HOUSE AMENDMENTS TO B-ENGROSSED SENATE BILL 692

By COMMITTEE ON ENERGY AND ENVIRONMENT

May 17

On page 17 of the printed B-engrossed bill, delete lines 5 through 15 and insert:

"

Viewable Screen Area	Television Standby-passive Mode Power Usage (Watts)	Maximum On Mode Power Usage (P in Watts, A is Viewable Screen area)	Minimum Power Factor for (P ≥ 100W)
<1400 sq. in	1 W	P ≤ 0.12 x A + 25	0.9
≥ 1400 sq. in	3 W	NA	NA

"

On page 19, delete lines 23 through 45 and delete pages 20 through 26.

On page 27, delete lines 1 through 14 and insert:

"**SECTION 4.** ORS 469.233, as amended by section 3 of this 2013 Act, is amended to read:

"469.233. The following minimum energy efficiency standards for new products are established:

"(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	5.30	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 24 hours, which must be reported within 5 percent of the tested value. Maximum water use applies only to water used for the condenser.

"

"(b) For purposes of this subsection, automatic commercial ice cube machines shall be tested in accordance with the 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 and a maximum water consumption factor of 9.5. For purposes of this subsection, capacity, modified energy factor and water consumption factor are defined and shall be measured in accordance with the federal test method for commercial clothes washers under 10 C.F.R. 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 ASTM International's 'Standard Test Method for Prerinse Spray Valves,' ASTM F2324-03.

"(4)(a) Commercial refrigerators or 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	0.126V + 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 subsection:

"(A) '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.

"(B) 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:

"(i) The back-loading doors of pass-through and roll-through refrigerators and freezers must remain closed throughout the test; and

"(ii) The controls of all commercial refrigerators or freezers shall be adjusted to obtain the following product temperatures, in accordance with the California Code of Regulations, Title 20, Division 2, Chapter 4, Article 4, section 1604, table A-2, effective November 27, 2002:

"

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

"

"(5) Illuminated exit signs must have an input power demand of five watts or less per illuminated face. For purposes of this subsection, input power demand shall be measured in accordance with the conditions for testing established by the United States Environmental Protection Agency's Energy Star exit sign program version 3.0. Illuminated exit signs must also meet all applicable building and safety codes.

"(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 may not contain a probe-start metal halide lamp ballast.

"(7)(a) Single-voltage external AC to DC power supplies manufactured on or after July 1, 2008, must meet the requirements in the following table:

"

Nameplate output	Minimum Efficiency in Active Mode

<1 Watt	0.5 * Nameplate Output
≥ 1 Watt and ≤ 51 Watts	0.09 * Ln (Nameplate Output) + 0.5
> 51 Watts	0.85

Maximum Energy Consumption in No-Load Mode
0.5 Watts

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

"

"(b) For the purposes of this subsection, 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,' dated August 11, 2004. The efficiency in the active and no-load modes of power supplies shall be tested only at 115 volts at 60 Hz.

"(8)(a) State-regulated incandescent reflector lamps manufactured on or after January 1, 2008, must meet the minimum efficiencies in the following table:

"

Wattage	Minimum average lamp efficiency (lumens per watt)
40 - 50	10.5
51 - 66	11.0
67 - 85	12.5
86 - 115	14.0
116 - 155	14.5
156 - 205	15.0

"

"(b) Lamp efficiency shall be measured in accordance with the applicable test method found in 10 C.F.R. 430.23.

"(9) Torchieres may not use more than 190 watts. A torchiere uses 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.

"(10)(a) Traffic signal modules must have maximum and nominal wattage that does 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

“

“(b) For purposes of this subsection, maximum wattage and nominal wattage shall 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.’

