

[First Reprint]
SENATE, No. 332

STATE OF NEW JERSEY
211th LEGISLATURE

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Sponsored by:

Senator PAUL SARLO

District 36 (Bergen, Essex and Passaic)

Senator BARBARA BUONO

District 18 (Middlesex)

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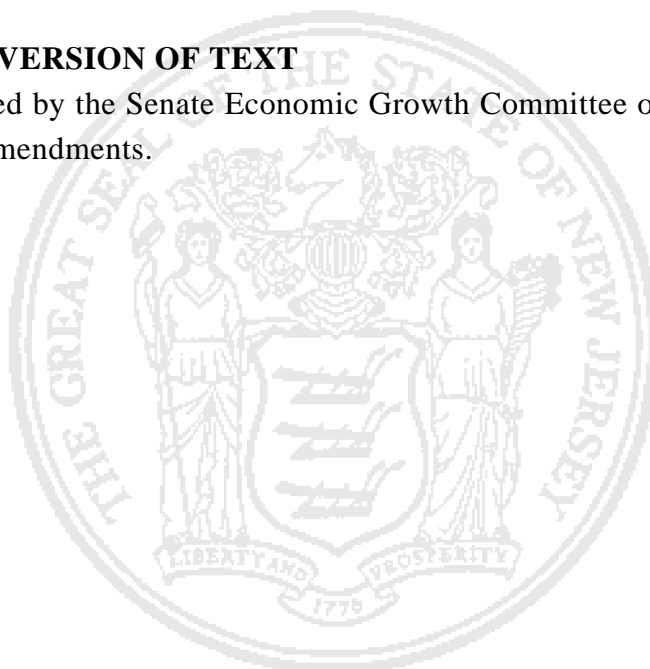
Senator Madden

SYNOPSIS

Establishes minimum energy efficiency standards for certain products.

CURRENT VERSION OF TEXT

As reported by the Senate Economic Growth Committee on December 6, 2004, with amendments.



(Sponsorship Updated As Of: 12/14/2004)

1 AN ACT concerning energy efficiency and supplementing Title 48 of
2 the Revised Statutes.

3

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

6

7 1. As used in this act:

8 ¹"Air-cooled very large commercial package air conditioning and
9 heating equipment" means air-cooled, water-cooled,
10 evaporative-cooled or water source (but not ground water source),
11 electrically operated, unitary central air conditioners and central air
12 conditioning heat pumps for commercial application that are rated at
13 or above 240,000 Btu per hour and below 760,000 Btu per hour in
14 cooling capacity;¹

15 "Board" means the Board of Public Utilities;

16 ¹["Cable television box" means a device that acts as a tuner for
17 cable television programming and that converts signals received from
18 a cable service provider to a signal usable by a television set;

19 "Ceiling fan" means a non-portable device that is suspended from
20 a ceiling for circulating air via the rotation of fan blades;

21 "Ceiling fan lighting kit" means the equipment used to provide light
22 from a ceiling fan, which equipment may be integral such that the
23 ceiling fan light kit is hardwired to the ceiling fan, or attachable such
24 that the ceiling fan light kit is not, at the time of sale, physically
25 attached to the fan. Attachable ceiling fan light kits may be included
26 inside the ceiling fan package at the time of sale or sold separately for
27 subsequent attachment to a ceiling fan;]

28 "Coefficient of performance" means the ratio of heating capacity in
29 watts to the power input values in watts obtained at standards rating
30 conditions;¹

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

39 "Commercial refrigerator ¹[or freezer" means a reach-in cabinet,
40 pass-through cabinet, roll-in cabinet and roll-through cabinet model of
41 a refrigerator or freezer, and a refrigerator-freezer with less than 85

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

Matter underlined thus is new matter.

Matter enclosed in superscript numerals has been adopted as follows:

¹ Senate SEG committee amendments adopted December 6, 2004.

1 cubic feet of capacity and that are not federally regulated products
2 under the National Appliance Energy Conservation Act of 1987,
3 Pub.L. 100-12] , freezer, and refrigerator-freezer equipment" means
4 refrigeration equipment that:

- 5 a. is not a consumer product;
6 b. operates at a chilled, frozen, combination chilled/frozen, or
7 variable temperature;
8 c. displays or stores merchandise either horizontally,
9 semi-vertically, or vertically;
10 d. may have transparent or solid hinged doors or both, sliding
11 doors, a combination of hinged and sliding doors or no doors;
12 e. is designed either for pull-down temperature applications or
13 holding temperature applications; and

14 f. is connected to a self-contained condensing unit¹;

15 "Commissioner" means the Commissioner of Environmental
16 Protection;

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

20 ¹"Energy efficiency ratio" means the ratio of the cooling capacity
21 in Btu per hour to the power input values in watts obtained at standard
22 rating conditions expressed in Btu per watt-hours.;

