General Assembly **Substitute Bill No. 5523**

February Session, 2006 *____HB05523ET_ED_031406___*

AN ACT CONCERNING ENERGY EFFICIENCY.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (NEW) (*Effective October 1, 2006*) (a) Notwithstanding any provision of the general statutes, any (1) new construction of a facility that is projected to cost not less than five million dollars, that is financed with state funds and is approved and funded on or after January 1, 2007, and (2) any renovation of a facility that is projected to cost not less than two million dollars, that is financed with state funds and is approved and funded on or after January 1, 2007, shall comply with the regulations adopted pursuant to subsection (b) of this section. The Secretary of the Office of Policy and Management, in consultation with the Commissioner of Public Works, shall exempt any facility from complying with said regulations if the Institute for Sustainable Energy finds, in a written analysis, that the cost of such compliance significantly outweighs the benefits. For purposes of this section, "facility" means any building, including, but not limited to, a state-financed housing project or a building that is used or intended to be used as a school.

(b) Not later than January 1, 2007, the Secretary of the Office of Policy and Management, in consultation with the Commissioner of Public Works, the Commissioner of Environmental Protection and the Commissioner of Public Safety, shall adopt regulations, in accordance

with the provisions of chapter 54 of the general statutes, to adopt building construction standards that are consistent with or exceed the silver building rating of the Leadership in Energy and Environmental Design's rating system for new commercial construction and major renovation projects, as established by the United States Green Building Council, or an equivalent standard, including, but not limited to, a two-globe rating in the Green Globes USA design program, and thereafter update such regulations as the secretary deems necessary.

Sec. 2. Section 10-286 of the 2006 supplement to the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2006*):

(a) The amount of the grant approved by the Commissioner of Education under the provisions of this chapter for any completed school building project shall be computed as follows:

(1) For the fiscal year ending June 30, 1984, and each fiscal year thereafter, in the case of a new school plant, an extension of an existing school building or projects involving the major alteration of any existing building to be used for school purposes, the eligible percentage, as determined in section 10-285a, as amended, of the result of multiplying together the number representing the highest projected enrollment, based on data acceptable to the Commissioner of Education, for such building during the eight-year period from the date a local or regional board of education files a notification of a proposed school building project with the Department of Education, the number of gross square feet per pupil determined by the Commissioner of Education to be adequate for the kind of educational program or programs intended, and the eligible cost of such project, divided by the gross square feet of such building, or the eligible percentage, as determined in section 10-285a, as amended, of the eligible cost of such project, whichever is less, provided, (A) any such project on which construction was started prior to July 1, 1975, shall be reimbursed under the formula in effect prior to said date, (B) any such project on which construction or payments under this chapter were

started after June 30, 1975, but prior to July 31, 1983, shall be reimbursed based upon the data, submitted for each such project and accepted by the Department of Education during said period, representing the number of pupils the plant was designed to accommodate, (C) any project for which final grant calculation has been made after June 30, 1975, but prior to July 31, 1983, shall be reimbursed based upon such final calculation, and (D) any such project for which estimated grant payments were begun prior to July 31, 1983, shall be reimbursed based upon the calculation formula used in making such estimated grant payments;

(2) In case of projects involving the purchase of an existing building to be used for school purposes, the eligible percentage, as determined in section 10-285a, as amended, of the eligible cost as determined by the Commissioner of Education, provided any project for which an application is made on or after July 1, 1995, involving the purchase and renovation of an existing facility, may be exempt from the standard space specifications, and otherwise ineligible repairs and replacements may be considered eligible for reimbursement as part of such a project, if information is provided acceptable to the commissioner documenting the need for such work and the cost savings to the state and the school district of such purchase and renovation project in comparison to alternative construction options;

(3) If any school building project described in subdivisions (1) and (2) of this subsection includes the construction, extension or major alteration of outdoor athletic facilities, tennis courts or a natatorium, gymnasium or auditorium, the grant for the construction of such outdoor athletic facilities, tennis courts and natatorium shall be limited to one-half of the eligible percentage for subdivisions (1) and (2) of the net eligible cost of construction thereof; the grant for the construction of an area of spectator seating in a gymnasium shall be one-half of the eligible percentage for subdivisions (1) and (2) of the net eligible cost of construction thereof; and the grant for the construction of the seating area in an auditorium shall be limited to one-half of the eligible percentage for subdivisions (1) and (2) of the net eligible cost of

construction of the portion of such area that seats one-half of the projected enrollment of the building, as defined in subdivision (1) of this subsection, which it serves;

