AN ACT
RELATING TO PUBLIC UTILITIES AND CARRIERS - THE ENERGY AND CONSUMER SAVINGS ACT OF 2005

Introduced By: Representatives Handy, Walsh, Ruggiero, Williams, and Slater

Date Introduced: February 28, 2013

Referred To: House Environment and Natural Resources

It is enacted by the General Assembly as follows:


39-27-3. Definitions. -- As used in this chapter:
(a) "Automatic commercial ice-maker" means a factory-made assembly that is shipped in one or more packages that consists of a condensing unit and ice-making section operating as an integrated unit, that makes and harvests ice cubes, and that may store and dispense ice. This term includes machines with capacities between and including fifty (50) and two thousand five hundred (2,500) pounds per twenty-four (24) hours.
(b) "Ballast" means a device used with an electric discharge lamp to obtain necessary circuit conditions (voltage, current and waveform) for starting and operating the lamp.
(c) "Boiler" means a self-contained low-pressure appliance for supplying steam or hot water primarily designed for space heating.
(d) "Bottle-type water dispenser" means a water dispenser that uses a bottle or reservoir as the source of potable water.
(e) "Chief of Energy and Community Services" means the head official of the Rhode Island state energy office, office of energy resources.
(f) "Commercial clothes washer" means a soft mount horizontal or vertical-axis clothes washer.
washer that:

1. Has a clothes container compartment no greater than three and a half (3.5) cubic feet in the case of a horizontal-axis product or no greater than four (4.0) cubic feet in the case of a vertical-axis product; and

2. Is designed for use by more than one household, such as in multi-family housing, apartments or coin laundries.

(g) "Commercial hot food holding cabinet" means an appliance that is a heated, fully-enclosed compartment with one or more solid doors, and that is designed to maintain the temperature of hot food that has been cooked in a separate appliance. "Commercial hot food holding cabinet" does not include heated glass merchandizing cabinets, drawer warmers, or cook-and-hold appliances.

(h) "Commercial pre-rinse spray valve" means a hand-held device designed and marketed for use with commercial dishwashing and ware washing equipment and which sprays water on dishes, flatware, and other food service items for the purpose of removing food residue prior to their cleaning.

(i) "Commercial refrigerator, freezer and refrigerator-freezer" means self-contained refrigeration equipment that:

1. Is not a consumer product as regulated pursuant to 42 U.S.C. section 6291 and subsequent sections;

2. Operates at a chilled, frozen, combination chilled/frozen, or variable temperature for the purpose of storing and/or merchandising food, beverages and/or ice;

3. May have transparent and/or solid hinged doors, sliding doors, or a combination of hinged and sliding doors; and

4. Incorporates most components involved in the vapor compression cycle and the refrigerated compartment in a single cabinet.

This term does not include:

1. Units with eighty-five (85) cubic feet or more of internal volume;

2. Walk-in refrigerators or freezers;

3. Units with no doors; or

4. Freezers specifically designed for ice cream.

(j) "Commission" means the Rhode Island public utilities commission.

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

(l) "Electricity ratio" is the ratio of furnace electricity use to total furnace energy use.
Electricity ratio = \((\frac{3.412 \times \text{EAE}}{1000 \times \text{Ef} + 3.412 \times \text{EAE}})\) where EAE (average annual auxiliary electrical consumption) and EF (average annual fuel energy consumption) are defined in Appendix N to subpart B of part 430 of title 10 of the Code of Federal Regulations.

(m) "High intensity discharge lamp" means a lamp in which light is produced by the passage of an electric current through a vapor or gas, and in which the light-producing arc is stabilized by bulb wall temperature and the arc tube has a bulb wall loading in excess of three (3) watts per square centimeter.

