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**SUBSTITUTE HOUSE BILL 1524**

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**State of Washington**

**60th Legislature**

**2007 Regular Session**

**By** House Committee on Technology, Energy & Communications (originally sponsored by Representatives Chase, Morris and B. Sullivan)

READ FIRST TIME 02/09/07.

1       AN ACT Relating to the sale of light-emitting diode holiday lights;  
2 amending RCW 19.260.020, 19.260.030, 19.260.040, 19.260.050, and  
3 19.260.070; adding a new section to chapter 19.260 RCW; creating a new  
4 section; and prescribing penalties.

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

6       NEW SECTION. **Sec. 1.** The legislature finds and declares that  
7 meeting the state's future energy needs through conservation efforts,  
8 both large and small, is a priority. Small changes on the part of  
9 Washington consumers, such as switching from conventional, incandescent  
10 holiday lights to light-emitting diode lights, has the potential to  
11 save hundreds of kilowatts of electricity each holiday season.

12       The legislature further finds that light-emitting diode lights are  
13 more efficient, last longer, emit less heat, and draw less current than  
14 conventional incandescent lights, which make them a safer and more  
15 cost-effective option for use in the home. Therefore, it is the intent  
16 of the legislature to encourage its citizens to participate in cost-  
17 effective energy conservation by establishing efficiency standards for  
18 decorative light strings sold in the state.

1       **Sec. 2.** RCW 19.260.020 and 2006 c 194 s 1 are each amended to read  
2 as follows:

3       The definitions in this section apply throughout this chapter  
4 unless the context clearly requires otherwise.

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

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

13       (3) "Commercial clothes washer" means a soft mount horizontal or  
14 vertical-axis clothes washer that: (a) Has a clothes container  
15 compartment no greater than 3.5 cubic feet in the case of a horizontal-  
16 axis product or no greater than 4.0 cubic feet in the case of a  
17 vertical-axis product; and (b) is designed for use by more than one  
18 household, such as in multifamily housing, apartments, or coin  
19 laundries.

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

25       (5)(a) "Commercial refrigerators and freezers" means refrigerators,  
26 freezers, or refrigerator-freezers designed for use by commercial or  
27 institutional facilities for the purpose of storing or merchandising  
28 food products, beverages, or ice at specified temperatures that: (i)  
29 Incorporate most components involved in the vapor-compression cycle and  
30 the refrigerated compartment in a single cabinet; and (ii) may be  
31 configured with either solid or transparent doors as a reach-in  
32 cabinet, pass-through cabinet, roll-in cabinet, or roll-through  
33 cabinet.

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

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

4 (7) "Decorative light string" means a string of lamps that operate  
5 on main power in North America (120 V RMS AC, 60 Hz) or via a power  
6 adaptor or controller that connects directly to main power, and is used  
7 for decorative residential lighting purposes.

8 (8) "Department" means the department of community, trade, and  
9 economic development.

10 ((+8)) (9) "High-intensity discharge lamp" means a lamp in which  
11 light is produced by the passage of an electric current through a vapor  
12 or gas, and in which the light-producing arc is stabilized by bulb wall  
13 temperature and the arc tube has a bulb wall loading in excess of three  
14 watts per square centimeter.

15 ((+9)) (10) "Light-emitting diode lights" means a string of lamps  
16 that emit light from a small semiconducting chip when current is  
17 applied.

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

22 ((+10)) (12) "Metal halide lamp fixture" means a light fixture  
23 designed to be operated with a metal halide lamp and a ballast for a  
24 metal halide lamp.

25 ((+11)) (13) "Pass-through cabinet" means a commercial  
26 refrigerator or freezer with hinged or sliding doors on both the front  
27 and rear of the unit.

28 ((+12)) (14) "Probe-start metal halide ballast" means a ballast  
29 used to operate metal halide lamps which does not contain an igniter  
30 and which instead starts lamps by using a third starting electrode  
31 "probe" in the arc tube.