(4) In the case of a regional vocational agriculture center or the purchase of equipment pursuant to subsection (a) of section 10-65 or a regional special education facility pursuant to section 10-76e, an amount equal to the eligible cost of such project, as determined by the Commissioner of Education;

(5) In the case of a public school administrative or service facility, one-half of the eligible percentage for subdivisions (1) and (2) of this subsection of the eligible project cost as determined by the Commissioner of Education, or in the case of a regional educational service center administrative or service facility, the eligible percentage, as determined pursuant to subsection (c) of section 10-285a, as amended, of the eligible project cost as determined by the commissioner;

(6) In the case of the total replacement of a roof or the total replacement of a portion of a roof which has existed for at least twenty years, or in the case of the total replacement of a roof or the total replacement of a portion of a roof which has existed for fewer than twenty years when it is determined by a registered architect or registered engineer that such roof was improperly designed or improperly constructed and the town is prohibited from recovery of damages or has no other recourse at law or in equity, the eligible percentage for subdivisions (1) and (2) of this subsection, of the eligible cost as determined by the Commissioner of Education. In the case of the total replacement of a roof or the total replacement of a portion of a roof which has existed for fewer than twenty years (A) when it is determined by a registered architect or registered engineer that such roof was improperly designed or improperly constructed and the town has recourse at law or in equity and recovers less than such eligible cost, the eligible percentage for subdivisions (1) and (2) of this subsection of the difference between such recovery and such eligible

cost, and (B) when the roof is at least fifteen years old but less than twenty years old and it cannot be determined by a registered architect or registered engineer that such roof was improperly designed or improperly constructed, the eligible percentage for subdivisions (1) and (2) of this subsection of the eligible project costs provided such costs are multiplied by the ratio of the age of the roof to twenty years. For purposes of this subparagraph, the age of the roof shall be determined in whole years to the nearest year based on the time between the completed installation of the old roof and the date of the grant application for the school construction project for the new roof;

(7) For the fiscal year ending June 30, 1984, and for each fiscal year thereafter, in the case of projects to correct code violations, the eligible percentage, as determined in section 10-285a, as amended, of the eligible cost as determined by the Commissioner of Education;

(8) In the case of a renovation project for which an application is made on or after July 1, 1995, the eligible percentage as determined in subsection (b) of section 10-285a, as amended, multiplied by the eligible costs as determined by the commissioner, provided the project may be exempt from the standard space specifications, and otherwise ineligible repairs and replacements may be considered eligible for reimbursement as part of such a project, if information is provided acceptable to the commissioner documenting the need for such work and the cost savings to the state and the school district of such renovation project in comparison to alternative construction options;

(9) In the case of projects approved to remedy certified school indoor air quality emergencies, the eligible percentage, as determined in section 10-285a, as amended, of the eligible cost as determined by the Commissioner of Education;

(10) On or after January 1, 2007, in the case of a construction of a school building that is projected to cost not less than five million dollars that is consistent with or exceeds the building construction standards developed pursuant to subsection (b) of section 1 of this act,

or for the renovation of a school building that is projected to cost not less than two million dollars that complies with said standards, one hundred per cent of the costs of construction or renovation that are attributable to conforming the construction or renovation to said standards, as determined by the commissioner, in consultation with the Secretary of the Office of Policy and Management.

(b) (1) In the case of all grants computed under this section for a project which constitutes a replacement, extension or major alteration of a damaged or destroyed facility, no grant may be paid if a local or regional board of education has failed to insure its facilities and capital equipment in accordance with the provisions of section 10-220. The amount of financial loss due to any damage or destruction to any such facility, as determined by ascertaining the replacement value of such damage or destruction, shall be deducted from project cost estimates prior to computation of the grant.

(2) In the case of any grants computed under this section for a school building project authorized pursuant to section 10-283 after July 1, 1979, any federal funds or other state funds received for such school building project shall be deducted from project costs prior to computation of the grant.

(3) The limitation on grants for new outdoor athletic facilities, tennis courts, natatorium, gymnasium and auditorium shall not apply to school building projects for which applications for review of preliminary plans and specifications on Form 2A were submitted prior to October 1, 1975, in the case of towns and prior to October 15, 1975, in the case of regional school districts.