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

“(12) Bottle-type water dispensers designed for dispensing both hot and cold water may not have standby energy consumption greater than 1.2 kilowatt-hours per day, as measured in accordance with the test criteria contained in Version 1 of the United States Environmental Protection Agency’s ‘Energy Star Program Requirements for Bottled Water Coolers,’ except that units with an integral, automatic timer may not be tested using Section D, ‘Timer Usage,’ of the test criteria.

“(13) Commercial hot food holding cabinets shall have a maximum idle energy rate of 40 watts per cubic foot of interior volume, as determined by the ‘Idle Energy Rate-dry Test’ in ASTM F2140-01, ‘Standard Test Method for Performance of Hot Food Holding Cabinets’ published by ASTM International. Interior volume shall be measured in accordance with the method shown in the United States Environmental Protection Agency’s ‘Energy Star Program Requirements for Commercial Hot Food Holding Cabinets,’ as in effect on August 15, 2003.

“(14) Compact audio products may not use more than two watts in standby passive mode for those without a permanently illuminated clock display and four watts in standby passive mode for those with a permanently illuminated clock display, as measured in accordance with International Electrotechnical Commission (IEC) test method 62087:2002(E), ‘Methods of Measurement for the Power Consumption of Audio, Video, and Related Equipment.’

“(15) Digital versatile disc players and digital versatile disc recorders may not use more than three watts in standby passive mode, as measured in accordance with International Electrotechnical Commission (IEC) test method 62087:2002(E), ‘Methods of Measurement for the Power Consumption of Audio, Video, and Related Equipment.’

“(16) Portable electric spas may not have a standby power greater than $5(V^{2/3})$ Watts where V=the total volume in gallons, as measured in accordance with the test method for portable electric spas contained in the California Code of Regulations, Title 20, Division 2, Chapter 4, section 1604.

“(17)(a) Walk-in refrigerators and walk-in freezers with the applicable motor types shown in the table below shall include the required components shown.

“

Motor Type	Required Components
All	Interior lights: light sources with an efficacy of 45

	lumens per watt or more, including ballast losses (if any)
All	Automatic door closers that firmly close all reach-in doors
All	Automatic door closers that firmly close all walk-in doors no wider than 3.9 feet and no higher than 6.9 feet that have been closed to within one inch of full closure
All	Wall, ceiling and door insulation at least R-28 for refrigerators and at least R-34 for freezers
All	Floor insulation at least R-28 for freezers (no requirement for refrigerators)
Condenser fan motors of under one horsepower	(i) Electronically commutated motors, (ii) Permanent split capacitor-type motors, or (iii) Polyphase motors of ½ horsepower or more
Single-phase evaporator fan motors of under one horsepower and less than 460 volts	Electronically commutated motors

" _____

"(b) In addition to the requirements in paragraph (a) of this subsection, walk-in refrigerators and walk-in freezers with transparent reach-in doors shall meet the following requirements:

"(A) Transparent reach-in doors shall be of triple pane glass with either heat-reflective treated glass or gas fill;

"(B) If the appliance has an anti-sweat heater without anti-sweat controls, the appliance shall have a total door rail, glass and frame heater power draw of no more than 40 watts if it is a freezer or 17 watts if it is a refrigerator per foot of door frame width; and

"(C) If the appliance has an anti-sweat heater with anti-sweat heat controls, and the total door rail, glass, and frame heater power draw is 40 watts or greater per foot of door frame width if it is a freezer or 17 watts or greater per foot of door frame width if it is a refrigerator, the anti-sweat heat controls shall reduce the energy use of the anti-sweat heater in an amount corresponding to the relative humidity in the air outside the door or to the condensation on the inner glass pane.