(n) "High light output double-ended quartz halogen lamp" means a lamp that:

1. Is designed for general outdoor lighting purposes;
2. Contains a tungsten filament;
3. Has a rated initial lumen value of greater than six thousand (6,000) and less than forty thousand (40,000) lumens;
4. Has at each end a recessed single contact, R7s base;
5. Has a maximum overall length (MOL) between four (4) and eleven (11) inches;
6. Has a nominal diameter of less than three quarters of an inch (3/4") (T6);
7. Is designed to be operated at a voltage not less than one hundred-ten (110) volts and not greater than two hundred (200) volts or is designed to be operated at a voltage between two hundred thirty-five (235) volts and three hundred (300) volts;
8. Is not a tubular quartz infrared heat lamp; and
9. Is not a lamp marked and marketed as a stage and studio lamp with a rated life of five hundred (500) hours or less.

(o) "Illuminated exit sign" means an internally-illuminated sign that is designed to be permanently fixed in place to identify a building exit and consists of an electrically powered integral light source that illuminates the legend "EXIT" and any directional indicators and provides contrast between the legend, any directional indicators and the background.

(p) "Large packaged air-conditioning equipment" means electronically-operated, air-cooled air-conditioning and air-conditioning heat pump equipment having cooling capacity greater than or equal to two hundred forty thousand (240,000) Btu/hour but less than seven hundred sixty thousand (760,000) Btu/hour that is built as a package and shipped as a whole to end-user sites.

(q) "Low voltage dry-type distribution transformer" means a transformer that:
1. Has an input voltage of six hundred (600) volts or less;
2. Is air-cooled;
3. Does not use oil as a coolant; and
(4) Is rated for operation at a frequency of sixty (60) Hertz.

(q) "Mercury vapor lamp" means a high-intensity discharge lamp in which the major portion of the light is produced by radiation from mercury operating at a partial pressure in excess of one hundred thousand (100,000) PA (approximately 1 atm). This includes clear, phosphor-coated and self-ballasted lamps.

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

(t) "Metal halide lamp fixture" means a lamp fixture designed to be operated with a metal halide lamp and a ballast for a metal halide lamp.

(u) "Portable electric spa" means a factory built electric spa or hot tub, supplied with equipment for heating and circulating water.

(v) "Probe-start metal halide ballast" means a ballast used to operate metal halide lamps which does not contain an igniter and which instead starts lamps by using a third staring electrode "probe" in the arc tube.

(w) "Pulldown refrigerator" means a commercial refrigerator with doors that, when fully loaded with twelve (12) ounce canned beverages at ninety (90) degrees F, can cool these beverages to an average stable temperature of thirty-eight (38) degrees F in twelve (12) hours or less.

(x) "Residential boiler" means a self-contained appliance for supplying steam or hot water, which uses natural gas, propane, or home heating oil, and which has a heat input rate of less than three hundred thousand (300,000) Btu per hour.

(y) "Residential furnace" means a self-contained space heater designed to supply heated air through ducts of more than ten (10) inches length and which utilizes only single-phase electric current, or single-phase electric current or DC current in conjunction with natural gas, propane, or home heating oil, and which:

(1) Is designed to be the principle heating source for the living space of one or more residences;

(2) Is not contained within the same cabinet with a central air conditioner whose rated cooling capacity is above sixty-five thousand (65,000) Btu per hour; and

(3) Has a heat input rate of less than two hundred twenty-five thousand (225,000) Btu per hour.

(z) "Single-voltage external AC to DC power supply" means a device that:

(1) Is designed to convert line voltage AC input into lower voltage DC output;
(2) Is able to convert to one DC output voltage at a time;

(3) Is sold with, or intended to be used with, a separate end-use product that constitutes the primary power load;

(4) Is contained within a separate physical enclosure from the end-use product;

(5) Is connected to the end-use product via a removable or hard-wired male/female electrical connection, cable, cord or other wiring;

(6) Does not have batteries or battery packs, including those that are removable, that physically attach directly to the power supply unit;

(7) Does not have a battery chemistry or type selector switch and indicator light; or

(8) Has a nameplate output power less than or equal to two hundred fifty (250) watts.