(4) Commencing with the school construction projects authorized by the General Assembly during the fiscal year ending June 30, 1985, and for all such projects so authorized thereafter, the calculation of grants pursuant to this section shall be made in accordance with the state standard space specifications in effect at the time of the final grant calculation, except that on and after July 1, 2005, in the case of a school

district with an enrollment of less than one hundred fifty students in grades kindergarten to grade eight, inclusive, state standard space specifications shall not apply in the calculation of grants pursuant to this section and the Commissioner of Education may modify the standard space specifications for a project in such district.

(c) In the computation of grants pursuant to this section for any school building project authorized by the General Assembly pursuant to section 10-283 after January 1, 1993, any maximum square footage per pupil limit established pursuant to this chapter or any regulation adopted by the State Board of Education pursuant to this chapter shall be increased by twenty-five per cent for a building constructed prior to 1950, except that a board of education may apply to the department by June 30, 2002, for use of such increased percentage for a building constructed prior to July 1, 1951.

(d) In the computation of grants pursuant to this section for any school building project authorized by the General Assembly pursuant to section 10-283 after January 1, 2004, any maximum square footage per pupil limit established pursuant to this chapter or any regulation adopted by the State Board of Education pursuant to this chapter shall be increased by up to one per cent to accommodate a heating, ventilation or air conditioning system, if needed.

Sec. 3. Subdivision (16) of subsection (a) of section 16a-48 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2006*):

(16) "Commercial refrigerators and freezers" means reach-in cabinets, pass-through cabinets, roll-in cabinets and roll-through cabinets that have less than eighty-five feet of capacity **[**. "Commercial refrigerators and freezers" does not include walk-in models or consumer products regulated under the federal National Appliance Energy Conservation Act of 1987**]** <u>designed for the refrigerated or frozen storage of food and food products</u>.

Sec. 4. Subsection (a) of section 16a-48 of the general statutes is

amended by adding subdivisions (23) to (41), inclusive, as follows (*Effective October 1, 2006*):

(NEW) (23) "Electricity ratio" means the ratio of furnace electricity use to total furnace energy use;

(NEW) (24) "Boiler" means a space heater that is a self-contained appliance for supplying steam or hot water primarily intended for space-heating. "Boiler" does not include hot water supply boilers;

(NEW) (25) "Central furnace" means a self-contained space heater designed to supply heated air through ducts of more than ten inches in length;

(NEW) (26) "Residential furnace or boiler" means a product that utilizes only single-phase electric current, or single-phase electric current or DC current in conjunction with natural gas, propane or home heating oil, and which (A) is designed to be the principal heating source for the living space of a residence; (B) is not contained within the same cabinet with a central air conditioner with a rated cooling capacity of not less than 65,000 BTUs per hour; (C) is an electric central furnace, electric boiler, forced-air central furnace, gravity central furnace, or low pressure steam or hot water boiler; and (D) has a heat input rate of less than 300,000 BTUs per hour for electric boilers and low pressure steam or hot water boilers and less than 225,000 BTUs per hour for forced-air central furnaces, gravity central furnaces and electric central furnaces;

(NEW) (27) "Furnace air handler" means the section of the furnace that includes the fan, blower and housing, generally upstream of the burners and heat exchanger. The furnace air handler may include a filter and a cooling coil;

(NEW) (28) "High-intensity discharge lamp" means a lamp in which light is produced by the passage of an electric current through a vapor or gas, and in which the light-producing arc is stabilized by bulb wall temperature and the arc tube has a bulb wall loading in excess of three

watts per square centimeter;

(NEW) (29) "Medium voltage dry-type distribution transformer" means a transformer that (A) has an input voltage of not less than 600 volts but not more than 34,400 volts; (B) is air-cooled; (C) does not use oil as a coolant; and (D) is rated for operation at a frequency of 60 Hertz. "Medium voltage dry-type distribution transformer" does not mean devices with multiple voltage taps, with the highest voltage tap not less than twenty per cent more than the lowest voltage tap, or devices that are designed to be used in a special purpose application and are unlikely to be used in general purpose applications including drive transformers, rectifier transformers, auto transformers, uninterruptible power system transformers, impedence transformers, regulating transformers, sealed and nonventilating transformers, machine tool transformers, welding transformers, grounding transformers or testing transformers;

(NEW) (30) "Metal halide lamp" means a high intensity discharge lamp in which the major portion of the light is produced by radiation of metal halides and their products of dissociation, possibly in combination with metallic vapors;

(NEW) (31) "Metal halide lamp fixture" means a light fixture designed to be operated with a metal halide lamp and a ballast for a metal halide lamp;