32 ((+13)) (15) "Reach-in cabinet" means a commercial refrigerator or  
33 freezer with hinged or sliding doors or lids, but does not include  
34 roll-in or roll-through cabinets or pass-through cabinets.

35 ((+14)) (16)(a) "Roll-in cabinet" means a commercial refrigerator  
36 or freezer with hinged or sliding doors that allow wheeled racks of  
37 product to be rolled into the unit.

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

4 (~~(15)~~) (17)(a) "Single-voltage external AC to DC power supply"  
5 means a device that: (i) Is designed to convert line voltage  
6 alternating current input into lower voltage direct current output;  
7 (ii) is able to convert to only one DC output voltage at a time; (iii)  
8 is sold with, or intended to be used with, a separate end-use product  
9 that constitutes the primary power load; (iv) is contained within a  
10 separate physical enclosure from the end-use product; (v) is connected  
11 to the end-use product via a removable or hard-wired male/female  
12 electrical connection, cable, cord, or other wiring; and (vi) has a  
13 nameplate output power less than or equal to 250 watts.

14 (b) "Single-voltage external AC to DC power supply" does not  
15 include: (i) Products with batteries or battery packs that physically  
16 attach directly to the power supply unit; (ii) products with a battery  
17 chemistry or type selector switch and indicator light; or (iii)  
18 products with a battery chemistry or type selector switch and a state  
19 of charge meter.

20 (~~(16)~~) (18) "State-regulated incandescent reflector lamp" means  
21 a lamp that is not colored or designed for rough or vibration service  
22 applications, that has an inner reflective coating on the outer bulb to  
23 direct the light, an E26 medium screw base, and a rated voltage or  
24 voltage range that lies at least partially within 115 to 130 volts, and  
25 that falls into one of the following categories:

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

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

30 (~~(17)~~) (19) "Transformer" means a device consisting of two or  
31 more coils of insulated wire and that is designed to transfer  
32 alternating current by electromagnetic induction from one coil to  
33 another to change the original voltage or current value.

34 (~~(18)~~) (20)(a) "Unit heater" means a self-contained, vented fan-  
35 type commercial space heater that uses natural gas or propane, and that  
36 is designed to be installed without ducts within a heated space.

37 (b) "Unit heater" does not include any products covered by federal

1 standards established pursuant to 42 U.S.C. Sec. 6291 et seq. or any  
2 product that is a direct vent, forced flue heater with a sealed  
3 combustion burner.

4 **Sec. 3.** 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) state-regulated incandescent reflector  
12 lamps; ~~((and))~~ (h) unit heaters; and (i) decorative light strings.  
13 This chapter applies equally to products whether they are sold, offered  
14 for sale, or installed as a stand-alone product or as a component of  
15 another product.

16 (2) This chapter does not apply to (a) new products manufactured in  
17 the state and sold outside the state, (b) new products manufactured  
18 outside the state and sold at wholesale inside the state for final  
19 retail sale and installation outside the state, (c) products installed  
20 in mobile manufactured homes at the time of construction, or (d)  
21 products designed expressly for installation and use in recreational  
22 vehicles.

23 **Sec. 4.** RCW 19.260.040 and 2006 c 194 s 3 are each amended to read  
24 as follows:

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

27 (1)(a) Automatic commercial ice cube machines must have daily  
28 energy use and daily water use no greater than the applicable values in  
29 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

1	>=1436	4.0	200 - .022H		
2	Ice-making head	air	450	10.26 - .0086H	Not applicable
3			>=450	6.89 - .0011H	Not applicable
4	Remote condensing but not remote compressor	air	<1000	8.85 - .0038	Not applicable
5			>=1000	5.10	Not applicable
6	Remote condensing and remote compressor	air	<934	8.85 - .0038H	Not applicable
7			>=934	5.3	Not applicable
8	Self-contained models	water	<200	11.40 - .0190H	191 - .0315H
9			>=200	7.60	191 - .0315H
10	Self-contained models	air	<175	18.0 - .0469H	Not applicable
11			>=175	9.80	Not applicable

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

13 "Maximum water use" applies only to water used for the condenser.