"State-regulated incandescent reflector lamp" means a lamp, not colored or designed for rough or vibration service applications, with an inner reflective coating on the outer bulb to direct the light, an E26 medium screw base, a rated voltage or voltage range that lies at least partially within one hundred fifteen (115) to one hundred thirty (130) volts, and that falls into either of the following categories: a blown PAR (BPAR), bulged reflector (BR), or elliptical reflector (ER) bulb shape or similar bulb shape with a diameter equal to or greater than two and one quarter (2.25) inches; or a reflector (R), parabolic aluminized reflector (PARA) bulged reflector (BR) or similar bulb shape with a diameter of two and one quarter (2.25) to two and three quarter (2.75) inches, inclusive.

"Torchiere" means a portable electric lighting fixture with a reflective bowl that directs light upward onto a ceiling so as to produce indirect illumination on the surfaces below. A torchiere may include downward directed lamps in addition to the upward, indirect illumination.

"Traffic signal module" means a standard eight (8) inch (two hundred millimeter (200 mm)) or twelve (12) inch (three hundred millimeter (300 mm)) traffic signal indication, consisting of a light source, a lens, and all other parts necessary for operation.

"Transformer" means a device consisting of two (2) or more coils of insulated wire and that is designed to transfer alternating current by electromagnetic induction from one coil to another to change the original voltage or current value. The term "transformer" does not include:

(1) Transformers with multiple voltage taps, with the highest voltage tap equaling at least twenty percent (20%) more than the lowest voltage tap; or

(2) Transformers, such as those commonly known as drive transformers, rectifier transformers, auto-transformers, uninterruptible power system transformers, impedance transformers, regulating transformers, sealed and nonventilating transformers, machine tool
transformers, welding transformers, grounding transformers, or testing transformers, that are
designed to be used in a special purpose application and are unlikely to be used in general
purpose applications.

(ee) "Tubular quartz infrared lamp" means a double-ended quartz halogen lamp that is
marked and marketed as an infrared heat lamp, radiates predominately in the infrared radiation
range and in which the visible radiation is not of principle interest.

(ff) "Unit heater" means a self-contained, vented fan-type commercial space heater
that uses natural gas or propane, and that is designed to be installed without ducts within a heated
space, except that such term does not include any products covered by federal standards
established pursuant to 42 U.S.C. section 6291 and subsequent sections or any product that is a
direct vent, forced flue heater with a sealed combustion burner.

(gg) "Walk-in refrigerator" and "walk-in freezer" mean a space, designed for the
purpose of storing and/or merchandising food, beverages and/or ice, that is refrigerated to
temperatures, respectively, at or above and below thirty-two (32) degrees F that can be walked
into.

(hh) "Water dispenser" means a factory-made assembly that mechanically cools and
heats potable water and that dispenses the cooled or heated water by integral or remote means.

39-27-4. Scope. -- (a) The provisions of this chapter apply to the following types of new
products sold, offered for sale or installed in the state:

1. Automatic commercial ice makers;
2. Commercial clothes washers;
3. Commercial pre-rinse spray valves;
4. Commercial refrigerators, freezers, and refrigerator freezers;
5. High-intensity discharge lamp ballasts;
6. Illuminated exit signs;
7. Large packaged air-conditioning equipment;
8. Low voltage dry-type distribution transformers;
9. Metal halide lamp fixtures;
10. Single-voltage external AC to DC power supplies;
11. Torchières;
12. Traffic signal modules;
13. Unit heaters.