(NEW) (32) "Probe start metal halide ballast" means a ballast used to operate metal halide lamps that does not contain an ignitor and that instead starts lamps by using a third starting electrode probe in the arc tube;

(NEW) (33) "Single voltage external AC to DC power supply" means a device that (A) is designed to convert line voltage AC input into lower voltage DC output; (B) is able to convert to only one DC output voltage at a time; (C) is sold with, or intended to be used with, a separate end-use product that constitutes the primary power load; (D) is contained within a separate physical enclosure from the end-use

product; (E) is connected to the end-use product in a removable or hard-wired male and female electrical connection, cable, cord or other wiring; (F) does not have batteries or battery packs, including those that are removable or that physically attach directly to the power supply unit; (G) does not have a battery chemistry or type selector switch and indicator light, or does not have a battery chemistry or type selector switch and a state of charge meter; and (H) has a nameplate output power less than or equal to 250 watts;

(NEW) (34) "State regulated incandescent reflector lamp" means a lamp that is not colored or designed for rough or vibration service applications, that has an inner reflective coating on the outer bulb to direct the light, and E26 medium screw base, and a rated voltage or voltage range that lies at least partially within 115 to 130 volts, and that falls into one of the following categories: (A) A bulged reflector or elliptical reflector or a blown PAR bulb shape and that has a diameter that equals or exceeds 2.25 inches, or (B) a reflector, parabolic aluminized reflector, bulged reflector or similar bulb shape and that has a diameter of 2.25 to 2.75 inches. "State regulated incandescent reflector lamp" does not include ER30, BR30, BR40 and ER40 lamps of not more than fifty watts, BR30, BR40 and ER40 lamps of sixty-five watts and R20 lamps of not more than forty-five watts;

(NEW) (35) "Bottle-type water dispenser" means a water dispenser that uses a bottle or reservoir as the source of potable water;

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

(NEW) (37) "Pool heater" means an appliance designed for heating nonpotable water contained at atmospheric pressure for swimming pools, spas, hot tubs and similar applications, including natural gas,

heat pump, oil and electric resistance pool heaters;

(NEW) (38) "Portable electric spa" means a factory-built electric spa or hot tub, supplied with equipment for heating and circulating water;

(NEW) (39) "Residential pool pump" means a pump used to circulate and filter pool water in order to maintain clarity and sanitation;

(NEW) (40) "Walk-in refrigerator" means a space refrigerated to temperatures at or above thirty-two degrees Fahrenheit that can be walked into and is designed for the refrigerated storage of food and food products;

(NEW) (41) "Walk-in freezer" means a space refrigerated to temperatures below thirty-two degrees Fahrenheit that can be walked into and is designed for the frozen storage of food and food products.

Sec. 5. Subdivision (1) of subsection (d) of section 16a-48 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2006*):

(d) (1) **[**Not later than July 1, 2005, the**]** The department, in consultation with the secretary, shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of this section and to establish minimum energy efficiency standards for the types of new products set forth in subsection (b) of this section. The regulations shall provide for the following minimum energy efficiency standards:

(A) Commercial clothes washers shall meet the requirements shown in Table P-3 of section 1605.3 of the California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4;

(B) **[**commercial**]** Commercial refrigerators and freezers shall meet the August 1, 2004, requirements shown in Table A-6 of **[**said California regulation**]** the California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4;

(C) **[**illuminated**]** Illuminated exit signs shall meet the version 2.0 product specification of the "Energy Star Program Requirements for Exit Signs" developed by the United States Environmental Protection Agency;

(D) **[**large**]** Large packaged air-conditioning equipment having not more than 760,000 BTUs per hour of capacity shall meet a minimum energy efficiency ratio of 10.0 for units using both electric heat and air conditioning or units solely using electric air conditioning, and 9.8 for units using both natural gas heat and electric air conditioning;

(E) **[**large**]** Large packaged air-conditioning equipment having not less than 761,000 BTUs per hour of capacity shall meet a minimum energy efficiency ratio of 9.7 for units using both electric heat and air conditioning or units solely using electric air conditioning, and 9.5 for units using both natural gas heat and electric air conditioning;

(F) **[**low**]** Low voltage dry-type distribution transformers shall meet or exceed the energy efficiency values shown in Table 4-2 of the National Electrical Manufacturers Association Standard TP-1-2002;

