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STATE OF NEW JERSEY
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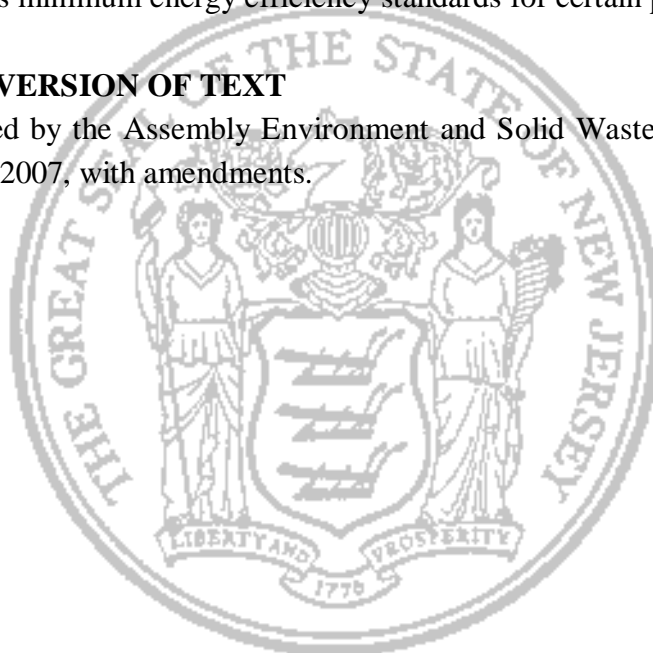
Assemblymen Epps, Gordon, Assemblywomen Evans and Lampitt

SYNOPSIS

Establishes minimum energy efficiency standards for certain products.

CURRENT VERSION OF TEXT

As reported by the Assembly Environment and Solid Waste Committee on December 6, 2007, with amendments.



(Sponsorship Updated As Of: 12/14/2007)

1 AN ACT concerning energy efficiency standards for certain products
2 ², supplementing P.L.1975, c.217 (C.52:27D-119 et seq.),² and
3 amending and supplementing P.L.2005, c.42.
4

5 **BE IT ENACTED** by the Senate and General Assembly of the State
6 of New Jersey:
7

8 1. Section 1 of P.L.2005, c.42 (C.48:3-99) is amended to read as
9 follows:

10 1. As used in **[this act]** P.L.2005, c.42 (C.48:3-99 et seq.):

11 "Air-cooled very large commercial package air conditioning and
12 heating equipment" means air-cooled, water-cooled, evaporative-
13 cooled or water source (but not ground water source), electrically
14 operated, unitary central air conditioners and central air
15 conditioning heat pumps for commercial application that are rated
16 at or above 240,000 Btu per hour and below 760,000 Btu per hour
17 in cooling capacity;

18 "Ballast" means a device used with an electric discharge lamp to
19 obtain necessary circuit conditions (voltage, current and waveform)
20 for starting and operating the lamp;

21 "Board" means the Board of Public Utilities;

22 "Bottle-type water dispenser" means a water dispenser that uses
23 a bottle or reservoir as the source of potable water;

24 "Coefficient of performance" means the ratio of heating capacity
25 in watts to the power input values in watts obtained at standards
26 rating conditions;

27 "Commercial clothes washer" means a soft mount front-loading
28 or soft mount top-loading clothes washer that is designed for use in:
29 applications where the occupants of more than one household will
30 be using it, including multi-family housing common areas and coin
31 laundries; or other commercial applications, if the clothes container
32 compartment is no greater than 3.5 cubic feet for horizontal-axis
33 clothes washers, or no greater than 4.0 cubic feet for vertical-axis
34 clothes washers;

35 "Commercial hot food holding cabinet" means a heated, fully-
36 enclosed compartment with one or more solid or glass doors that is
37 designed to maintain the temperature of hot food that has been
38 cooked in a separate appliance. "Commercial hot food holding
39 cabinet" shall not include heated glass merchandizing cabinets,
40 drawer warmers, or cook-and-hold appliances;

41 "Commercial refrigerator, freezer, and refrigerator-freezer
42 equipment" means refrigeration equipment that: **[a.]** (1) is not a
43 consumer product; **[b.]** (2) operates at a chilled, frozen,
44 combination chilled/frozen, or variable temperature; **[c.]** (3)

EXPLANATION – Matter enclosed in bold-faced brackets **[thus]** in the above bill is not enacted and is intended to be omitted in the law.

Matter underlined thus is new matter.

Matter enclosed in superscript numerals has been adopted as follows:

¹Assembly AEN committee amendments adopted June 14, 2007.

²Assembly AEN committee amendments adopted December 6, 2007.

1 displays or stores merchandise either horizontally, semi-vertically,
2 or vertically; [d.] (4) may have transparent or solid hinged doors or
3 both, sliding doors, a combination of hinged and sliding doors or no
4 doors; [e.] (5) is designed either for pull-down temperature
5 applications or holding temperature applications; and [f.] (6) is
6 connected to a self-contained condensing unit;

7 ¹["Commissioner" means the Commissioner of Environmental
8 Protection;]¹

9 ²["Compact audio product," also known as a mini, mid, micro,
10 or shelf audio system, means an integrated audio system encased in
11 a single housing that includes an amplifier and radio tuner, attached
12 or separable speakers, and can reproduce audio from one or more of
13 the following media: magnetic tape, CD, DVD, or flash memory.
14 "Compact audio product" shall not include products that can be
15 independently powered by internal batteries or that have a powered
16 external satellite antenna, or that can provide a video output signal;

17 "Digital television converter box" means a device that receives
18 and decodes digital broadcast signals for display by an analog
19 television set;

20 "Digital versatile disc" or "DVD" means a laser-encoded plastic
21 medium capable of storing a large amount of digital audio, video,
22 and computer data;

23 "Digital versatile disc player" or "digital versatile disc recorder"
24 means commercially-available electronic products encased in a
25 single housing that includes an integral power supply and for which
26 the sole purpose is the decoding and the production or recording of
27 digitized video signal on a DVD. A "DVD recorder" shall not
28 include models that have an electronic programming guide function
29 that provides an interactive, onscreen menu of television listings,
30 and that downloads program information from the vertical blanking
31 interval of a regular television signal;]²