(b) The provisions of this chapter also apply to the following types of new products sold,
offered for sale or installed in the state:
(1) Bottle-type water dispensers;
(2) Commercial hot food holding cabinets;
(3) Residential boilers and residential furnaces;
(4) State-regulated incandescent reflector lamps; and
(5) Walk-in refrigerators and walk-in freezers.

c) The provisions of this chapter also apply to the following types of new products sold, offered for sale or installed in the state:

(1) High light output double-ended quartz halogen lamps; and
(2) Portable electric spas.

c(d) The provisions of this chapter do not apply to:

(1) New products manufactured in the state and sold outside the state;
(2) New products manufactured outside the state and sold at wholesale inside the state for final retail sale and installation outside the state;
(3) Products installed in mobile manufactured homes at the time of construction; or
(4) Products designed expressly for installation and use in recreational vehicles.

39-27-5. Efficiency standards. -- (a) Not later than June 1, 2006, the commission, in consultation with the state building commissioner and the chief of energy and community services, shall adopt regulations, in accordance with the provisions of chapter 35 of title 42, establishing minimum efficiency standards for the types of new products set forth in subparagraph (a) of section 39-27-4. The regulations shall provide for the following minimum efficiency standards:

(1) Automatic commercial ice makers shall meet the energy efficiency requirements shown in table A-7 of section 1605.3 of the California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations as adopted on December 15, 2004.

(2) Commercial clothes washers shall meet the requirements shown in Table P-4 of section 1605.3 of the California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations in effect on December 15, 2004.

(3) Commercial pre-rinse spray valves shall have a flow rate equal to or less than one and six tenths (1.6) gallons per minute.

(4) Commercial refrigerators, freezers and refrigerator-freezers shall meet the minimum efficiency requirements shown in Table A-6 of section 1605.3 of the California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations as adopted on December 15, 2004, except that pulldown refrigerators with transparent doors shall meet a requirement five percent (5%) less stringent than shown in the California regulations.
(5) High-intensity discharge lamp ballasts shall not be designed and marketed to operate a mercury vapor lamp.

(6) Illuminated exit signs shall have an input power demand of five (5) watts or less per illuminated face.

(7) Large packaged air-conditioning equipment shall meet a minimum energy efficiency ratio of:

- (i) Ten (10.0) for air conditioning without an integrated heating component or with electric resistance heating integrated into the unit;
- (ii) Nine and eight tenths (9.8) for air conditioning with heating other than electric resistance integrated into the unit;
- (iii) Nine and five tenths (9.5) for air conditioning with heating other than electric resistance integrated heating component or with electric resistance heating integrated into the unit;
- (iv) Nine and three tenths (9.3) for air conditioning heat pump equipment with heating other than electric resistance integrated into the unit. Large packaged air-conditioning heat pumps shall meet a minimum coefficient of performance in the heating mode of three and two tenths (3.2) (measured at a high temperature rating of forty-seven (47) degrees F db).

(8) Low voltage dry-type distribution transformers shall meet the Class 1 efficiency levels for low voltage distribution transformers specified in Table 4-2 of the "Guide for Determining Energy Efficiency for Distribution Transformers" published by the National Electrical Manufacturers Association (NEMA Standard TP-1-2002).

(9) Metal halide lamp fixtures that operate in a vertical position and are designed to be operated with lamps rated greater than or equal to one hundred fifty (150) watts but less than or equal to five hundred (500) watts shall not contain a probe-start metal halide lamp ballast.

(10) Single-voltage external AC to DC power supplies shall meet the tier one energy efficiency requirements shown in Table U-1 of section 1605.3 of the California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations as adopted on December 15, 2004. This standard applies to single voltage AC to DC power supplies that are sold individually and to those that are sold as a component of or in conjunction with another product. Single-voltage external AC to DC power supplies that are made available by a product manufacturer as service parts or spare parts for its products manufactured prior to January 1, 2008 shall be exempt from this provision.

(11) Torchieres shall not use more than one hundred ninety (190) watts. A torchiere shall be deemed to use more than one hundred ninety (190) watts if any commercially available lamp
or combination of lamps can be inserted in its socket(s) and cause the torchiere to draw more than one hundred ninety (190) watts when operated at full brightness.