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

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

30 ¹["Large packaged air-conditioning equipment" means packaged
31 air-conditioning equipment having 20 tons or more of cooling
32 capacity;]¹

33 "Low-voltage dry-type distribution transformer" means a
34 transformer with an input voltage of 600 volts or less, is between
35 14kVa and 2,501kVa in size, is air-cooled, and does not use oil as a
36 coolant ¹, and does not include those types of transformers specifically
37 excluded from the low voltage dry-type distribution transformer
38 definition published in the California Code of Regulations, Title 20:
39 Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations, as
40 amended in November 2002¹;

41 "Packaged air-conditioning equipment" means air-conditioning
42 equipment that is built as a package and shipped as a whole to end-
43 user sites;

44 ¹["Set-top box" means a cable television box, wireless television
45 receiver or digital television converter box;]

46 "Pull-down temperature applications" means commercial

1 refrigerator, freezer, and refrigerator-freezer equipment specifically
2 designed to rapidly reduce all product content temperatures from
3 various ambient temperatures at a minimum reduction rate of 4.3
4 degrees Fahrenheit per hour over a 12-hour period to an overall
5 integrated product temperature equal to 38 degrees Fahrenheit when
6 fully loaded with beverage containers;

7 "Self-contained condensing unit" means a factory-made assembly
8 of refrigerating components designed to compress and liquefy a
9 specific refrigerant that is an integral part of the refrigerated
10 equipment and consists of one or more refrigerant compressors,
11 refrigerant condensers, condenser fans and motors, and factory
12 supplied accessories;¹

13 "Torchiere lighting fixture" means a portable electric lighting fixture
14 with a reflector bowl directing light upward to provide indirect
15 illumination;

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

22 "Transformer" means a device consisting essentially of two or more
23 coils of insulated wire that transfers alternating current by
24 electromagnetic induction from one coil to another in order to change
25 the original voltage or current value; ¹and¹

26 "Unit heater" means a self-contained fan-type heater that uses
27 natural gas, propane, or fuel oil and is designed to be installed within
28 a heated space. Unit heaters include an apparatus or appliance to
29 supply heat, and a fan for circulating air over a heat exchange surface,
30 all enclosed in a common casing. Unit heaters do not include "warm
31 air furnaces" as specifically defined under the federal Energy Policy
32 Act of 1992, Pub.L. 102-486 ¹]; and

33 "Wireless television receiver" means a device used in conjunction
34 with a dish antenna to receive satellite or other wireless television
35 programming and that converts signals from a dish antenna for use by
36 a television set]¹.

37

38 2. a. The provisions of this act shall apply to the testing,
39 certification and enforcement of efficiency standards for the following
40 types of new products sold, offered for sale or installed in the State:

41 ¹[(1) ceiling fans and ceiling fan light kits;

42 (2)] (1)¹ commercial clothes washers;

43 ¹[(3)] (2)¹ commercial refrigerators and freezers;

44 ¹[(4)] (3)¹ illuminated exit signs;

45 ¹[(5) large packaged air-conditioning equipment] (4) air cooled
46 very large commercial package air conditioning and heating

- 1 equipment¹;
- 2 ¹[(6)] (5)¹ low-voltage dry-type distribution transformers;
- 3 ¹[(7)] set-top boxes;
- 4 (8)] (6)¹ torchiere lighting fixtures;
- 5 ¹[(9)] (7)¹ traffic signal modules; ¹and¹
- 6 ¹[(10)] (8)¹ unit heaters ¹]; and
- 7 (11) such other products as may be designated in accordance with
- 8 section 5 of this act]¹.
- 9 b. The provisions of this act shall not apply to:
- 10 (1) new products manufactured in the State and sold outside the
- 11 State;
- 12 (2) new products manufactured outside the State and sold at
- 13 wholesale inside the State for final retail sale and installation outside
- 14 the State;
- 15 (3) products installed in mobile manufactured homes at the time of
- 16 construction; or
- 17 (4) products designed expressly for installation and use in
- 18 recreational vehicles.
- 19
- 20 3. Within one year of the effective date of this act, the Board of
- 21 Public Utilities, in consultation with the Commissioner of
- 22 Environmental Protection, shall adopt, pursuant to the "Administrative
- 23 Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.), rules and
- 24 regulations establishing minimum energy efficiency standards for the
- 25 types of new products set forth in section 2 of this act. The
- 26 regulations shall provide for the following minimum efficiency
- 27 standards:
- 28 a. ¹[Ceiling fans and ceiling fan light kits shall meet the Tier I
- 29 criteria of the product specification of the "Energy Star Program
- 30 Requirements for Residential Ceiling Fans" developed by the United
- 31 States Environmental Protection Agency;
- 32 b.]¹ Commercial clothes washers shall meet the requirements set
- 33 forth in Table P-3 of section 1605.3, California Code of Regulations,
- 34 Title 20: Division 2, Chapter 4, Article 4, Appliance Efficiency
- 35 Regulations ¹, provided that such washers shall not be required to
- 36 meet the modified energy factor requirements until 2007 and shall not
- 37 be required to meet the water factor requirements until 2010¹;
- 38 ¹[c.] b.¹ ¹[Commercial refrigerators and freezers shall meet the
- 39 requirements set forth in Table A-6 of section 1605.3 of the California
- 40 Code of Regulations, Title 20: Division 2, Chapter 4, Article 4,
- 41 Appliance Efficiency Regulations] (1) Each self-contained commercial
- 42 refrigerator, freezer, and refrigerator-freezer equipment designed for
- 43 holding temperature applications sold on or after January 1, 2010,
- 44 shall meet the following standards:
- 45 (a) Refrigerators with solid doors: 0.10 times V plus 2.04 kilowatt

