

[Third Reprint]

**ASSEMBLY, No. 516**

**STATE OF NEW JERSEY**  
**211th LEGISLATURE**

PRE-FILED FOR INTRODUCTION IN THE 2004 SESSION

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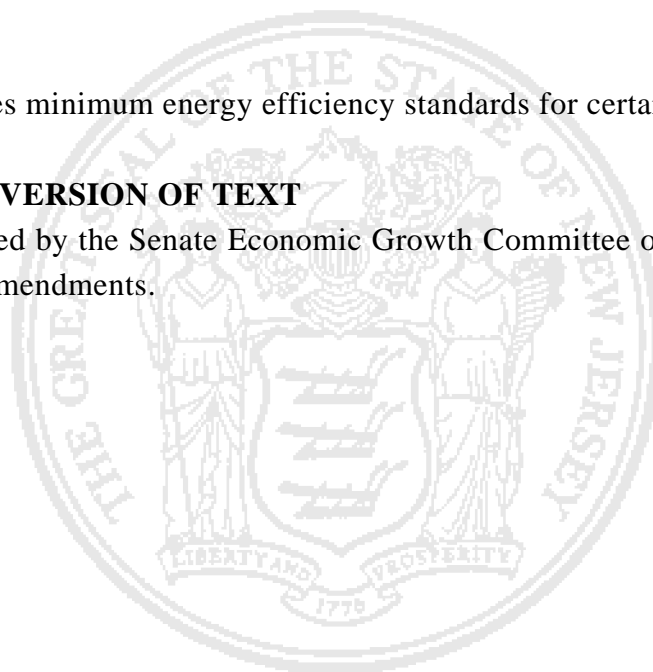
**Assemblymen Stack, Vas, Senators Sarlo, Buono, Madden,  
Assemblywoman Greenstein and Assemblyman Conaway**

**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: 1/25/2005)**

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 <sup>3</sup>"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;<sup>3</sup>

15 "Board" means the Board of Public Utilities;

16 <sup>1</sup>["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;]<sup>1</sup>

28 <sup>3</sup>"Coefficient of performance" means the ratio of heating capacity  
29 in watts to the power input values in watts obtained at standards rating  
30 conditions;<sup>3</sup>

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 <sup>3</sup>[or freezer" means a reach-in cabinet,  
40 pass-through cabinet, roll-in cabinet and roll-through cabinet model of

**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:**

<sup>1</sup> Assembly ATU committee amendments adopted June 14, 2004.

<sup>2</sup> Assembly floor amendments adopted June 21, 2004.

<sup>3</sup> Senate SEG committee amendments adopted December 6, 2004.

1 a refrigerator or freezer, and a refrigerator-freezer with less than 85  
2 cubic feet of capacity and that are not federally regulated products  
3 under the National Appliance Energy Conservation Act of 1987,  
4 Pub.L. 100-12] , freezer, and refrigerator-freezer equipment" means  
5 refrigeration equipment that:

- 6 a. is not a consumer product;  
7 b. operates at a chilled, frozen, combination chilled/frozen, or  
8 variable temperature;  
9 c. displays or stores merchandise either horizontally,  
10 semi-vertically, or vertically;  
11 d. may have transparent or solid hinged doors or both, sliding  
12 doors, a combination of hinged and sliding doors or no doors;  
13 e. is designed either for pull-down temperature applications or  
14 holding temperature applications; and  
15 f. is connected to a self-contained condensing unit<sup>3</sup>;

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

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

21 <sup>3</sup>"Energy efficiency ratio" means the ratio of the cooling capacity  
22 in Btu per hour to the power input values in watts obtained at standard  
23 rating conditions expressed in Btu per watt-hours.;

24 "Holding temperature applications" means commercial refrigerator,  
25 freezer, and refrigerator-freezer equipment that is not designed for  
26 "pull-down" temperature applications;<sup>3</sup>

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

31 <sup>3</sup>["Large packaged air-conditioning equipment" means packaged  
32 air-conditioning equipment having 20 tons or more of cooling  
33 capacity;]<sup>3</sup>