32 "Electricity ratio" means the ratio of furnace electricity use to
33 total furnace energy use. Electricity ratio = (3.412*Eae)/(1000*Ef
34 + 3.412*Eae) where Eae (average annual auxiliary electrical
35 consumption) and Ef (average annual fuel energy consumption) are
36 defined in Appendix N to subpart B of part 430 of title 10, Code of
37 Federal Regulations, and Ef is expressed in millions of British
38 thermal units (Btus) per year;

39 "Energy efficiency ratio" means the ratio of the cooling capacity
40 in Btu per hour to the power input values in watts obtained at
41 standard rating conditions expressed in Btu per watt-hours;

42 "High-intensity discharge lamp" means a lamp in which light is
43 produced by the passage of an electric current through a vapor or
44 gas and in which the light-producing arc is stabilized by bulb wall
45 temperature and the arc tube has a bulb wall loading in excess of
46 three watts per square centimeter;

1 "Holding temperature applications" means commercial
2 refrigerator, freezer, and refrigerator-freezer equipment that is not
3 designed for "pull-down" temperature applications;

4 "Illuminated exit sign" means an internally illuminated sign that
5 is designed to be permanently fixed in place and used to identify an
6 exit, a light source illuminates the sign or letters from within, and
7 the background of the sign is not transparent;

8 "Low-voltage dry-type distribution transformer" means a
9 transformer with an input voltage of 600 volts or less, is between
10 14kVa and 2,501kVa in size, is air-cooled, and does not use oil as a
11 coolant, and does not include those types of transformers
12 specifically excluded from the low voltage dry-type distribution
13 transformer definition published in the California Code of
14 Regulations, Title 20: Division 2, Chapter 4, Article 4: Appliance
15 Efficiency Regulations, as amended in November 2002;

16 "Metal halide lamp" means a high intensity discharge lamp in
17 which the major portion of the light is produced by radiation of
18 metal halides and their products of dissociation, possibly in
19 combination with metallic vapors;

20 "Metal halide lamp fixture" means a light fixture designed to be
21 operated with a metal halide lamp and a ballast for a metal halide
22 lamp;

23 "Packaged air-conditioning equipment" means air-conditioning
24 equipment that is built as a package and shipped as a whole to end-
25 user sites;

26 ²["Portable electric spa" means a factory-built electric spa or hot
27 tub, supplied with equipment for heating and circulating water;]²

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

32 "Pull-down temperature applications" means commercial
33 refrigerator, freezer, and refrigerator-freezer equipment specifically
34 designed to rapidly reduce all product content temperatures from
35 various ambient temperatures at a minimum reduction rate of 4.3
36 degrees Fahrenheit per hour over a 12-hour period to an overall
37 integrated product temperature equal to 38 degrees Fahrenheit when
38 fully loaded with beverage containers;

39 "Residential boiler" means a self-contained low-pressure
40 appliance for supplying steam or hot water primarily designed for
41 space heating, which uses natural gas, propane, or home heating oil,
42 and which has a heat input rate of less than 300,000 Btu per hour;

43 "Residential furnace" means a self-contained space heater
44 designed to supply heated air through ducts of more than 10 inches
45 length and which utilizes only single-phase electric current, or
46 single-phase electric current or DC current in conjunction with
47 natural gas, propane, or home heating oil, and which: (1) is
48 designed to be the principle heating source for the living space of

1 one or more residences; (2) is not contained within the same cabinet
2 with a central air conditioner whose rated cooling capacity is above
3 65,000 Btu per hour; and (3) has a heat input rate of less than
4 225,000 Btu per hour;

5 ²["Residential pool pump" means a pump used to circulate and
6 filter residential swimming pool water in order to maintain clarity
7 and sanitation;]²

8 "Self-contained condensing unit" means a factory-made
9 assembly of refrigerating components designed to compress and
10 liquefy a specific refrigerant that is an integral part of the
11 refrigerated equipment and consists of one or more refrigerant
12 compressors, refrigerant condensers, condenser fans and motors,
13 and factory supplied accessories;

14 "Single-voltage external AC to DC power supply" means a
15 device that: (1) is designed to convert line voltage AC input into
16 lower voltage DC output; (2) is able to convert to only one DC
17 output voltage at a time; (3) is sold with, or intended to be used
18 with, a separate end-use product that constitutes the primary power
19 load; (4) is contained within a separate physical enclosure from the
20 end-use product; (5) is connected to the end-use product via a
21 removable or hard-wired male/female electrical connection, cable,
22 cord or other wiring; (6) does not have batteries or battery packs,
23 including those that are removable, that physically attach directly to
24 the power supply unit; (7) does not have a battery chemistry or type
25 selector switch and indicator light, or does not have a battery
26 chemistry or type selector switch and a state of charge meter; and
27 (8) has a nameplate output power less than or equal to 250 watts;

28 "State-regulated incandescent reflector lamp" means a lamp, not
29 colored or designed for rough or vibration service applications, with
30 an inner reflective coating on the outer bulb to direct the light, an
31 E26 medium screw base, a rated voltage or voltage range that lies at
32 least partially within 115 to 130 volts, and that falls into either of
33 the following categories: a blown PAR (BPAR), bulged reflector
34 (BR), elliptical reflector (ER) or similar bulb shape with a diameter
35 equal to or greater than 2.25 inches; or a reflector (R), parabolic
36 aluminized reflector (PAR) or similar bulb shape with a diameter of
37 2.25 to 2.75 inches, inclusive;

38 "Temperature reset" means an automatic means for adjusting the
39 temperature of the water supplied by a residential boiler such that
40 an incremental change in inferred heat load ¹or hot water load¹
41 produces a corresponding incremental change in supply water
42 temperature. When there is no inferred heat load ¹or hot water
43 load¹, such an automatic means adjusts the supply water
44 temperature to no more than 140° Fahrenheit (F);

45 "Torchiere lighting fixture" means a portable electric lighting
46 fixture with a reflector bowl directing light upward to provide
47 indirect illumination;

1 "Traffic signal module" means a standard 8-inch (200 mm) or
2 12-inch (300 mm) round traffic signal indication, consisting of a
3 light source, lens and all parts necessary for operation, and
4 communicates movement messages to drivers through red, amber
5 and green colors, and may include arrow modules in the same
6 colors to indicate turning movements;

