



## 94TH GENERAL ASSEMBLY

### State of Illinois

2005 and 2006

HB4455

Introduced 01/10/06, by Rep. Kathleen A. Ryg

#### SYNOPSIS AS INTRODUCED:

New Act

Creates the Minimum Energy Efficiency Standards Act. Provides minimum efficiency standards for certain new products sold or installed in this State including: (1) medium voltage dry-type distribution transformers; (2) metal halide lamp fixtures; (3) furnaces and boilers; (4) single-voltage external AC to DC power supplies; and (5) State-regulated incandescent reflector lamps. Authorizes the Environmental Protection Agency to designate minimum standards for additional new products to promote energy conservation when cost effective for consumers. Authorizes the Pollution Control Board, by rule, to change the initial minimum efficiency standards. Authorizes the Pollution Control Board, by rule, to change the initial minimum efficiency standards. Sets forth that beginning January 1, 2008, no new medium voltage dry-type distribution transformer, single-voltage external AC to DC power supply, or State-regulated incandescent reflector lamps may be sold or offered for sale in this State unless the efficiency of the new product meets or exceeds the applicable minimum efficiency standards. Provides that beginning January 1, 2009, no new metal halide lamp fixture may be sold or offered for sale in this State unless the efficiency of the new product meets or exceeds the applicable minimum efficiency standards. Requires the Agency, in consultation with the Attorney General, to determine if implementation of State standards for furnaces and boilers requires a waiver from federal preemption. Provides that if a waiver from federal preemption is necessary, the State standard shall go into effect at the earliest date permitted by federal law. Sets forth that if a waiver from federal preemption is not needed for the State then the State standards shall go into effect on June 1, 2008. Requires manufacturers to test their products and certify the results to the Illinois Environmental Protection Agency. Adds other provisions. Effective immediately.

LRB094 17234 RSP 52523 b

FISCAL NOTE ACT  
MAY APPLY

1 AN ACT concerning energy efficiency.

2 **Be it enacted by the People of the State of Illinois,**  
3 **represented in the General Assembly:**

4 Section 1. Short title. This Act may be cited as the  
5 Illinois Appliance Efficiency Standards Act.

6 Section 5. Purpose and findings.

7 (a) This Act provides for the establishment of minimum  
8 efficiency standards for certain products sold or installed in  
9 this State.

10 (b) The legislature finds that:

11 (1) Efficiency standards for certain products sold or  
12 installed in this State assure consumers and businesses  
13 that the products meet minimum efficiency performance  
14 levels, thus saving money on heating or electric bills.

15 (2) Such efficiency standards save energy and thus  
16 reduce pollution and other environmental impacts  
17 associated with the production, distribution, and use of  
18 electricity and natural gas.

19 (3) Such efficiency standards can make electricity  
20 systems more reliable by reducing the strain on the  
21 electricity grid during peak demand periods.

22 (4) Energy efficiency standards contribute to the  
23 economy of this State by enabling consumers and business  
24 owners to spend less on energy, leaving more for the  
25 purchase of local goods and services.

26 Section 10. Definitions. As used in this Act:

27 "Agency" means the Illinois Environmental Protection  
28 Agency.

29 "Board" means the Illinois Pollution Control Board.

30 "Ballast" means a device used with an electric discharge  
31 lamp to obtain necessary circuit conditions (voltage, current

1 and waveform) for starting and operating the lamp.

2 "Boiler" means a self-contained appliance for supplying  
3 steam or hot water primarily intended for space-heating and  
4 which utilizes only single-phase electric current, or  
5 single-phase electric current or DC current in conjunction with  
6 natural gas, propane, or home heating oil, and which:

7 (1) is designed to be the principal heating source for  
8 the living space of one or more residences;

9 (2) has a heat input rate of less than 300,000 Btu per  
10 hour; and

11 (3) is not an appliance designed for the primary  
12 purpose of supplying hot water for purposes other than  
13 heating.

14 "Compensation" means money or any other valuable thing,  
15 regardless of form, received or to be received by a person for  
16 services rendered.