1 hours per day;

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

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

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

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

11 (f) Refrigerators/freezers with separate refrigeration systems: the
12 sum of the standard applicable to the refrigerator and the standard
13 applicable to the freezer.

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

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

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

25 (b) Freezers with transparent doors: 0.788 times V plus 4.3
26 kilowatt hours per day.

27 As used in this subsection, "V" means the chilled or frozen
28 compartment volume in cubic feet as defined in the Association of
29 Home Appliance Manufacturers Standard HRF1-1979; "integrated
30 average temperature" means the average temperature of all test
31 package measurements taken during the test; and "AV" means the
32 adjusted volume in cubic feet defined as 1.63 times the frozen
33 temperature compartment volume in cubic feet plus the chilled
34 temperature compartment volume in cubic feet¹;

35 ¹[d.] c.¹ Illuminated exit signs shall meet the requirements of the
36 "Energy Star Program Requirements for Exit Signs" developed by the
37 United States Environmental Protection Agency;

38 ¹[e.] d.¹ ¹[Large packaged air-conditioning equipment shall meet
39 the Tier II efficiency levels of the "Minimum Equipment Efficiencies
40 for Unitary Commercial Air Conditioners" and "Minimum Equipment
41 Efficiencies for Heat Pumps" developed by the Consortium for Energy
42 Efficiency, Boston, Massachusetts] Each air-cooled very large
43 commercial package air conditioning and heating equipment sold on
44 or after January 1, 2010, shall meet the following standards:

45 (1) The minimum energy efficiency ratio of air-cooled central air
46 conditioners at or above 240,000 Btu per hour in cooling capacity and

1 less than 760,000 Btu per hour in cooling capacity shall be 10.0 for
2 equipment with no heating or electric resistance heating and 9.8 for
3 equipment with all other heating system types that are integrated into
4 the equipment at a standard rating of 95 degrees Fahrenheit dry bulb.

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

12 (3) The minimum coefficient of performance in the heating mode of
13 air-cooled central air conditioning heat pumps at or above 240,000
14 Btu per hour in cooling capacity and less than 760,000 Btu per hour
15 in cooling capacity shall be 3.2 at a high temperature rating of 47
16 degrees Fahrenheit dry bulb¹;

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

20 ¹[g. Set-top boxes shall meet the Tier 2 criteria of the product
21 specifications of the "Energy Star Program Requirements for Set-Top
22 Boxes" developed by the United States Environmental Protection
23 Agency;

24 h.] f.¹ Torchiere lighting fixtures shall not consume more than 190
25 watts and shall not be capable of operating with lamps that total more
26 than 190 watts;

27 ¹[i.] g.¹ Traffic signal modules shall meet the product
28 specifications of the "Energy Star Program Requirements for Traffic
29 Signals" developed by the United States Environmental Protection
30 Agency; and

31 ¹[j. Unit heaters shall not have pilot lights and shall have either
32 power venting or an automatic flue damper] h. Unit heaters shall be
33 equipped with an intermittent ignition device and shall have either
34 power venting or an automatic flue damper¹.

35
36 4. a. ¹[Within] Except as provided in subsection c. of this section,
37 within¹ two years of the effective date of this act, no new product of
38 a type set forth in section 2 of this act may be sold or offered for sale
39 in the State unless the energy efficiency of the new product meets or
40 exceeds the efficiency standards set forth in the regulations adopted
41 pursuant to section 3 of this act.

42 b. ¹[Within] Except as provided in subsection c. of this section,
43 within¹ three years of the effective date of this act, no new product for
44 a type set forth in section 2 of this act may be installed in the State
45 unless the energy efficiency of the new product meets or exceeds the
46 efficiency standards set forth in the regulations adopted pursuant to

1 section 3 of this act.

