

# Senate Bill 20

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## SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure **as introduced**.

Modifies applicability of minimum energy efficiency standards to certain products.  
 Modifies minimum energy efficiency standards for certain products.

## A BILL FOR AN ACT

Relating to minimum energy efficiency standards; amending ORS 469.233 and section 10, chapter 418, Oregon Laws 2013.

**Be It Enacted by the People of the State of Oregon:**

**SECTION 1.** ORS 469.233 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:

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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 <i>-.0055H</i>	200 <i>-.022H</i>
		≥ 500<1436	5.58 <i>-.0011H</i>	200 <i>-.022H</i>
		≥ 1436	4.0	200 <i>-.022H</i>
Ice-making head	air	<450	10.26 <i>-.0086H</i>	Not applicable
		≥ 450	6.89 <i>-.0011H</i>	Not applicable
Remote condensing but not remote				
compressor	air	<1000	8.85 <i>-.0038</i>	Not applicable
		≥ 1000	5.10	Not applicable
Remote condensing and remote				
compressor	air	<934	8.85 <i>-.0038H</i>	Not applicable
		≥ 934	5.30	Not applicable
Self-contained models	water	<200	11.40 <i>-.0190H</i>	191 <i>-.0315H</i>

**NOTE:** Matter in **boldfaced** type in an amended section is new; matter *[italic and bracketed]* is existing law to be omitted. New sections are in **boldfaced** type.

1		$\geq 200$	7.60	191 -.0315H
2	Self-contained			
3	models	air <175	18.0 -.0469H	Not applicable
4		$\geq 175$	9.80	Not applicable

5  
 6 Where H = harvest rate in pounds per 24 hours, which must be reported within 5 percent  
 7 of the tested value. Maximum water use applies only to water used for the condenser.

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 9  
 10 (b) For purposes of this subsection, automatic commercial ice cube machines shall be tested in  
 11 accordance with the ARI 810-2003 test method as published by the Air-Conditioning and Refriger-  
 12 ation Institute. Ice-making heads include all automatic commercial ice cube machines that are not  
 13 split system ice makers or self-contained models as defined in ARI 810-2003.

14 (2) Commercial clothes washers must have a minimum modified energy factor of 1.26 and a  
 15 maximum water consumption factor of 9.5. For purposes of this subsection, capacity, modified energy  
 16 factor and water consumption factor are defined and shall be measured in accordance with the fed-  
 17 eral test method for commercial clothes washers under 10 C.F.R. 430.23.

18 (3) Commercial prerinse spray valves must have a flow rate equal to or less than 1.6 gallons per  
 19 minute when measured in accordance with the ASTM International’s “Standard Test Method for  
 20 Prerinse Spray Valves,” ASTM F2324-03.

21 (4)(a) Commercial refrigerators or freezers must meet the applicable requirements listed in the  
 22 following table:

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25	Equipment Type	Doors	Maximum Daily
26			Energy Consumption (kWh)
28	Reach-in cabinets, pass-through		
29	cabinets and roll-in or roll-through	Solid	0.10V + 2.04
30	cabinets that are refrigerators	Transparent	0.12V + 3.34
32	Reach-in cabinets, pass-through		
33	cabinets and roll-in or roll-through		
34	cabinets that are “pulldown”		
35	refrigerators	Transparent	0.126V + 3.51
37	Reach-in cabinets, pass-through		
38	cabinets and roll-in or roll-through	Solid	0.40V + 1.38
39	cabinets that are freezers	Transparent	0.75V + 4.10
41	Reach-in cabinets that are		
42	refrigerator-freezers with an		
43	AV of 5.19 or higher	Solid	0.27AV - 0.71

44  
 45 kWh = kilowatt hours

1 V = total volume (ft<sup>3</sup>)

2

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

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6

7 (b) For purposes of this subsection:

8 (A) "Pulldown" designates products designed to take a fully stocked refrigerator with beverages  
9 at 90 degrees Fahrenheit and cool those beverages to a stable temperature of 38 degrees Fahrenheit  
10 within 12 hours or less.

11 (B) Daily energy consumption shall be measured in accordance with the American National  
12 Standards Institute/American Society of Heating, Refrigerating and Air-Conditioning Engineers test  
13 method 117-2002, except that:

14 (i) The back-loading doors of pass-through and roll-through refrigerators and freezers must re-  
15 main closed throughout the test; and

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

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21 Product or compartment type	22 Integrated average product temperature 23 in degrees Fahrenheit
24 Refrigerator	38 ± 2
25 Freezer	0 ± 2

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

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

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

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40 Nameplate Output	41 Minimum Efficiency in Active Mode
42 <1 Watt	43 0.5 * Nameplate Output
44 ≥ 1 Watt and ≤ 51 Watts	45 0.09 * Ln (Nameplate Output) + 0.5
> 51 Watts	0.85

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Maximum Energy Consumption in No-Load Mode

Any Output 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

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(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.