17 "Electricity ratio" means the ratio of furnace electricity  
18 use to total furnace energy use. Electricity ratio =  
19  $(3.412 * E_{AE}) / (1000 * E_F + 3.412 * E_{AE})$  where  $E_{AE}$  and  $E_F$  are defined in  
20 Title 10 of the Code of Federal Regulations.

21 "Furnace" means a self-contained space heater designed to  
22 supply heated air through ducts of more than 10 inches length  
23 and which utilizes only single-phase electric current, or  
24 single-phase electric current or DC current in conjunction with  
25 natural gas, propane, or home heating oil, and which:

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

28 (2) is not contained within the same cabinet with a  
29 central air conditioner whose rated cooling capacity is  
30 above 65,000 Btu per hour; and

31 (3) has a heat input rate of less than 225,000 Btu per  
32 hour.

33 "High-intensity discharge lamp" means a lamp in which light  
34 is produced by the passage of an electric current through a  
35 vapor or gas and in which the light-producing arc is stabilized  
36 by bulb wall temperature and the arc tube has a bulb wall

1 loading in excess of 3 watts per square centimeter.

2 "Medium voltage dry-type distribution transformer" means a  
3 transformer that:

4 (1) has an input voltage of more than 600 volts but  
5 less than or equal to 34,500 volts;

6 (2) is air-cooled;

7 (3) does not use oil as a coolant; and

8 (4) is rated for operation at a frequency of 60 Hertz.

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

13 "Metal halide lamp fixture" means a light fixture designed  
14 to be operated with a metal halide lamp and a ballast for a  
15 metal halide lamp.

16 "Probe-start metal halide ballast" means a ballast used to  
17 operate metal halide lamps which does not contain an igniter  
18 and which instead starts lamps by using a third starting  
19 electrode probe in the arc tube.

20 "Single-voltage external AC to DC power supply" means a  
21 device that:

22 (1) is designed to convert line voltage AC input into  
23 lower voltage DC output;

24 (2) is able to convert to only one DC output voltage at  
25 a time;

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

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

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

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

1 (7) does not have a battery chemistry or type selector  
2 switch and indicator light, or does not have a battery  
3 chemistry or type selector switch and a state of charge  
4 meter; and

5 (8) has a nameplate output power less than or equal to  
6 250 watts.

7 "State-regulated incandescent reflector lamp" means a  
8 lamp, not colored or designed for rough or vibration service  
9 applications, with an inner reflective coating on the outer  
10 bulb to direct the light, an E26 medium screw base, a rated  
11 voltage or voltage range that lies at least partially within  
12 115 to 130 volts and that falls into either of the following  
13 categories: a bulged reflector, elliptical reflector, blown  
14 parabolic aluminized reflector or similar bulb shape with a  
15 diameter equal to or greater than 2.25 inches; or a reflector,  
16 parabolic aluminized reflector, bulged reflector or similar  
17 bulb shape with a diameter of 2.25 to 2.75 inches, inclusive.

18 "Transformer" means a device consisting of 2 or more coils  
19 of insulated wire and that is designed to transfer alternating  
20 current by electromagnetic induction from one coil to another  
21 to change the original voltage or current value. This term does  
22 not include: (1) devices with multiple voltage taps, with the  
23 highest voltage tap equaling at least 20% more than the lowest  
24 voltage tap; or (2) devices, such as those commonly known as  
25 drive transformers, rectifier transformers, auto-transformers,  
26 uninterruptible power system transformers, impedance  
27 transformers, regulating transformers, sealed and  
28 non-ventilating transformers, machine tool transformers,  
29 welding transformers, grounding transformers, or testing  
30 transformers, that are designed to be used in a special-purpose  
31 application and are unlikely to be used in general-purpose  
32 applications.

33 Section 15. Scope.

34 (a) The provisions of this Act apply to the testing,  
35 certification, and enforcement of efficiency standards for the

1 following types of new products sold, offered for sale, or  
2 installed in this State:

- 3 (1) medium voltage dry-type distribution transformers;
- 4 (2) metal halide lamp fixtures;
- 5 (3) furnaces and boilers;
- 6 (4) single-voltage external AC to DC power supplies;
- 7 (5) State-regulated incandescent reflector lamps; and
- 8 (6) such other products as may be designated by the  
9 Agency in accordance with Section 30.