7 "Transformer" means a device consisting essentially of two or
8 more coils of insulated wire that transfers alternating current by
9 electromagnetic induction from one coil to another in order to
10 change the original voltage or current value;

11 "Unit heater" means a self-contained fan-type heater that uses
12 natural gas, propane, or fuel oil and is designed to be installed
13 within a heated space. Unit heaters include an apparatus or
14 appliance to supply heat, and a fan for circulating air over a heat
15 exchange surface, all enclosed in a common casing. Unit heaters do
16 not include "warm air furnaces" as specifically defined under the
17 federal Energy Policy Act of 1992, Pub.L.102-486; **[and]**

18 "Walk-in refrigerator and freezer" means a refrigerated space
19 that can be walked into and has a total chilled and frozen storage
20 area of less than 3,000 square feet, operates at chilled (above 32°F)
21 or frozen (at or below 32°F) temperature, and is connected to a self-
22 contained or remote condensing unit. "Walk-in refrigerator and
23 freezer" excludes (1) refrigerated warehouses, and (2) products
24 designed and marketed exclusively for medical, scientific or
25 research purposes; and

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

29 (cf: P.L.2005, c.42, s.1)

30

31 2. Section 2 of P.L.2005, c.42 (C.48:3-100) is amended to read
32 as follows:

33 2. a. The provisions of **[this act]** P.L.2005, c.42 (C.48:3-99 et
34 seq.) shall apply to the testing, certification and enforcement of
35 efficiency standards for the following types of new products sold,
36 offered for sale or installed in the State:

- 37 (1) commercial clothes washers;
- 38 (2) commercial refrigerators and freezers;
- 39 (3) illuminated exit signs;
- 40 (4) air- cooled very large commercial package air conditioning
41 and heating equipment;
- 42 (5) low-voltage dry-type distribution transformers;
- 43 (6) torchiere lighting fixtures;
- 44 (7) traffic signal modules; and
- 45 (8) unit heaters.

46 b. The provisions of P.L.2005, c.42 (C.48:3-99 et seq.) shall also
47 apply to the testing, certification and enforcement of efficiency

1 standards for the following types of new products sold, offered for
2 sale or installed in the State:
3 (1) bottle-type water dispensers;
4 (2) commercial hot food holding cabinets;
5 (3) ²compact audio products;
6 (4) digital versatile disc players and digital versatile disc
7 recorders;
8 (5) ²metal halide lamp fixtures;
9 ²(6) portable electric spas;
10 (7) ²(4) residential furnaces and residential boilers;
11 ²(8) residential pool pumps;
12 (9) ²(5) single-voltage external AC to DC power supplies;
13 ²(10) (6) State-regulated incandescent reflector lamps; ¹and¹
14 ²(11) (7) walk-in refrigerators and freezers ¹; and
15 (12) any other products as may be designated by the board in
16 accordance with section 5 of P.L. , c. (C.) (pending before the
17 Legislature as this bill)] .

18 The board may propose to the President of the Senate and the
19 Speaker of the General Assembly, and the chairs of the Senate
20 Environment Committee and the Assembly Environment and Solid
21 Waste Committee, or the respective successor committees, every
22 three years a list of new standards for products not specifically
23 listed in this subsection. When considering new products to
24 propose to the President of the Senate, the Speaker of the General
25 Assembly, and the chairs of the Senate Environment Committee and
26 the Assembly Environment and Solid Waste Committee, the board
27 shall determine that any new or increased efficiency standard for a
28 certain product would serve to promote energy conservation in the
29 State, be life cycle cost effective for consumers who purchase and
30 use the new products, and be technologically feasible and
31 economically justified.¹

32 c. The provisions of **[this act]** P.L.2005, c.42 (C.48:3-99 et
33 seq.) shall not apply to:

- 34 (1) new products manufactured in the State and sold outside the
35 State;
36 (2) new products manufactured outside the State and sold at
37 wholesale inside the State for final retail sale and installation
38 outside the State;
39 (3) products installed in mobile manufactured homes at the time
40 of construction; or
41 (4) products designed expressly for installation and use in
42 recreational vehicles.

43 (cf P.L.2005, c.42, s.2)

44
45 3. Section 3 of P.L.2005, c.42 (C.48:3-101) is amended to read
46 as follows:

1 3. Within one year of the effective date of **[this act]** P.L.2005,
 2 c.42 (C.48:3-99 et seq.), the Board of Public Utilities ¹and the
 3 Commissioner of Community Affairs^{1 2}**[**, in consultation with the
 4 **Commissioner of Environmental Protection,**²**]** shall adopt, pursuant
 5 to the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-
 6 1 et seq.), rules and regulations establishing minimum energy
 7 efficiency standards for the types of new products set forth in
 8 subsection a. of section 2 of [this act] P.L.2005, c.42 (C.48:3-100).
 9 ¹Rules and regulations adopted by the Commissioner of Community
 10 Affairs pursuant to the "State Uniform Construction Code Act,"
 11 P.L.1975, c.217 (C.52:27D-119 et seq.) and P.L.2005, c.42 (C.48:3-
 12 99 et seq.) shall require that all such new products, when used in
 13 construction or installed in a building or structure, conform to the
 14 minimum efficiency standards set forth in this section.¹ The rules
 15 and regulations ¹adopted pursuant to this section¹ shall provide for
 16 the following minimum efficiency standards:

17 a. Commercial clothes washers shall meet the ¹following¹
 18 requirements ¹**[**set forth in Table P-3 of section 1605.3, California
 19 Code of Regulations, Title 20: Division 2, Chapter 4, Article 4,
 20 Appliance Efficiency Regulations, provided that such washers shall
 21 not be required to meet the modified energy factor requirements
 22 until 2007 and shall not be required to meet the water factor
 23 requirements until 2010; ²**]** ²provided that such washers shall not be
 24 required to meet the modified energy factor requirements until 2007
 25 and shall not be required to meet the water factor requirements until
 26 2010² ;