(12) Traffic signal modules shall meet the product specification of the "Energy Star Program Requirements for Traffic Signals" developed by the U.S. Environmental Protection Agency that took effect in February 2001 and shall be installed with compatible, electronically-connected signal control interface devices and conflict monitoring systems.

(13) Unit heater shall be equipped with an intermittent ignition device and shall have either power venting or an automatic flue damper.

(b) Not later than June 1, 2007, the commission, in consultation with the state building commissioner and the chief of energy and community services, shall adopt regulations, in accordance with the provisions of chapter 42-35, establishing minimum efficiency standards for the types of new products set forth in paragraph (b) of section 39-27-4. The regulations shall provide for the following minimum efficiency standards.

(1) Bottle-type water dispensers designed for dispensing both hot and cold water shall not have standby energy consumption greater than one and two tenths (1.2) kilowatt-hours per day.

(2) Commercial hot food holding cabinets shall have a maximum idle energy rate of forty (40) watts per cubic foot of interior volume.

(3) (i) Residential furnaces and residential boilers shall comply with the following Annual Fuel Utilization Efficiency (AFUE) and electricity ratio values.

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Minimum AFUE</th>
<th>Maximum electricity ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas and propane-fired furnaces</td>
<td>90%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Oil-fired furnaces&gt;94,000 Btu/hour in capacity</td>
<td>83%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Oil-fired furnaces&gt;94,000 Btu/hour in capacity</td>
<td>83%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Natural gas and oil, and propane-fired hot water residential boilers</td>
<td>84%</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Natural gas, oil, and propane-fired steam residential boilers</td>
<td>82%</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
(ii) The chief of energy and community services shall adopt rules to provide for exemptions from compliance with the foregoing residential furnace or residential boiler AFUE standards at any building, site or location where complying with said standards would be in conflict with any local zoning ordinance, fire code, building or plumbing code or other rule regarding installation and venting of residential furnaces or residential boilers.

(iii) The provisions of this subsection 39-27-5(b) shall be effective upon determination by the chief of energy and community services that the same or substantial corresponding standards have been enacted in two (2) New England states.

(4) (i) State-regulated incandescent reflector lamps shall meet the minimum average lamp efficacy requirements for federally-regulated incandescent reflector lamps contained in 42 U.S.C. section 6295(i)(1)(A).

(ii) The following types of incandescent reflector lamps are exempt from these requirements:

(I) lamps rated at fifty (50) watts or less of the following types: BR30, BR40, ER30 and ER40;

(II) lamps rated at sixty-five (65) watts of the following types: BR30, BR40, and ER40; and

(III) R20 lamps of forty-five (45) watts or less.

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

<table>
<thead>
<tr>
<th>MOTOR Type</th>
<th>Required Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Interior lights: light sources with an efficacy of forty-five (45) lumens per watt or more, including ballast losses (if any). This efficacy standard does not apply to LED light sources until January 1, 2010.</td>
</tr>
<tr>
<td>All</td>
<td>Automatic door closers that firmly close all reach-in doors.</td>
</tr>
<tr>
<td>All</td>
<td>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</td>
</tr>
</tbody>
</table>
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 requirements for
refrigerators)

Condenser fan Electronically commutated
motors of under one motors, Permanently
horsepower split capacitor-type motors

Polyphase motors of one half (1/2)
horsepower or more

Single-phase evaporator fan Electronically commutated
motors of under one horse-
motors
power and less than four

hundred sixty (460) volts

(ii) In addition to the requirements in paragraph (i), walk-in refrigerators and walk-in
freezers with transparent reach-in doors shall meet the following requirements: transparent reach-
door shall be of triple pane glass with either heat-reflective treated glass or gas fill; if the
appliance has an anti-sweat heater without anti-sweat controls, then: the appliance shall have a
total door rail, glass, and frame heater power draw of no more than forty (40) watts if it is a
freezer or seventeen (17) watts if it is a refrigerator per foot of door frame width; and 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 more than forty (40) watts if it is a freezer or seventeen (17) watts if it
is a refrigerator per foot of door frame width, then: 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.