10 (b) The provisions of this Act do not apply to:

- 11 (1) new products manufactured in this State and sold  
12 outside this State;
- 13 (2) new products manufactured outside this State and  
14 sold at wholesale inside this State for final retail sale  
15 and installation outside this State;
- 16 (3) products installed in mobile manufactured homes at  
17 the time of construction; or
- 18 (4) products designed expressly for installation and  
19 use in recreational vehicles.

20 Section 20. Efficiency standards. The initial minimum  
21 efficiency standards for the types of new products set forth in  
22 Section 15 are as follows:

- 23 (1) Medium voltage dry-type distribution transformers  
24 shall meet minimum efficiency levels three-tenths of a  
25 percentage point higher than the Class 1 efficiency levels  
26 for medium voltage distribution transformers specified in  
27 Table 4-2 of the "Guide for Determining Energy Efficiency  
28 for Distribution Transformers" published by the National  
29 Electrical Manufacturers Association (NEMA Standard  
30 TP-1-2002).
- 31 (2) Metal halide lamp fixtures designed to be operated  
32 with lamps rated greater than or equal to 150 watts but  
33 less than or equal to 500 watts shall not contain a  
34 probe-start metal halide ballast.
- 35 (3) Furnaces and boilers shall meet or exceed the

1 applicable Annual Fuel Utilization Efficiency (AFUE)  
2 levels in the following table:

3 Product Type	Minimum Efficiency Level
4 Gas and propane furnaces	90% AFUE
5 Oil furnaces	83% AFUE
6 Gas and propane hot water	
7 boilers	84% AFUE
8 Gas and propane steam	
9 boilers	82% AFUE
10 Oil-fired steam	
11 boilers	82% AFUE

12 Residential furnace air handlers shall have an ER of 2%  
13 or less, except that residential oil furnaces with a  
14 capacity of less than 94,000 Btu per hour shall have an ER  
15 of 2.3% or less.

16 (4) Single-voltage external AC to DC power supplies  
17 shall meet the tier 1 energy efficiency requirements of  
18 California Code of Regulations, Title 20, Section 1605.3 as  
19 published in April 2005. This standard applies to  
20 single-voltage AC to DC power supplies that are sold  
21 individually and to those that are sold as a component of  
22 or in conjunction with another product.

23 (5) State-regulated incandescent reflector lamps shall  
24 meet the minimum average lamp efficiency requirements for  
25 federally-regulated incandescent reflector lamps contained  
26 in 42 U.S.C. section 6295 (i)(1)(A). The following lamps  
27 are exempt from these requirements: ER30, BR30, BR40, and  
28 ER40 of 50 watts or less; BR30, BR40, and ER40 of 65 watts;  
29 and R20 of 45 watts or less.

30 The initial minimum efficiency standards provided in this  
31 Section are subject to change by Board rule in accordance with  
32 Section 30.

33 Section 25. Implementation.

34 (a) On and after January 1, 2008, no new medium voltage  
35 dry-type distribution transformer, single-voltage external AC

1 to DC power supply, or State-regulated incandescent reflector  
2 lamp may be sold or offered for sale in the State unless the  
3 efficiency of the new product meets or exceeds the efficiency  
4 standards set forth in Section 20.

5 On and after January 1, 2009, no new metal halide lamp  
6 fixture may be sold or offered for sale in the State unless the  
7 efficiency of the product meets or exceeds the efficiency  
8 standards set forth in Section 20.

9 In consultation with the Attorney General, the Agency shall  
10 determine if implementation of State standards for furnaces and  
11 boilers requires a waiver from federal preemption, and, if  
12 necessary, shall apply for such waiver within 18 months of the  
13 effective date of this Act. If the Agency determines that a  
14 waiver from federal preemption is necessary for State furnace  
15 and boiler standards, the State standards shall go into effect  
16 at the earliest date permitted by federal law. If the Agency  
17 determines that a waiver from federal preemption is not needed  
18 for State furnace and boiler standards, then the State  
19 standards shall go into effect on June 1, 2008.