34 "Low-voltage dry-type distribution transformer" means a  
35 transformer with an input voltage of 600 volts or less, is between  
36 14kVa and 2,501kVa in size, is air-cooled, and does not use oil as a  
37 coolant <sup>1</sup>, and does not include those types of transformers specifically  
38 excluded from the low voltage dry-type distribution transformer  
39 definition published in the California Code of Regulations, Title 20:  
40 Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations, as  
41 amended in November 2002<sup>1</sup>;

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

45 <sup>1</sup>["Set-top box" means a cable television box, wireless television  
46 receiver or digital television converter box;]<sup>1</sup>

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

8 "Self-contained condensing unit" means a factory-made assembly  
9 of refrigerating components designed to compress and liquefy a  
10 specific refrigerant that is an integral part of the refrigerated  
11 equipment and consists of one or more refrigerant compressors,  
12 refrigerant condensers, condenser fans and motors, and factory  
13 supplied accessories;<sup>3</sup>

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

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

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

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

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

38

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

42 <sup>1</sup>[(1) ceiling fans and ceiling fan light kits;]<sup>1</sup>

43 <sup>1</sup>[(2)] (1)<sup>1</sup> commercial clothes washers;

44 <sup>1</sup>[(3)] (2)<sup>1</sup> commercial refrigerators and freezers;

45 <sup>1</sup>[(4)] (3)<sup>1</sup> illuminated exit signs;

46 <sup>1</sup>[(5)] (4)<sup>1</sup> <sup>3</sup>[large packaged air-conditioning equipment] air-

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

1 shall meet the following standards:

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

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

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

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

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

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

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

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

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

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

29 As used in this subsection, "V" means the chilled or frozen  
30 compartment volume in cubic feet as defined in the Association of  
31 Home Appliance Manufacturers Standard HRF1-1979; "integrated  
32 average temperature" means the average temperature of all test  
33 package measurements taken during the test; and "AV" means the  
34 adjusted volume in cubic feet defined as 1.63 times the frozen  
35 temperature compartment volume in cubic feet plus the chilled  
36 temperature compartment volume in cubic feet<sup>3</sup>;

37 <sup>1</sup>[d.] c.<sup>1</sup> Illuminated exit signs shall meet the requirements of the  
38 "Energy Star Program Requirements for Exit Signs" developed by the  
39 United States Environmental Protection Agency;

40 <sup>1</sup>[e.] d.<sup>1 3</sup> [Large packaged air-conditioning equipment shall meet  
41 the Tier II efficiency levels of the "Minimum Equipment Efficiencies  
42 for Unitary Commercial Air Conditioners" and "Minimum Equipment  
43 Efficiencies for Heat Pumps" developed by the Consortium for Energy  
44 Efficiency, Boston, Massachusetts] Each air-cooled very large  
45 commercial package air conditioning and heating equipment sold on  
46 or after January 1, 2010, shall meet the following standards:

1       (1) The minimum energy efficiency ratio of air-cooled central air  
2 conditioners at or above 240,000 Btu per hour in cooling capacity and  
3 less than 760,000 Btu per hour in cooling capacity shall be 10.0 for  
4 equipment with no heating or electric resistance heating and 9.8 for  
5 equipment with all other heating system types that are integrated into  
6 the equipment at a standard rating of 95 degrees Fahrenheit dry bulb.

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

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

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

22       <sup>1</sup>[g. Set-top boxes shall meet the Tier 2 criteria of the product  
23 specifications of the "Energy Star Program Requirements for Set-Top  
24 Boxes" developed by the United States Environmental Protection  
25 Agency;]<sup>1</sup>

26       <sup>1</sup>[h.] f.<sup>1</sup> Torchiere lighting fixtures shall not consume more than  
27 190 watts and shall not be capable of operating with lamps that total  
28 more than 190 watts;

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

33       <sup>1</sup>[j. Unit heaters shall not have pilot lights and shall have either  
34 power venting or an automatic flue damper.] h. Unit heaters shall be  
35 equipped with an intermittent ignition device and shall have either  
36 power venting or an automatic flue damper.<sup>1</sup>

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

44       b. <sup>3</sup>[Within] Except as provided in subsection c. of this section,  
45 within<sup>3</sup> three years of the effective date of this act, no new product for

1 a type set forth in section 2 of this act may be installed in the State  
2 unless the energy efficiency of the new product meets or exceeds the  
3 efficiency standards set forth in the regulations adopted pursuant to  
4 section 3 of this act.