14 (b) For purposes of this section, automatic commercial ice cube  
 15 machines shall be tested in accordance with ARI 810-2003 test method as  
 16 published by the air-conditioning and refrigeration institute. Ice-  
 17 making heads include all automatic commercial ice cube machines that  
 18 are not split system ice makers or self-contained models as defined in  
 19 ARI 810-2003.

20 (2) Commercial clothes washers must have a minimum modified energy  
 21 factor of 1.26. For the purposes of this section, capacity and  
 22 modified energy factor are defined and measured in accordance with the  
 23 current federal test method for clothes washers as found at 10 C.F.R.  
 24 Sec. 430.23.

25 (3) Commercial prerinse spray valves must have a flow rate equal to  
 26 or less than 1.6 gallons per minute when measured in accordance with  
 27 the American society for testing and materials' "Standard Test Method  
 28 for Prerinse Spray Valves," ASTM F2324-03.

29 (4)(a) Commercial refrigerators and freezers must meet the  
 30 applicable requirements listed in the following table:

31 Equipment Type	Doors	Maximum Daily Energy Consumption (kWh)
32 Reach-in cabinets, pass-through cabinets, 33 and roll-in or roll-through cabinets that are refrigerators	Solid	0.10V+ 2.04
	Transparent	0.12V+ 3.34

1	Reach-in cabinets, pass-through cabinets,	Transparent	.126V+ 3.51
2	and roll-in or roll-through cabinets that are		
3	"pulldown" refrigerators		
4	Reach-in cabinets, pass-through cabinets,	Solid	0.40V+ 1.38
5	and roll-in or roll-through cabinets that are	Transparent	0.75V+ 4.10
6	freezers		
7	Reach-in cabinets that are refrigerator-	Solid	0.27AV - 0.71
8	freezers		
9	with an AV of 5.19 or higher		

9 kWh= kilowatt hours

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

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

12 (b) For purposes of this section, "pulldown" designates products  
 13 designed to take a fully stocked refrigerator with beverages at 90  
 14 degrees F and cool those beverages to a stable temperature of 38  
 15 degrees F within 12 hours or less. Daily energy consumption shall be  
 16 measured in accordance with the American national standards  
 17 institute/American society of heating, refrigerating and air-  
 18 conditioning engineers test method 117-2002, except that the back-  
 19 loading doors of pass-through and roll-through refrigerators and  
 20 freezers must remain closed throughout the test, and except that the  
 21 controls of all appliances must be adjusted to obtain the following  
 22 product temperatures.

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

26 (5) Decorative light strings must be light-emitting diode lights.

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

30 ((+6+)) (7)(a) Single-voltage external AC to DC power supplies  
 31 shall meet the requirements in the following table:

32	Nameplate output	Minimum Efficiency in Active Mode
33	< 1 Watt	0.49 * Nameplate Output

1	> or= 1 Watt and < or= 49 Watts	0.09 * Ln (Nameplate Output)+ 0.49
2	> 49 Watts	0.84
3		Maximum Energy Consumption in No-Load Mode
4	< 10 Watts	0.5 Watts
5	> or= 10 Watts and < or= 250 Watts	0.75 Watts

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

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

13 ~~((+7))~~ (8)(a) State-regulated incandescent reflector lamps shall  
14 meet the minimum average lamp efficacy requirements for federally  
15 regulated incandescent reflector lamps contained in 42 U.S.C. Sec.  
16 6295(i)(1)(A).