27
 28

Standards for Commercial Clothes Washers			
<u>Appliance</u>	<u>Clothes Container Component Capacity (ft³)</u>	<u>Minimum Modified Energy Factor Effective January 1, 2007</u>	<u>Minimum Water Factor Effective January 1, 2010</u>
<u>Front-loading washers</u>	<u><3.5ft.³</u>	<u>1.26</u>	<u>9.5</u>
<u>Top-loading washers</u>	<u><1.6ft.³</u>	<u>0.65</u>	<u>9.5</u>
<u>Top-loading washers</u>	<u>>=1.65ft³ and <4ft³</u>	<u>1.26</u>	<u>9.5</u>

29
 30 Commercial top-loading semi-automatic clothes washers and
 31 commercial suds-savings clothes washers manufactured on or after
 32 January 1, 2005 shall have an unheated rinse option.¹

33 b. (1) Each self-contained commercial refrigerator, freezer, and
 34 refrigerator-freezer equipment designed for holding temperature

1 applications sold on or after January 1, 2010, shall meet the
2 following standards:

3 (a) Refrigerators with solid doors: 0.10 times V plus 2.04
4 kilowatt hours per day;

5 (b) Refrigerators with transparent doors: 0.12 times V plus 3.34
6 kilowatt hours per day;

7 (c) Freezers with solid doors: 0.40 times V plus 1.38 kilowatt
8 hours per day;

9 (d) Freezers with transparent doors: 0.75 times V plus 4.10
10 kilowatt hours per day;

11 (e) Refrigerators/freezers with solid doors: the greater of 0.27
12 times AV minus 0.71 kilowatt hours per day or 0.70 kilowatt hours
13 per day; and

14 (f) Refrigerators/freezers with separate refrigeration systems:
15 the sum of the standard applicable to the refrigerator and the
16 standard applicable to the freezer.

17 For refrigerators, freezers, and refrigerator-freezers with doors,
18 the rating temperatures shall be the integrated average temperature
19 of 38 degrees Fahrenheit (plus or minus two degrees Fahrenheit) for
20 refrigerator compartments and zero degrees Fahrenheit (plus or
21 minus two degrees Fahrenheit for freezer compartments).

22 (2) Each self-contained commercial refrigerator, freezer, and
23 refrigerator-freezer equipment designed for pull-down temperature
24 applications sold on or after January 1, 2010, shall meet the
25 following standards:

26 (a) Refrigerators with transparent doors: 0.126 times V plus 3.51
27 kilowatt hours per day; and

28 (b) Freezers with transparent doors 0.788 times V plus 4.3
29 kilowatt hours per day.

30 As used in this subsection, "V" means the chilled or frozen
31 compartment volume in cubic feet as defined in the Association of
32 Home Appliance Manufacturers Standard HRF1-1979; "integrated
33 average temperature" means the average temperature of all test
34 package measurements taken during the test; and "AV" means the
35 adjusted volume in cubic feet defined as 1.63 times the frozen
36 temperature compartment volume in cubic feet plus the chilled
37 temperature compartment volume in cubic feet;

38 c. Illuminated exit signs shall meet the requirements of the
39 "Energy Star Program Requirements for Exit Signs" developed by
40 the United States Environmental Protection Agency;

41 d. Each air-cooled very large commercial package air
42 conditioning and heating equipment sold on or after January 1,
43 2010, shall meet the following standards:

44 (1) The minimum energy efficiency ratio of air-cooled central air
45 conditioners at or above 240,000 Btu per hour in cooling capacity
46 and less than 760,000 Btu per hour in cooling capacity shall be 10.0
47 for equipment with no heating or electric resistance heating and 9.8
48 for equipment with all other heating system types that are integrated

1 into the equipment at a standard rating of 95 degrees Fahrenheit dry
2 bulb.

3 (2) The minimum energy efficiency ratio of air-cooled central air
4 conditioner heat pumps at or above 240,000 Btu per hour in cooling
5 capacity and less than 760,000 Btu per hour in cooling capacity
6 shall be 9.5 for equipment with no heating or electric resistance
7 heating and 9.3 for equipment with all other heating system types
8 that are integrated into the equipment at a standard rating of 95
9 degrees Fahrenheit dry bulb.

10 (3) The minimum coefficient of performance in the heating mode
11 of air-cooled central air conditioning heat pumps at or above
12 240,000 Btu per hour in cooling capacity and less than 760,000 Btu
13 per hour in cooling capacity shall be 3.2 at a high temperature
14 rating of 47 degrees Fahrenheit dry bulb;

15 e. Low-voltage dry type distribution transformers shall meet or
16 exceed the energy efficiency values shown in Table 4-2 of National
17 Electrical Manufacturers Association Standard TP-1-1996;

18 f. Torchiere lighting fixtures shall not consume more than 190
19 watts and shall not be capable of operating with lamps that total
20 more than 190 watts;

21 g. Traffic signal modules shall meet the product specifications
22 of the "Energy Star Program Requirements for Traffic Signals"
23 developed by the United States Environmental Protection Agency;
24 and

25 h. Unit heaters shall be equipped with an intermittent ignition
26 device and shall have either power venting or an automatic flue
27 damper.

28 (cf: P.L.2005, c.42, s.3)

29

30 4. (New section) Within one year of the effective date of
31 P.L. , c. (C.) (pending before the Legislature as this bill), the
32 Board of Public Utilities ¹and the Commissioner of Community
33 Affairs¹ , in consultation with ²[Commissioner of Environmental
34 Protection and]² any other appropriate State agencies, shall adopt,
35 pursuant to the "Administrative Procedure Act," P.L.1968, c.410
36 (C.52:14B-1 et seq.), rules and regulations establishing minimum
37 efficiency standards for the types of new products set forth in
38 subsection b. of section 2 of P.L.2005, c.42 (C.48:3-100). ¹Rules
39 and regulations adopted by the Commissioner of Community
40 Affairs pursuant to the "State Uniform Construction Code Act,"
41 P.L.1975, c.217 (C.52:27D-119 et seq.) and P.L.2005, c.42 (C.48:3-
42 99 et seq.) shall require that all such new products, when used in
43 construction or installed in a building or structure, conform to the
44 minimum efficiency standards set forth in this section.¹ The rules
45 and regulations ¹adopted pursuant to this section¹ shall provide for
46 the following minimum efficiency standards:

1 a. Bottle-type water dispensers designed for dispensing both hot
 2 and cold water shall not have standby energy consumption greater
 3 than 1.2 kilowatt-hours per day, as measured in accordance with the
 4 test criteria contained in version 1 of the United States
 5 Environmental Protection Agency's "Energy Star Program
 6 Requirements for Bottled Water Coolers," except units with an
 7 integral, automatic timer shall not be tested using Section D, "Timer
 8 Usage," of the test criteria;

9 b. Commercial hot food holding cabinets shall have a maximum
 10 idle energy rate of 40 watts per cubic foot of interior volume, as
 11 determined by the "idle energy rate-dry test" in ASTM F2140-01,
 12 "Standard Test Method for Performance of Hot Food Holding
 13 Cabinets" published by ASTM International. Interior volume shall
 14 be measured in accordance with the method shown in the United
 15 States Environmental Protection Agency's "Energy Star Program
 16 Requirements for Commercial Hot Food Holding Cabinets" in
 17 effect on August 15, 2003;

18 c. ²[Compact audio products shall not use more than 2 watts in
 19 standby-passive mode for those without a permanently illuminated
 20 clock display and 4 watts in standby-passive mode for those with a
 21 permanently illuminated clock display, as measured in accordance
 22 with International Electrotechnical Commission (IEC) test method
 23 62087:2002(E), "Methods of measurement for the power
 24 consumption of audio, video, and related equipment";

25 d. Digital versatile disc players and digital versatile disc
 26 recorders shall not use more than 3 watts in standby passive mode,
 27 as measured in accordance with International Electrotechnical
 28 Commission (IEC) test method 62087:2002(E), "Methods of
 29 measurement for the power consumption of audio, video, and
 30 related equipment";

31 e.]² Metal halide lamp fixtures designed to be operated with
 32 lamps rated greater than or equal to 150 watts but less than or equal
 33 to 500 watts shall not contain a probe-start metal halide ballast;

34 ²[f. Portable electric spas shall not have a standby power greater
 35 than $5(V/3)$ Watts where V=the total volume in gallons, as
 36 measured pursuant to the test method for portable electric spas
 37 contained in Section 1604 of title 20, California Code of
 38 Regulations;

39 g.] d.² (1) Residential furnaces and residential boilers shall
 40 comply with the following Annual Fuel Utilization Efficiency
 41 (AFUE), electricity ratio and design requirements:

42

Product Type	Minimum AFUE	Maximum Electricity Ratio	Design Requirements
Natural gas- and propane-fired furnaces	90%	2.0%	none

Oil-fired furnaces ≥ 94,000 Btu/hour in capacity	1 [None] <u>Federal minimum</u> ¹	2.0%	none
Oil-fired furnaces < 94,000 Btu/hour in capacity	1 [None] <u>Federal minimum</u> ¹	2.3%	none
Natural gas- and propane-fired hot water residential boilers	82%	Not applicable	No standing pilot Temperature reset required
Natural gas- and propane-fired steam residential boilers	80%	Not applicable	No standing pilot
Oil-fired hot water residential boilers	84%	Not applicable	Temperature reset required
Oil-fired steam residential boilers	82%	Not applicable	none

1 ~~2~~; and²

2 (2) Residential boilers shall only be operable if the temperature
3 reset is installed. AFUE shall be measured in accordance with the
4 federal test method for measuring the energy consumption of
5 furnaces and boilers contained in Appendix N to subpart B of part
6 430 of title 10, Code of Federal Regulations ²~~1~~; and

7 (3) ~~2~~ ¹~~1~~ **[The board may adopt rules to exempt compliance with**
8 **the forgoing residential furnace or residential boiler AFUE**
9 **standards at any building, site or location where complying with**
10 **those standards would be in conflict with any local zoning**
11 **ordinance, building or plumbing code, or other rule regarding**
12 **installation and venting of residential furnaces or residential**
13 **boilers;]**

14 If the cost of installation of a natural gas- or propane-fired
15 furnace cannot be recovered within ²~~10~~ seven² years, that furnace
16 shall not be required to meet the 90% minimum AFUE standard
17 pursuant to this section.¹

18 ²~~h.~~ (1) Residential pool pump motors may not be split-phase or
19 capacitor start-induction run type motors; and

20 (2) Pool pump motors with a capacity of one horsepower or more
21 shall have the capability of operating at two or more speeds with a
22 low speed having a rotation rate that is no more than one-half of the
23 motor's maximum rotation rate. Pool pump motor controls shall
24 have the capability of operating the pool pump at least two speeds.
25 The default circulation speed shall be the lowest speed, with a high
26 speed override capability being for a temporary period not to
27 exceed one normal cycle;

1 i.] e.² (1) Single-voltage external AC to DC power supplies
 2 shall meet the energy efficiency requirements in the following
 3 table:
 4

Nameplate Output Power	Minimum Efficiency in Active Mode
0 to < 1 watt	0.49 * Nameplate Output
≥1 watt and ≤49 watts	0.09*Ln (Nameplate Output Power) + 0.49
>49 watts	0.84
Maximum Energy Consumption in No-Load Mode	
0 to < 10 watts	0.5 watts
≥10 watts and ≤250 watts	0.75 watts
*Where Ln (Nameplate Output) = Natural Logarithm of the Nameplate Output Expressed in Watts.	

5
 6 (2) This standard applies to single voltage AC to DC power
 7 supplies that are sold individually and to those that are sold as a
 8 component of or in conjunction with another product;

9 (3) Single voltage external AC to DC power supplies that require
 10 United States Food and Drug Administration listing and approval as
 11 a medical device are exempt from the requirements of this
 12 subsection;

13 (4) Single voltage external AC to DC power supplies made
 14 available by a manufacturer directly to a consumer or to a service or
 15 repair facility after and separate from the original sale of the
 16 product requiring the power supply as a service part or spare part
 17 shall not be required to meet the standards of this subsection until
 18 January 1, 2013; and

19 (5) For purposes of this subsection, the efficiency of single-
 20 voltage external AC to DC power supplies shall be measured in
 21 accordance with ¹["the test methodology specified by the United
 22 States Environmental Protection Agency's Energy Star Program,
 23 "Test Method for Calculating the Energy Efficiency of Single-
 24 Voltage External AC-DC and AC-AC Power Supplies (August 11,
 25 2004)" except that tests shall be conducted at 115 volts only]
 26 applicable federal standards¹ ;