"(18) A television must automatically enter television standby-passive mode after a maximum of 15 minutes without video or audio input on the selected input mode. A television must enter television standby-passive mode when turned off with the remote control unit or via an internal signal. The peak luminance of a television in home mode, or in the default mode as shipped, may not be less than 65 percent of the peak luminance of the retail mode or the brightest selectable preset mode of the television. A television must meet the standards in the following table:

“

Viewable Screen Area	Television Standby-passive Mode Power Usage (Watts)	Maximum On Mode Power Usage (P in Watts, A is Viewable Screen area)	Minimum Power Factor for (P ≥ 100W)
<1400 sq. in	1 W	P ≤ 0.12 x A + 25	0.9
≥ 1400 sq. in	3 W	NA	NA

“

“(19)(a) Large battery charger systems must meet the minimum efficiencies in the following table:

“

Standards for Large Battery Charger Systems

Performance Parameter		Standard
Charge Return Factor	100 percent Depth of Discharge	Crf ≤ 1.10
	80 percent Depth of Discharge	Crf ≤ 1.10
	40 percent Depth of Discharge	Crf ≤ 1.15
Power Conversion Efficiency		≥ 89 percent
Power Factor		≥ 0.90
Battery Maintenance Mode Power (E_b = battery capacity of tested battery)		≤ 10 +0.0012E_b W

No Battery Mode Power	≤ 10 W

“

“(b)(A) As described in subparagraph (B) of this paragraph, inductive charger systems and small battery charger systems must meet the minimum energy efficiency standards in the following table:

“

Standards for Inductive and Small Battery Charger Systems

Performance Parameter	Standard
Maximum 24-hour charge and maintenance energy (Wh) (E_b = capacity of all batteries in ports and N = number of charger ports)	For E_b of 2.5 Wh or less: 16 x N For E_b >2.5 Wh and ≤ 100 Wh: 12 x N+1.6E_b For E_b >100 Wh and ≤ 1000 Wh: 22 x N+1.5E_b For E_b > 1000 Wh: 36.4 x N + 1.486E_b
Battery Maintenance Mode Power and No Battery Mode Power (W) Power Factor (E_b = capacity of all batteries in ports and N = number of charger ports)	The sum of battery maintenance mode power and no battery mode power must be less than or equal to: 1 x N+0.0021xE_b

“

“(B) The requirements in subparagraph (A) of this paragraph must be met by:

“(i) Small battery charger systems for sale at retail that are not USB charger systems with a battery capacity of 20 watt-hours or more and that are manufactured on or after January 1, 2014.

“(ii) Small battery charger systems for sale at retail that are USB charger systems with a battery capacity of 20 watt-hours or more and that are manufactured on or after January 1, 2014.

“(iii) Small battery charger systems that are not sold at retail that are manufactured on or after January 1, 2017.

“(iv) Inductive charger systems manufactured on or after January 1, 2014, unless the inductive charger system uses less than one watt in battery maintenance mode, less than one watt in no battery mode and an average of one watt or less over the duration of the charge and battery mainte-

nance mode test.

"(v) Battery backups and uninterruptible power supplies, manufactured on or after January 1, 2014, for small battery charger systems for sale at retail, which may not consume more than 0.8 ($0.0021xE_b$) watts in battery maintenance mode, where (E_b) is the battery capacity in watt-hours.

"(vi) Small battery charger systems not sold at retail, manufactured after January 1, 2017, which may not consume more than 0.8 ($0.0021xE_b$) watts in battery maintenance mode, where (E_b) is the battery capacity in watt-hours.

"(C) The requirements in subparagraph (A) of this paragraph do not need to be met by an à la carte charger that is:

"(i) Provided separately from and subsequent to the sale of a small battery charger system described in this paragraph;

"(ii) Necessary as a replacement for, or as a replacement component of, a small battery charger system; and

"(iii) Provided by a manufacturer directly to a consumer or to a service or repair facility.

"**(20) A high light output double-ended quartz halogen lamp must have a minimum efficiency of:**

"(a) 27 lumens per watt for lamps with a minimum rated initial lumen value of greater than 6,000 lumens and a maximum initial lumen value of 15,000 lumens; or

"(b) 34 lumens per watt for lamps with a rated initial lumen value of greater than 15,000 and less than 40,000 lumens.".