17 (b) The following types of incandescent lamps are exempt from these  
18 requirements:

19 (i) Lamps rated at fifty watts or less of the following types: BR  
20 30, ER 30, BR 40, and ER 40;

21 (ii) Lamps rated at sixty-five watts of the following types: BR  
22 30, BR 40, and ER 40; and

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

24 ~~((+8))~~ (9) Unit heaters must be equipped with intermittent  
25 ignition devices and must have either power venting or an automatic  
26 flue damper.

27 **Sec. 5.** RCW 19.260.050 and 2006 c 194 s 4 are each amended to read  
28 as follows:

29 (1)(a) No new commercial prerinse spray valve, commercial clothes  
30 washer, commercial refrigerator or freezer, state-regulated  
31 incandescent reflector lamp, or unit heater manufactured on or after  
32 January 1, 2007, may be sold or offered for sale in the state unless  
33 the efficiency of the new product meets or exceeds the efficiency  
34 standards set forth in RCW 19.260.040. No new automatic commercial ice  
35 cube machine, single-voltage external AC to DC power supply, or metal  
36 halide lamp fixtures manufactured on or after January 1, 2008, may be



1 sold or offered for sale in the state unless the efficiency of the new  
2 product meets or exceeds the efficiency standards set forth in RCW  
3 19.260.040.

4 (b) No new decorative light strings manufactured after January 1,  
5 2008, may be sold or offered for sale in this state unless the lights  
6 are light-emitting diode lights as required under RCW 19.260.040.

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

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

21 **Sec. 6.** RCW 19.260.070 and 2005 c 298 s 7 are each amended to read  
22 as follows:

23 (1) The manufacturers of products covered by this chapter must test  
24 samples of their products in accordance with the test procedures under  
25 this chapter or those specified in the state building code.

26 (2) Manufacturers of new products covered by RCW 19.260.030, except  
27 for single-voltage external AC to DC power supplies, shall certify to  
28 the department that the products are in compliance with this chapter.  
29 This certification must be based on test results unless this chapter  
30 does not specify a test method. The department shall establish rules  
31 governing the certification of these products and may coordinate with  
32 the certification programs of other states and federal agencies with  
33 similar standards.

34 (3) Manufacturers of new products covered by RCW 19.260.030 shall  
35 identify each product offered for sale or installation in the state as  
36 in compliance with this chapter by means of a mark, label, or tag on  
37 the product and packaging at the time of sale or installation. The

1 department shall establish rules governing the identification of these  
2 products and packaging, which shall be coordinated to the greatest  
3 practical extent with the labeling programs of other states and federal  
4 agencies with equivalent efficiency standards.

5 (4) The department may test products covered by RCW 19.260.030. If  
6 products so tested are found not to be in compliance with the minimum  
7 efficiency standards established under RCW 19.260.040, the department  
8 shall: (a) Charge the manufacturer of the product for the cost of  
9 product purchase and testing; and (b) make information available to the  
10 public on products found not to be in compliance with the standards.

11 (5) The department shall obtain in paper form the test methods  
12 specified in RCW 19.260.040, which shall be available for public use at  
13 the department's energy policy offices.

14 (6) The department shall investigate complaints received concerning  
15 violations of this chapter. Any manufacturer or distributor who  
16 violates this chapter shall be issued a warning by the director of the  
17 department for any first violation. Repeat violations are subject to  
18 a civil penalty of not more than two hundred fifty dollars a day.  
19 Penalties assessed under this subsection are in addition to costs  
20 assessed under subsection (4) of this section.

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

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

25 (9) This section does not apply to the sale or use of decorative  
26 light strings.

27 NEW SECTION. Sec. 7. A new section is added to chapter 19.260 RCW  
28 to read as follows:

29 The department may investigate complaints received concerning  
30 violations of this act. Any manufacturer or distributor who violates  
31 this act may be issued a warning by the director of the department for  
32 any first violation. Repeat violations may be subject to a civil  
33 penalty of not more than two hundred fifty dollars a day.

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