5 <sup>3</sup>c. The standards for commercial refrigerator, freezer, and  
6 refrigerator-freezer equipment and for air-cooled very large  
7 commercial package air conditioning and heating equipment become  
8 effective for equipment sold or installed in this State on or after  
9 January 1, 2010.<sup>3</sup>

10

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

29

30 <sup>1</sup>[6.] 5.<sup>1</sup> a. The Board of Public Utilities, in consultation with the  
31 Commissioner of Environmental Protection, shall adopt, pursuant to  
32 the "Administrative Procedure Act," procedures for testing the energy  
33 efficiency of the new products covered by section 2 of this act if such  
34 procedures are not provided for in the standard building code of New  
35 Jersey. The board shall use United States Department of Energy  
36 approved test methods, or in the absence of such test methods, other  
37 appropriate nationally recognized test methods. The manufacturers of  
38 such products shall cause samples of such appliances to be tested in  
39 accordance with the test procedures adopted pursuant to this section  
40 or those specified in the standard building code of New Jersey.

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

1 coordination with the certification program of other states with similar  
2 standards.

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

10 <sup>3</sup>d. Testing procedures for commercial refrigerator, freezer, and  
11 refrigerator-freezer equipment and for air-cooled very large  
12 commercial package air conditioning and heating equipment shall be  
13 as follows:

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

19 (2) air-cooled very large commercial package air conditioning and  
20 heating equipment shall be tested in accordance with Air-Conditioning  
21 and Refrigeration Institute Standard 340/360-2000 "Commercial and  
22 Industrial Unitary Air-Conditioning and Heat Pump Equipment"  
23 (ANSI Approved).<sup>3</sup>

24

25 <sup>1</sup>[7.] 6.<sup>1</sup> The Board of Public Utilities, in consultation with the  
26 Commissioner of Environmental Protection, may cause periodic  
27 inspections to be made of distributors or retailers of new products  
28 covered by section 2 of this act in order to determine compliance with  
29 the provisions of this act. The board shall also work with the  
30 Commissioner of Community Affairs to coordinate the inspections for  
31 new products that are also covered by the standard building code of  
32 New Jersey.

33

34 <sup>1</sup>[8.] 7.<sup>1</sup> a. The Board of Public Utilities, in consultation with the  
35 Commissioner of Environmental Protection, shall cause investigations  
36 to be made of complaints received concerning violations of this act and  
37 shall report the results of such investigations to the Attorney General.  
38 The Attorney General may institute proceedings to enforce the  
39 provisions of this act.

40 b. A manufacturer, distributor or retailer who violates any  
41 provision of this act shall be issued a warning by the board for any first  
42 violation. Repeat violations shall be subject to a civil penalty of not  
43 more than \$250. Each violation of this act shall constitute a separate  
44 offense, and each day that the violation continues shall constitute a  
45 separate offense. Penalties assessed under this act are in addition to  
46 costs assessed pursuant to subsection c. of section <sup>1</sup>[6] 5<sup>1</sup> of this act.

1       <sup>1</sup>[9.] 8.<sup>1</sup> The Board of Public Utilities, in consultation with the  
2 Commissioner of Environmental Protection, may adopt, pursuant to  
3 the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et  
4 seq.), any further regulations as may be necessary to implement the  
5 provisions of this act.

6

7       <sup>3</sup>[<sup>1</sup>9. <sup>2</sup>a.<sup>2</sup> Within 12 months following the effective date of this act,  
8 and every two years thereafter, the board shall make recommendations  
9 as to which products they determine to be representative of the most  
10 energy efficient products available for consumers.

11       <sup>2</sup>b. Within two years following the effective date of this act, and  
12 every two years thereafter, the board shall make recommendations to  
13 the Legislature as to which products the board determines should be  
14 added to the list of products contained in section 2 of this act and for  
15 which the board determines that it would be appropriate to set energy  
16 efficiency standards to promote energy conservation in this State.<sup>2</sup><sup>3</sup>

17

18       <sup>3</sup>[10.] 9.<sup>3</sup> This act shall take effect immediately.