(c) Not later than June 1, 2014, the commission, in consultation with the state building
commissioner and the chief of energy and community services, shall adopt regulations in
accordance with the provisions of chapter 42-35 ("The Administrative Procedures Act"),
establishing minimum efficiency standards for the types of new products set forth in subsection
(e) of section 39-27-4. The regulations shall provide for the following minimum efficiency
standards:
(1) High light output double-ended quartz halogen lamps. - A high light output double-ended quartz halogen lamp sold or offered for sale shall have a minimum efficiency of twenty-seven (27) LPW for lamps with a minimum rated initial lumen value greater than six thousand (6,000) and a maximum initial lumen value of fifteen thousand (15,000); and thirty-four (34) LPW for lamps with a rated initial lumen value greater than fifteen thousand (15,000) and less than forty thousand (40,000);

(2) Portable electric spas shall have a normalized standby power not greater than 5(V^{2/3}) watts where V= the fill volume in gallons (the 2/3 is a superscript: the term means “V to the two thirds power”) as measured in accordance with the test method for portable electric spas contained in section 1604, title 20, California Code of regulations as amended on December 3, 2008.

39-27-6. Implementation. -- (a) No new commercial clothes washer, commercial pre-rinse spray valve, high-intensity discharge lamp ballast, illuminated exit sign, low voltage dry-type distribution transformer, torchiere, traffic signal module, or unit heater after January 1, 2007 may be sold or offered for sale in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in the regulations adopted pursuant to section 39-27-5. No bottle-type-water dispenser, commercial hot food holding cabinet, metal halide lamp fixture, single voltage external AC to DC power supply, state regulated incandescent reflector lamp, or walk-in refrigerator or walk-in freezer manufactured on or after January 1, 2008 may be sold or offered for sale in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in the regulations adopted pursuant to section 39-27-5. No new automatic commercial icemaker, commercial refrigerator, refrigerator-freezer, or freezer or large packaged air conditioning equipment manufactured on or after January 1, 2010 may be sold or offered for sale in the state unless the efficiency of the new product meets or exceeds the efficiency standards set forth in the regulations adopted pursuant to section 39-27-5. High light output double-ended quartz halogen lamps or portable electric spas manufactured on or after January 1, 2015 may be sold or offered for sale in the state, unless the efficiency of the new products meet or exceed the efficiency standards set forth in the regulations adopted pursuant to section 39-27-5.

(b) No later than six (6) months after the effective date of this chapter, the chief of energy and community services, in consultation with the attorney general, shall determine if implementation of state standards for residential furnaces and residential boilers require a waiver from federal preemption. If the chief of energy and community services determines that a waiver from federal preemption is not needed, then no new residential furnace or residential boiler
manufactured on or after January 1, 2008, or the date which is one year after the date of said
determination, if later, may be sold or offered for sale in the state unless the efficiency of the new
product meets or exceeds the efficiency standards set forth in the regulations adopted pursuant to
section 39-27-5. If the chief of energy and community services determines that a waiver from
federal preemption is required, then the chief of energy and community services shall apply for
such waiver within one year of such determination and upon approval of such waiver application,
the applicable state standards shall go into effect at the earliest date permitted by federal law.

(c) One year after the date upon which sale or offering for sale of certain products is
limited pursuant to this section, no new products may be installed for compensation in the state
unless the efficiency of the new product meets or exceeds the efficiency standards set forth in the
regulations adopted pursuant to section 39-27-5.

SECTION 2. This act shall take effect upon passage.
This act would update the "Energy and Consumer Savings Act of 2005" by adding high light output double-ended quartz halogen lamp, tubular quartz and portable electric spa among the products sold or installed in the state for which a minimum efficiency standard must be met.

This act would take effect upon passage.