27 ²["j.] f.² (1) State-regulated incandescent reflector lamps shall
 28 meet the minimum average lamp efficacy requirements for
 29 federally-regulated incandescent reflector lamps contained in 42
 30 U.S.C. s.6295 (i)(1)(A); and

31 (2) The following types of incandescent reflector lamps are
 32 exempt from these requirements:

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

3 (b) lamps rated at 65 watts of the following types: BR30, BR40,
4 and ER40; and

5 (c) R20 lamps of 45 watts or less;

6 ²[k.] g.² Walk-in refrigerators and freezers shall meet the
7 following requirements:

8 (1) All walk-in refrigerators and freezers shall have:

9 (a) automatic door closers that firmly close all reach-in doors and
10 that firmly close walk-in doors no wider than 3 feet 9 inches and no
11 higher than 6 feet 11 inches that have been closed to within one
12 inch of full closure;

13 (b) wall, ceiling and door insulation of at least R-28 for
14 refrigerators. Door insulation requirements shall not apply to
15 glazed portions of doors, nor to structural members;

16 (c) wall, ceiling, and door insulation of at least R-32 for freezers.
17 Door insulation requirements shall not apply to glazed portions of
18 doors, or to structural members;

19 (d) floor insulation of at least R-28 for freezers;

20 (e) for single-phase evaporator fan motors of under one
21 horsepower and less than 460 volts, electronically commutated
22 motors. The board may delay implementation of this subparagraph
23 upon a determination that such motors are only available from one
24 manufacturer or in insufficient quantities to serve the needs of the
25 walk-in industry for evaporator-fan applications;

26 (f) for condenser fan motors of under one horsepower, either
27 electronically commutated motors, permanent split capacitor-type
28 motors, or polyphase motors of one-half horsepower or more; and

29 (g) for all interior lights, light sources with an efficacy of 40
30 lumens per watt or more, including ballast losses, if any. Light
31 sources with an efficacy of 40 lumens per watt or less, including
32 ballast losses, if any, may be used in conjunction with a timer or
33 device that turns off the lights within 15 minutes of when the walk-
34 in is not occupied;

35 (2) In addition to the requirements in subparagraph (a) of
36 paragraph (1) of this subsection, walk-in refrigerators and freezers
37 with transparent reach-in doors shall meet the following
38 requirements:

39 (a) transparent reach-in doors and windows in walk-in doors for
40 walk-in freezers shall be of triple-pane glass with either heat-
41 reflective treated glass or gas fill;

42 (b) transparent reach-in doors and windows in walk-in doors for
43 walk-in refrigerators shall be either double-pane glass with heat-
44 reflective treated glass and gas fill or triple pane glass with either
45 heat-reflective treated glass or gas fill;

46 (c) if the appliance has an anti-sweat heater without anti-sweat
47 heat controls, then the appliance shall have a total door rail, glass,
48 and frame heater power draw of no more than 7.1 watts per square

1 foot of door opening for freezers and 3.0 watts per square foot of
2 door opening for refrigerators; and

3 (d) if the appliance has an anti-sweat heater with anti-sweat heat
4 controls, and the total door rail, glass, and frame heater power draw
5 is more than 7.1 watts per square foot of door opening for freezers
6 and 3.0 watts per square foot of door opening for refrigerators, then
7 the anti-sweat heat controls shall reduce the energy use of the anti-
8 sweat heater in an amount corresponding to the relative humidity in
9 the air outside the door or to the condensation on the inner glass
10 pane.

11

12 5. (New section) The Board of Public Utilities ¹and the
13 Commissioner of Community Affairs¹ ²[, in consultation with the
14 Commissioner of Environmental Protection,]² may establish,
15 pursuant to the "Administrative Procedure Act," P.L.1968, c.410
16 (C.52:14B-1 et seq.), increased efficiency standards on the products
17 listed in section 3 of P.L.2005, c.42 (C.48:3-101) and section 4 of
18 P.L. , c. (C.) (pending before the Legislature as this bill).
19 ²[The board ¹and the Commissioner of Community Affairs¹, in
20 consultation with the ¹[commissioner] Commissioner of
21 Environmental Protection¹ , also may, pursuant to the
22 "Administrative Procedure Act," establish standards for products
23 not specifically listed in section 3 of P.L.2005, c.42 (C.48:3-101)
24 and section 4 of P.L. , c. (C.) (pending before the Legislature
25 as this bill). In considering such new or amended standards, the
26 board ¹and the Commissioner of Community Affairs¹, in
27 consultation with the ¹[commissioner] Commissioner of
28 Environmental Protection¹ , shall set efficiency standards upon a
29 determination that increased efficiency standards would serve to
30 promote energy conservation in the State and would be cost-
31 effective for consumers who purchase and use such new products,
32 provided no new or increased efficiency standards shall become
33 effective within one year following the adoption of any amended
34 rules or regulations establishing the increased efficiency standards.
35 ¹Rules and regulations adopted by the Commissioner of Community
36 Affairs pursuant to the "State Uniform Construction Code Act,"
37 P.L.1975, c.217 (C.52:27D-119 et seq.) and P.L.2005, c.42 (C.48:3-
38 99 et seq.) shall require that all such new products, when used in
39 construction or installed in a building or structure, conform to any
40 such new or increased efficiency standards that may be
41 applicable.¹² The board may apply for a waiver of federal
42 preemption in accordance with federal procedures set forth at 42
43 U.S.C. s.6297 (d) for those products regulated by the federal
44 government.