2 ¹c. The standards for commercial refrigerator, freezer, and
3 refrigerator-freezer equipment and for air-cooled very large
4 commercial package air conditioning and heating equipment become
5 effective for equipment sold or installed in this State on or after
6 January 1, 2010.¹

7

8 ¹[5. The Board of Public Utilities, in consultation with the
9 Commissioner of Environmental Protection, may, pursuant to the
10 "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et
11 seq.), establish increased efficiency standards on the products listed in
12 section 2 of this act. The board, in consultation with the
13 commissioner, also may, pursuant to the "Administrative Procedure
14 Act," establish standards for products not specifically listed in section
15 2 of this act. In considering such new or amended standards, the
16 board, in consultation with the commissioner, shall set efficiency
17 standards upon a determination that increased efficiency standards
18 would serve to promote energy conservation in the State and would
19 be cost-effective for consumers who purchase and use such new
20 products, provided no new or increased efficiency standards shall
21 become effective within one year following the adoption of any
22 amended regulations establishing such increased efficiency standards.
23 The board may apply for a waiver of federal preemption in accordance
24 with federal procedures set forth at U.S.Code 6297 (d) for those
25 products regulated by the federal government.]¹

26

27 ¹[6.] 5.¹ a. The Board of Public Utilities, in consultation with the
28 Commissioner of Environmental Protection, shall adopt, pursuant to
29 the "Administrative Procedure Act," procedures for testing the energy
30 efficiency of the new products covered by section 2 of this act if such
31 procedures are not provided for in the standard building code of New
32 Jersey. The board shall use United States Department of Energy
33 approved test methods, or in the absence of such test methods, other
34 appropriate nationally recognized test methods. The manufacturers of
35 such products shall cause samples of such appliances to be tested in
36 accordance with the test procedures adopted pursuant to this section
37 or those specified in the standard building code of New Jersey.

38 b. Manufacturers of new products covered by section 2 of this act
39 shall certify to the board that such products are in compliance with the
40 provisions of this act. The board, in consultation with the
41 commissioner, shall adopt, pursuant to the "Administrative Procedure
42 Act," P.L.1968, c.410 (C.52:14B-1 et seq.), regulations governing the
43 certification of such products and may propose to work in
44 coordination with the certification program of other states with similar
45 standards.

46 c. The board may test products covered by section 2 of this act

1 using an accredited testing facility. If products so tested are found not
2 to be in compliance with the minimum efficiency standards established
3 under section 3 of this act, the commissioner shall: (1) charge the
4 manufacturer of such products for the cost of product purchase and
5 testing, and (2) provide information to the public on products found
6 not to be in compliance with the standards.

7 ¹d. Testing procedures for commercial refrigerator, freezer, and
8 refrigerator-freezer equipment and for air-cooled very large
9 commercial package air conditioning and heating equipment shall be
10 as follows:

11 (1) commercial refrigerator, freezer, and refrigerator-freezer
12 equipment shall be tested in accordance with America Society of
13 Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
14 Standard 117-2002 - "Method of Testing Closed Refrigerators" (ANSI
15 Approved).

16 (2) air-cooled very large commercial package air conditioning and
17 heating equipment shall be tested in accordance with Air-Conditioning
18 and Refrigeration Institute Standard 340/360-2000 "Commercial and
19 Industrial Unitary Air-Conditioning and Heat Pump Equipment"
20 (ANSI Approved).¹

21
22 ¹[7.] 6.¹ The Board of Public Utilities, in consultation with the
23 Commissioner of Environmental Protection, may cause periodic
24 inspections to be made of distributors or retailers of new products
25 covered by section 2 of this act in order to determine compliance with
26 the provisions of this act. The board shall also work with the
27 Commissioner of Community Affairs to coordinate the inspections for
28 new products that are also covered by the standard building code of
29 New Jersey.

30
31 ¹[8.] 7.¹ a. The Board of Public Utilities, in consultation with the
32 Commissioner of Environmental Protection, shall cause investigations
33 to be made of complaints received concerning violations of this act and
34 shall report the results of such investigations to the Attorney General.
35 The Attorney General may institute proceedings to enforce the
36 provisions of this act.

37 b. A manufacturer, distributor or retailer who violates any
38 provision of this act shall be issued a warning by the board for any first
39 violation. Repeat violations shall be subject to a civil penalty of not
40 more than \$250. Each violation of this act shall constitute a separate
41 offense, and each day that the violation continues shall constitute a
42 separate offense. Penalties assessed under this act are in addition to
43 costs assessed pursuant to subsection c. of section ¹[6] 5¹ of this act.

44
45 ¹[9.] 8.¹ The Board of Public Utilities, in consultation with the
46 Commissioner of Environmental Protection, may adopt, pursuant to

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1 the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et
2 seq.), any further regulations as may be necessary to implement the
3 provisions of this act.

4

5 ¹[10.] 9.¹ This act shall take effect immediately.