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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

1		have been closed to within one inch of full closure
2		
3	All	Wall, ceiling and door insulation at least R-28 for
4		refrigerators and at least R-34 for freezers
5		
6	All	Floor insulation at least R-28 for freezers (no
7		requirement for refrigerators)
8		
9	Condenser fan motors of	(i) Electronically commutated motors,
10	under one horsepower	(ii) Permanent split capacitor-type motors, or
11		(iii) Polyphase motors of ½ horsepower or more
12		
13	Single-phase evaporator	Electronically commutated motors
14	fan motors of under one	
15	horsepower and less	
16	than 460 volts	

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

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

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

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

31 (18) A television **manufactured on or after January 1, 2014**, must automatically enter tele-  
32 vision standby-passive mode after a maximum of 15 minutes without video or audio input on the  
33 selected input mode. A television must enter television standby-passive mode when turned off with  
34 the remote control unit or via an internal signal. The peak luminance of a television in home mode,  
35 or in the default mode as shipped, may not be less than 65 percent of the peak luminance of the  
36 retail mode or the brightest selectable preset mode of the television. A television must meet the  
37 standards in the following table:

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39				
40		Television Standby-	Maximum On Mode	Minimum
41	Viewable	passive Mode	Power Usage (P in	Power
42	Screen	Power Usage	Watts, A is Viewable	Factor for
43	Area	(Watts)	Screen area)	(P ≥ 100W)
44				
45	<1400 sq. in	1 W	$P \leq 0.12 \times A + 25$	0.9



1	Performance	Standard
2	Parameter	
3		
4	Maximum 24-hour	For $E_b$ of 2.5 Wh or less: $16 \times N$
5	charge and	
6	maintenance	For $E_b > 2.5$ Wh and
7	energy (Wh)	$\leq 100$ Wh: $12 \times N + 1.6E_b$
8	( $E_b$ = capacity	
9	of all batteries in	For $E_b > 100$ Wh and
10	ports and $N$ =	$\leq 1000$ Wh: $22 \times N + 1.5E_b$
11	number of charger	
12	ports)	For $E_b > 1000$ Wh:
13		$36.4 \times N + 1.486E_b$
14		
15	Battery Maintenance	The sum of battery maintenance mode power and no
16	Mode Power and No	battery mode power must be less than or equal to:
17	Battery Mode Power (W)	$1 \times N + 0.0021 \times E_b$
18	Power Factor ( $E_b$ = capacity	
19	of all batteries in ports and	
20	$N$ = number of charger ports)	

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(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 and 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 maintenance 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  $0.8 + (0.0021 \times E_b)$  watts in battery maintenance mode, where ( $E_b$ ) is the battery capacity in watt-hours.

(vi) [*Small battery charger systems not sold at retail*] **Battery backups and uninterruptible power supplies**, manufactured **on or** after January 1, 2017, **for small battery charger systems not sold at retail**, which may not consume more than  $0.8 + (0.0021 \times E_b)$  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



1 system; and

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

3 **SECTION 2.** ORS 469.233, as amended by section 4, chapter 418, Oregon Laws 2013, is amended  
4 to read:

5 469.233. The following minimum energy efficiency standards for new products are established:

6 (1)(a) Automatic commercial ice cube machines must have daily energy use and daily water use  
7 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

35 Where H = harvest rate in pounds per 24 hours, which must be reported within 5 percent  
36 of the tested value. Maximum water use applies only to water used for the condenser.

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38  
39 (b) For purposes of this subsection, automatic commercial ice cube machines shall be tested in  
40 accordance with the ARI 810-2003 test method as published by the Air-Conditioning and Refrigeration  
41 Institute. Ice-making heads include all automatic commercial ice cube machines that are not  
42 split system ice makers or self-contained models as defined in ARI 810-2003.

43 (2) Commercial clothes washers must have a minimum modified energy factor of 1.26 and a  
44 maximum water consumption factor of 9.5. For purposes of this subsection, capacity, modified energy  
45 factor and water consumption factor are defined and shall be measured in accordance with the fed-

1 eral test method for commercial clothes washers under 10 C.F.R. 430.23.

2 (3) Commercial prerinse spray valves must have a flow rate equal to or less than 1.6 gallons per  
 3 minute when measured in accordance with the ASTM International’s “Standard Test Method for  
 4 Prerinse Spray Valves,” ASTM F2324-03.