45

46 6. Section 4 of P.L.2005, c.42 (C.48:3-102) is amended to read
47 as follows:

1 4. a. Except as provided in subsection c. of this section, within
2 two years of the effective date of **[this act]** P.L.2005, c.42 (C.48:3-
3 99 et seq.), no new product of a type set forth in subsection a. of
4 section 2 of **[this act]** P.L.2005, c.42 (C.48:3-100) may be sold or
5 offered for sale in the State unless the energy efficiency of the new
6 product meets or exceeds the efficiency standards set forth in the
7 rules and regulations adopted pursuant to section 3 of **[this act]**
8 P.L.2005, c.42 (C.48:3-101) . ¹The sale or offering for sale of any
9 new product in violation of this section, if there is no regular or
10 intended use of the product other than in building construction or
11 installation in a building or structure, or if the product is publicly
12 advertised or otherwise promoted for use in building construction or
13 installation in a building or structure, shall constitute a violation of
14 paragraph (5) of subsection a. of section 20 of P.L.1975, c.217
15 (C.52:27D-138).¹

16 b. Except as provided in subsection c. of this section, within
17 three years of the effective date of **[this act]** P.L.2005, c.42
18 (C.48:3-99 et seq.) , no new product for a type set forth in
19 subsection a. of section 2 of **[this act]** P.L.2005, c.42 (C.48:3-100)
20 may be installed in the State unless the energy efficiency of the new
21 product meets or exceeds the efficiency standards set forth in the
22 rules and regulations adopted pursuant to section 3 of **[this act]**
23 P.L.2005, c.42 (C.48:3-101) .

24 c. The standards for commercial refrigerator, freezer, and
25 refrigerator-freezer equipment and for air-cooled very large
26 commercial package air conditioning and heating equipment
27 become effective for equipment sold or installed in this State on or
28 after January 1, 2010.

29 d. ²**[(1)]**² ¹[On or after June 1, 2009] ²[Beginning one year
30 after the date of enactment of P.L. , c. (C.) (pending before the
31 Legislature as this bill)]¹ , no new] Any² product of a type set forth
32 in subsection b. of section 2 of ¹[P.L. , c. (C.) (pending
33 before the Legislature as this bill)] P.L.2005, c.42 (C.48:3-100)¹
34 ²[may be]² sold or offered for sale in the State ²[unless the
35 efficiency of the new product meets or exceeds] and manufactured
36 after January 1, 2009 shall meet or exceed² the efficiency standards
37 set forth in the rules and regulations adopted pursuant to section 4
38 of P.L. , c. (C.) (pending before the Legislature as this bill).

39 ²[(2) Notwithstanding the provisions of paragraph (1) of this
40 subsection, residential pool pumps that do not meet the efficiency
41 standards contained in paragraph (2) of subsection h. of section 4 of
42 P.L. , c. (C.) (pending before the Legislature as this bill) may
43 be sold or installed in the State until June 1, 2010.]²

44 e. No later than six months after the date of enactment of
45 P.L. , c. (C.) (pending before the Legislature as this bill), the
46 ²Board of Public Utilities and the² ¹[commissioner] Commissioner

1 of Community Affairs¹ , in consultation with the Attorney General,
 2 shall determine if implementation of State standards for residential
 3 furnaces and residential boilers requires a waiver from federal
 4 preemption. The ²board and the² ¹【commissioner】 Commissioner
 5 of Community Affairs¹ shall make separate determinations for each
 6 part of the State standards including minimum AFUE, maximum
 7 electricity ratio and any prescriptive requirements. If the ²board
 8 and the² ¹【commissioner】 Commissioner of Community Affairs¹
 9 ²【determines】 determine² that a waiver from federal preemption is
 10 not needed for any part, then on or after January 1, 2009, or the date
 11 which is one year after the date of that determination, if later, no
 12 new residential furnace or residential boiler may be sold or offered
 13 for sale in the State unless the efficiency of the new product meets
 14 or exceeds the applicable non-preempted part of the efficiency
 15 standards set forth in the rules and regulations adopted pursuant to
 16 section 5 of P.L. , c. (C.) (pending before the Legislature as
 17 this bill). If the ²board and the² ¹【commissioner】 Commissioner of
 18 Community Affairs¹ ²【determines】 determine² that a waiver from
 19 federal preemption is required for all or part of the State standards,
 20 then the ²board and the² commissioner shall apply for such waiver
 21 within one year of that determination. Upon approval of the waiver
 22 application, the applicable State standards shall go into effect at the
 23 earliest date permitted by federal law.

24 ²【f. On or after June 1, 2010, no new product, except for
 25 residential pool pumps, of a type set forth in subsection b. of
 26 section 2 of P.L.2005, c.42 (C.48:3-100) may be installed in the
 27 State unless the energy efficiency of the new product meets or
 28 exceeds the efficiency standards set forth in the rules and
 29 regulations adopted pursuant to section 4 of P.L. , c. (C.)
 30 (pending before the Legislature as this bill).

31 g. On or after June 1, 2011, no new residential pool pumps may
 32 be installed in the State unless the energy efficiency of the
 33 residential pool pump meets or exceeds the efficiency standards set
 34 forth in the rules and regulations adopted pursuant to section 4 of
 35 P.L. , c. (C.) (pending before the Legislature as this bill).】²
 36 (cf: P.L.2005, c.42, s.4)

37
 38 7. Section 5 of P.L.2005, c.42 (C.48:3-103) is amended to read
 39 as follows:

40 5. a. The Board of Public Utilities ¹and the Commissioner of
 41 Community Affairs¹ ²【, in consultation with the Commissioner of
 42 Environmental Protection,】² shall adopt, pursuant to the
 43 "Administrative Procedure Act," procedures for testing the energy
 44 efficiency of the new products covered by section 2 of 【this act】
 45 P.L.2005, c.42 (C.48:3-100) if such procedures are not ¹already¹
 46 provided for in the ¹【standard building code of New Jersey】 State

1 Uniform Construction Code adopted pursuant to P.L.1975, c.217
2 (C.52:27D-119 et seq.)¹ . The board ¹and the Commissioner of
3 Community Affairs¹ shall use United States Department of Energy
4 approved test methods, or in the absence of such test methods, other
5 appropriate nationally recognized test methods. The manufacturers
6 of such products shall cause samples of such appliances to be tested
7 in accordance with the test procedures adopted pursuant to this
8 section or those specified in the ¹[standard building code of New
9 Jersey] State Uniform Construction Code¹ .