20 (b) One year after the date upon which sale or offering for  
21 sale of certain products is limited pursuant to subsection (a),  
22 no new products may be installed for compensation in the State  
23 unless the efficiency of the new product meets or exceeds the  
24 efficiency standards set forth in Section 20.

25 Section 30. New and revised standards; waiver.

26 (a) The Agency, after consultation with the Department of  
27 Commerce and Economic Opportunity, may propose to the Board (i)  
28 increased efficiency standards to replace any of the standards  
29 listed in Section 20, and (ii) new minimum efficiency standards  
30 for new products not specifically listed in Section 15. In  
31 proposing any new or increased efficiency standards, the Agency  
32 shall base that proposal upon a determination that the new or  
33 increased efficiency standards would serve to promote energy  
34 conservation in this State and would be cost effective for  
35 consumers who purchase and use the affected new products.



1 (b) The Board shall consider any new or increased  
2 efficiency standards proposed by the Agency, and shall adopt by  
3 rule those standards that it finds to be appropriate. In  
4 adopting any new or increased efficiency standard, the Board  
5 shall consider whether the new or increased efficiency standard  
6 would serve to promote energy conservation in this State and  
7 would be cost effective for consumers who purchase and use the  
8 affected new products. New or increased efficiency standards  
9 shall take effect no sooner than one year following the  
10 adoption of the rule providing for such new or increased  
11 efficiency standards.

12 (c) The Director may apply for a waiver of federal  
13 preemption in accordance with federal procedures for those  
14 products regulated by the federal government.

15 Section 35. Testing, certification, labeling, and  
16 enforcement.

17 (a) The manufacturers of new products subject to this Act  
18 shall cause samples of such products to be tested in accordance  
19 with the appropriate test procedures. With respect to  
20 efficiency standards adopted by reference under Section 20, the  
21 appropriate test methods shall be those specified in the  
22 adopted standards. Board rules providing for new or increased  
23 minimum efficiency standards shall specify the appropriate  
24 test methods, which shall be test methods approved by the U.S.  
25 Department of Energy or, in the absence of such test methods,  
26 other appropriate nationally recognized test methods.

27 (b) Manufacturers of new products subject to this Act shall  
28 certify to the Agency that such products are in compliance with  
29 the provisions of this Act. The Agency may adopt procedures and  
30 requirements governing the certification of such products and  
31 may work in coordination with the certification programs of  
32 other states. With respect to a product for which the Illinois  
33 efficiency standards and labeling requirements are the same as  
34 those of the federal government or another state, the Agency  
35 may accept as sufficient for compliance with this subsection

1 the manufacturer's certification to the federal government or  
2 that other state, whichever is applicable, that the product  
3 complies with those standards and requirements.

4 (c) Manufacturers of new products subject to this Act shall  
5 identify each such product offered for sale or installation in  
6 this State as in compliance with the provisions of this Act by  
7 means of a mark, label, or tag on the product and packaging at  
8 the time of sale or installation. The Agency shall propose and  
9 the Board shall adopt rules governing the identification of  
10 such products and packaging and may work in coordination with  
11 the labeling programs of other states.

12 (d) The Director may cause investigations to be made of  
13 complaints received concerning violations of this Act and may  
14 report the results of such investigations to the Attorney  
15 General. The Attorney General may institute proceedings to  
16 enforce the provisions of this Act.

17 (e) A manufacturer, distributor, retailer, or installer  
18 who violates any provision of this Act shall be issued a  
19 warning by the Director for the first violation. Repeat  
20 violations shall be subject to a civil penalty of not more than  
21 \$250. Each violation shall constitute a separate offense, and  
22 each day that a violation continues shall constitute a separate  
23 offense. Penalties assessed under this subsection are in  
24 addition to costs assessed under subsection (d).

25 (f) The Agency may propose and the Board may adopt any  
26 rules that are necessary to ensure the proper implementation  
27 and enforcement of this Act.

28 Section 97. Severability. The provisions of this Act are  
29 severable under Section 1.31 of the Statute on Statutes.

30 Section 99. Effective date. This Act takes effect upon  
31 becoming law.