5 (4)(a) Commercial refrigerators or freezers must meet the applicable requirements listed in the  
 6 following table:

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9 Equipment Type	10 Doors	11 Maximum Daily 12 Energy Consumption (kWh)
13 Reach-in cabinets, pass-through 14 cabinets and roll-in or roll-through 15 cabinets that are refrigerators	16 Solid 17 Transparent	18 0.10V + 2.04 19 0.12V + 3.34
20 Reach-in cabinets, pass-through 21 cabinets and roll-in or roll-through 22 cabinets that are “pulldown” 23 refrigerators	24 Transparent	25 0.126V + 3.51
26 Reach-in cabinets, pass-through 27 cabinets and roll-in or roll-through 28 cabinets that are freezers	29 Solid 30 Transparent	31 0.40V + 1.38 32 0.75V + 4.10
33 Reach-in cabinets that are 34 refrigerator-freezers with an 35 AV of 5.19 or higher	36 Solid	37 0.27AV - 0.71

38 kWh = kilowatt hours

39 V = total volume (ft<sup>3</sup>)

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

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42 (b) For purposes of this subsection:

43 (A) “Pulldown” designates products designed to take a fully stocked refrigerator with beverages  
 44 at 90 degrees Fahrenheit and cool those beverages to a stable temperature of 38 degrees Fahrenheit  
 45 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 re-

1 main closed throughout the test; and

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

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

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13  
 14 (5) Illuminated exit signs must have an input power demand of five watts or less per illuminated  
 15 face. For purposes of this subsection, input power demand shall be measured in accordance with the  
 16 conditions for testing established by the United States Environmental Protection Agency’s Energy  
 17 Star exit sign program version 3.0. Illuminated exit signs must also meet all applicable building and  
 18 safety codes.

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

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

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Nameplate Output	Minimum Efficiency in Active Mode
<1 Watt	$0.5 * \text{Nameplate Output}$
$\geq 1 \text{ Watt and } \leq 51 \text{ Watts}$	$0.09 * \text{Ln (Nameplate Output)} + 0.5$
> 51 Watts	0.85
	Maximum Energy Consumption in No-Load Mode
Any Output	0.5 Watts

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

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39  
 40 (b) For the purposes of this subsection, efficiency of single-voltage external AC to DC power  
 41 supplies shall be measured in accordance with the United States Environmental Protection Agency’s  
 42 “Test Method for Calculating the Energy Efficiency of Single-Voltage External AC to DC and AC  
 43 to AC Power Supplies,” dated August 11, 2004. The efficiency in the active and no-load modes of  
 44 power supplies shall be tested only at 115 volts at 60 Hz.

45 (8)(a) State-regulated incandescent reflector lamps manufactured on or after January 1, 2008,

1 must meet the minimum efficiencies in the following table:

---

4 Wattage	Minimum average lamp efficiency (lumens per watt)
7 40 - 50	10.5
8 51 - 66	11.0
9 67 - 85	12.5
10 86 - 115	14.0
11 116 - 155	14.5
12 156 - 205	15.0

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14  
15 (b) Lamp efficiency shall be measured in accordance with the applicable test method found in  
16 10 C.F.R. 430.23.

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

20 (10)(a) Traffic signal modules must have maximum and nominal wattage that does not exceed the  
21 applicable values in the following table:

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24 Module Type	Maximum Wattage (at 74°C)	Nominal Wattage (at 25°C)
27 12" red ball (or 300 mm circular)	17	11
28 8" red ball (or 200 mm circular)	13	8
29 12" red arrow (or 300 mm arrow)	12	9
31 12" green ball (or 300 mm circular)	15	15
32 8" green ball (or 200 mm circular)	12	12
33 12" green arrow (or 300 mm arrow)	11	11

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35  
36 (b) For purposes of this subsection, maximum wattage and nominal wattage shall be measured  
37 in accordance with and under the testing conditions specified by the Institute for Transportation  
38 Engineers "Interim LED Purchase Specification, Vehicle Traffic Control Signal Heads, Part 2: Light  
39 Emitting Diode Vehicle Traffic Signal Modules."

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

42 (12) Bottle-type water dispensers designed for dispensing both hot and cold water may not have  
43 standby energy consumption greater than 1.2 kilowatt-hours per day, as measured in accordance  
44 with the test criteria contained in Version 1 of the United States Environmental Protection  
45 Agency's "Energy Star Program Requirements for Bottled Water Coolers," except that units with

1 an integral, automatic timer may not be tested using Section D, “Timer Usage,” of the test criteria.