10 b. Manufacturers of new products covered by section 2 of [this
11 act] P.L.2005, c.42 (C.48:3-100), ¹[except for single voltage
12 external AC to DC power supplies, walk-in refrigerators, and walk-
13 in freezers,]¹ shall certify to the board ¹and to the Commissioner of
14 Community Affairs¹ that such products are in compliance with the
15 provisions of [this act] P.L.2005, c.42 (C.48:3-99 et seq.) ¹or with
16 applicable preemptive federal standards, as the case may be¹ . The
17 board ¹and the Commissioner of Community Affairs¹ ²[, in
18 consultation with the ¹[commissioner] Commissioner of
19 Environmental Protection¹ ,]² shall adopt, pursuant to the
20 "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et
21 seq.), rules and regulations governing the certification of such
22 products and may propose to work in coordination with the
23 certification program of other states with similar standards.

24 c. The board may test products covered by section 2 of [this
25 act] P.L.2005, c.42 (C.48:3-100) using an accredited testing
26 facility. If products so tested are found not to be in compliance
27 with the minimum efficiency standards established under section 3
28 of [this act] P.L.2005, c.42 (C.48:3-101) and section 4 of P.L. ,
29 c. (C.) (pending before the Legislature as this bill) , the
30 ¹[commissioner] board¹ shall: (1) charge the manufacturer of such
31 products for the cost of product purchase and testing [,] ; and (2)
32 ¹in cooperation with the Commissioner of Community Affairs
33 ²[and the Commissioner of Environmental Protection]² ,¹ provide
34 information to the public on products found not to be in compliance
35 with the standards.

36 d. Testing procedures for commercial refrigerator, freezer, and
37 refrigerator-freezer equipment and for air-cooled very large
38 commercial package air conditioning and heating equipment shall
39 be as follows:

40 (1) commercial refrigerator, freezer, and refrigerator-freezer
41 equipment shall be tested in accordance with the American Society
42 of Heating, Refrigeration, and Air Conditioning Engineers
43 (ASHRAE) Standard 117-2002 - "Method of Testing Closed
44 Refrigerators" (ANSI Approved) [.] ;

45 (2) air-cooled very large commercial package air conditioning
46 and heating equipment shall be tested in accordance with Air-

1 Conditioning and Refrigeration Institute Standard 340/360-2000
2 "Commercial and Industrial Unitary Air-Conditioning and Heat
3 Pump Equipment" (ANSI Approved).
4 (cf: P.L.2005, c.42, s.5)

5
6 8. Section 6 of P.L.2005, c.42 (C.48:3-104) is amended to read
7 as follows:

8 6. The Board of Public Utilities ¹and the Commissioner of
9 Community Affairs^{1 2}], in consultation with the Commissioner of
10 Environmental Protection,² may cause periodic inspections to be
11 made of distributors or retailers of new products covered by section
12 2 of [this act] P.L.2005, c.42 (C.48:3-100) in order to determine
13 compliance with the provisions of [this act] P.L.2005, c.42
14 (C.48:3-99 et seq.). The ¹[board shall also work with the
15 Commissioner of Community Affairs to coordinate the inspections
16 for new products that are also covered by the standard building code
17 of New Jersey] sale or offering for sale of any new product in
18 violation of P.L.2005, c.42 (C.48:3-99 et seq.), if there is no regular
19 or intended use of the product other than in building construction or
20 installation in a building or structure, or if the product is publicly
21 advertised or otherwise promoted for use in building construction or
22 installation in a building or structure, shall constitute a violation of
23 paragraph (5) of subsection a. of section 20 of P.L.1975, c.217
24 (C.52:27D-138¹ .
25 (cf: P.L.2005, c.42, s.6)

26
27 9. Section 7 of P.L.2005, c.42 (C.48:3-105) is amended to read
28 as follows:

29 7. a. The Board of Public Utilities ²], in consultation with the
30 Commissioner of Environmental Protection,² shall cause
31 investigations to be made of complaints received concerning
32 violations of [this act] P.L.2005, c.42 (C.48:3-99 et seq.) and shall
33 report the results of such investigations to the Attorney General
34 ¹and the Commissioner of Community Affairs¹ . The Attorney
35 General may institute proceedings to enforce the provisions of [this
36 act] P.L.2005, c.42 (C.48:3-99 et seq.). ¹In addition, the
37 Commissioner of Community Affairs shall enforce the provisions of
38 P.L.2005, c.42 (C.48:3-99 et seq.) pursuant to the "State Uniform
39 Construction Code Act," P.L.1975, c.217 (C.52:27D-119 et seq.)
40 with regard to any violation involving building construction or
41 installation of any equipment or device in a building or structure.¹

42 b. A manufacturer, distributor or retailer who violates any
43 provision of [this act] P.L.2005, c.42 (C.48:3-99 et seq.) shall be
44 issued a warning by the board for any first violation. Repeat
45 violations shall be subject to a civil penalty of not more than \$250.
46 Each violation of [this act] P.L.2005, c.42 (C.48:3-99 et seq.) shall

1 constitute a separate offense, and each day that the violation
2 continues shall constitute a separate offense. Penalties assessed
3 under **[this act]** P.L.2005, c.42 (C.48:3-99 et seq.) are in addition to
4 costs assessed pursuant to subsection c. of section 5 of **[this act]**
5 P.L.2005, c.42 (C.48:3-103) ¹and to penalties assessed pursuant to
6 the “State Uniform Construction Code Act,” P.L.1975, c.217
7 (C.52:27D-119 et seq.)¹ .

8 (cf: P.L.2005, c.42, s.7)

9

10 ²10. (New section) The Commissioner of Community Affairs
11 shall enforce the “State Uniform Construction Code Act,” P.L.1975,
12 c.217 (C.52:27D-119 et seq.) with regard to any violation of
13 P.L.2005, c.42 (C.48:3-99 et seq.) involving building construction
14 or installation of any equipment or device in a building or
15 structure.²

16

17 ²**[10.]** 11.² Section 8 of P.L.2005, c.42 (C.48:3-106) is
18 amended to read as follows:

19 8. The Board of Public Utilities ¹and the Commissioner of
20 Community Affairs¹ ²**[**, in consultation with the Commissioner of
21 Environmental Protection,**]**² may adopt, pursuant to the
22 "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et
23 seq.), any further rules and regulations as may be necessary to
24 implement the provisions of **[this act]** P.L.2005, c.42 (C.48:3-99 et
25 seq.) .

26 (cf: P.L.2005, c.42, s.8)

27

28 ²**[11.]** 12.² This act shall take effect immediately.