:

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

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

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

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

12       (e) Pool heaters, residential pool pumps, and portable electric  
13 spas;

14       (f) Tub spout diverters; and

15       (g) Commercial hot food holding cabinets.

16       NEW SECTION. Sec. 4. A new section is added to chapter 19.260 RCW  
17 to read as follows:

18       By July 1, 2009, the energy policy division of the department of  
19 community, trade, and economic development shall adopt by rule minimum  
20 energy efficiency standards for new consumer audio and video equipment  
21 that are consistent with standards adopted by states on the west coast  
22 with similar minimum energy efficiency standards.

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