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

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

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

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

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

22 \_\_\_\_\_

24 Motor Type	Required Components
26 All	27 Interior lights: light sources with an efficacy of 45 lumens per watt or more, including ballast losses (if any)
29 All	Automatic door closers that firmly close all reach-in doors
31 All	32 Automatic door closers that firmly close all walk-in doors no wider than 3.9 feet and no higher than 6.9 feet that 33 have been closed to within one inch of full closure
35 All	36 Wall, ceiling and door insulation at least R-28 for refrigerators and at least R-34 for freezers
38 All	39 Floor insulation at least R-28 for freezers (no requirement for refrigerators)
41 Condenser fan motors of 42 under one horsepower	43 (i) Electronically commutated motors, (ii) Permanent split capacitor-type motors, or (iii) Polyphase motors of ½ horsepower or more
45 Single-phase evaporator	Electronically commutated motors

1 fan motors of under one  
 2 horsepower and less  
 3 than 460 volts

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5  
 6 (b) In addition to the requirements in paragraph (a) of this subsection, walk-in refrigerators and  
 7 walk-in freezers with transparent reach-in doors shall meet the following requirements:

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

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

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

18 (18) A television **manufactured on or after January 1, 2014**, must automatically enter tele-  
 19 vision standby-passive mode after a maximum of 15 minutes without video or audio input on the  
 20 selected input mode. A television must enter television standby-passive mode when turned off with  
 21 the remote control unit or via an internal signal. The peak luminance of a television in home mode,  
 22 or in the default mode as shipped, may not be less than 65 percent of the peak luminance of the  
 23 retail mode or the brightest selectable preset mode of the television. A television must meet the  
 24 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	$P \leq 0.12 \times A + 25$	0.9
≥ 1400 sq. in	3 W	NA	NA

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35  
 36 (19)(a) Large battery charger systems **manufactured on or after January 1, 2014**, must meet  
 37 the minimum efficiencies in the following table:

---

Standards for Large Battery Charger Systems	
Performance Parameter	Standard
Charge Return	

1	Factor	100 percent	$C_{rf} \leq 1.10$
2		Depth of Discharge	
3			
4		80 percent	$C_{rf} \leq 1.10$
5		Depth of Discharge	
6			
7		40 percent	$C_{rf} \leq 1.15$
8		Depth of Discharge	
9			
10	Power Conversion		
11	Efficiency		$\geq 89$ percent
12			
13	Power Factor		$\geq 0.90$
14			
15	Battery Maintenance		
16	Mode Power		$\leq 10$
17	+0.0012E <sub>b</sub> W		
18	(E <sub>b</sub> = battery		
19	capacity of		
20	tested battery)		
21			
22	No Battery		
23	Mode Power		$\leq 10$ W

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(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:

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Standards for Inductive and Small Battery Charger Systems

32	Performance	Standard
33	Parameter	
35	Maximum 24-hour	For E <sub>b</sub> of 2.5 Wh or less: 16 x N
36	charge and	
37	maintenance	For E <sub>b</sub> > 2.5 Wh and
38	energy (Wh)	$\leq 100$ Wh: 12 x N+1.6E <sub>b</sub>
39	(E <sub>b</sub> = capacity	
40	of all batteries in	For E <sub>b</sub> > 100 Wh and
41	ports and N =	$\leq 1000$ Wh: 22 x N+1.5E <sub>b</sub>
42	number of charger	
43	ports)	For E <sub>b</sub> > 1000 Wh:
44		36.4 x N + 1.486E <sub>b</sub>
45		

1	Battery Maintenance	The sum of battery maintenance mode power and no
2	Mode Power and No	battery mode power must be less than or equal to:
3	Battery Mode Power (W)	$1 \times N + 0.0021 \times E_b$
4	Power Factor ( $E_b$ = capacity	
5	of all batteries in ports and	
6	N = number of charger ports)	

7  
8

(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 maintenance 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  $0.8 + (0.0021 \times E_b)$  watts in battery maintenance mode, where ( $E_b$ ) is the battery capacity in watt-hours.

(vi) [*Small battery charger systems not sold at retail*] **Battery backups and uninterruptible power supplies**, manufactured **on or** after January 1, 2017, **for small battery charger systems not sold at retail**, which may not consume more than  $0.8 + (0.0021 \times E_b)$  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 **manufactured on or after January 1, 2016**, 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.

**SECTION 3.** Section 10, Chapter 418, Oregon Laws 2013 is amended to read:

**Sec. 10.** (1) The amendments to ORS 469.229 by section 2 of this 2013 Act become operative on January 1, 2016.

(2) The amendments to ORS 469.233 by section 4 of this 2013 Act become operative on January 1, 2016.

(3) The amendments to ORS 469.238 by section 6 of this 2013 Act become operative on January



1 1, 2016.

2 (4) The amendments to ORS 469.239 by section 8 of this 2013 Act become operative on January  
3 1, 2016.

4 *[(5) The minimum energy efficiency standards specified in ORS 469.233 (19)(b) do not apply to a*  
5 *small battery charger system that is made available by a manufacturer directly to a consumer or to a*  
6 *service or repair facility, as a service part or spare part, after and separate from the original sale of*  
7 *the product that requires the small battery charger system as a service part or spare part, or for a*  
8 *battery charger that is not sold at retail, before July 1, 2017.]*

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