(G) **[**torchiere**]** Torchiere lighting fixtures shall not consume more than 190 watts and shall not be capable of operating with lamps that total more than 190 watts;

(H) **[**traffic**]** Traffic signal modules shall meet the product specification of the "Energy Star Program Requirements for Traffic Signals" developed by the United States Environmental Protection Agency that took effect in February, 2001, except where the department, in consultation with the Commissioner of Transportation, determines that such specification would compromise safe signal operation;

(I) **[**unit**]** Unit heaters shall not have pilot lights and shall have either power venting or an automatic flue damper;

(J) On or after January 1, 2008, residential furnaces and boilers

purchased by the state shall meet or exceed the following Annual Fuel Utilization Efficiency: (i) For gas and propane furnaces, ninety per cent Annual Fuel Utilization Efficiency, (ii) for oil furnaces, eighty-three per cent Annual Fuel Utilization Efficiency, (iii) for gas and propane hot water boilers, eighty-four per cent Annual Fuel Utilization Efficiency, (iv) for oil-fired hot water boilers, eighty-four per cent Annual Fuel Utilization Efficiency, (v) for gas and propane steam boilers, eighty-two per cent Annual Fuel Utilization Efficiency, and (vi) for oil-fired steam boilers, eighty-two per cent Annual Fuel Utilization Efficiency;

(K) On or after January 1, 2008, furnace air handlers purchased by the state shall have an electricity ratio of not more than 2.0, except air handlers for oil furnaces with a capacity of less than 94,000 BTUs per hour shall have an electricity ratio of 2.3 or less;

(L) On or after January 1, 2008, medium voltage dry-type distribution transformers shall meet minimum efficiency levels three-tenths of a percentage point higher than the Class 1 efficiency levels for medium voltage distribution transformers specified in Table 4-2 of the "Guide for Determining Energy Efficiency for Distribution Transformers" published by the National Electrical Manufacturers Association;

(M) On or after January 1, 2008, metal halide lamp fixtures manufactured with lamps rated greater than or equal to 150 watts but less than or equal to 500 watts shall not contain a probe-start metal halide lamp ballast in the vertical base up or vertical base down position only;

(N) On or after January 1, 2008, single-voltage external AC to DC power supplies shall meet the tier one energy efficiency requirements of section 1605.3 of the January 2006 California Code of Regulations, Title 20, Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations. This standard applies to single voltage AC to DC power supplies that are sold individually and to those that are sold as a component of or in conjunction with another product;

(O) On or after January 1, 2008, state regulated incandescent reflector lamps shall be manufactured to meet the minimum average lamp efficacy requirements for federally-regulated incandescent reflector lamps contained in 43 USC 6295 (i)(1)(A);

(P) On or after January 1, 2008, bottle-type water dispensers, commercial hot food holding cabinets, portable electric spas, walk-in refrigerators and walk-in freezers shall meet the efficiency requirements of section 1605.3 of the January 2006 California Code of Regulations, Title 20, Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations. On or after January 1, 2010, residential pool pumps shall meet said efficiency requirements;

(Q) On or after January 1, 2008, pool heaters shall meet the efficiency requirements of sections 1605.1 and 1605.3 of the January 2006 California Code of Regulations, Title 20, Division 2, Chapter 4, Article 4: Appliance Efficiency Regulations.

Sec. 6. Section 4a-67c of the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2006*):

The Department of Administrative Services and each other budgeted agency, as defined in section 4-69, exercising procurement authority shall procure equipment and appliances for state use which meet or exceed the federal energy conservation standards set forth in the Energy Policy and Conservation Act, 42 USC 6295, any federal regulations adopted thereunder, **[**and**]** any applicable energy performance standards established in accordance with subsection (j) of section 16a-38 and meet the federal Energy Star standards. Purchases of equipment and appliances for which energy performance standards have been established pursuant to subsection (j) of section 16a-38 shall be (1) made from among those specific models of equipment and appliances which meet such standards, and (2) based, when possible, on competitive bids. Such bids shall be evaluated on the basis of the life-cycle cost standards, if any, established pursuant to subsection (b) of section 16a-38.

Sec. 7. Subdivision (44) of subsection (a) of section 16-1 of the 2006 supplement to the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2006*):

(44) "Class III renewable energy source" means the electricity output from combined heat and power systems with an operating efficiency level of no less than fifty per cent that are part of customer-side distributed resources developed at commercial and industrial facilities in this state on or after January 1, 2006, or the electricity savings **[**created at commercial and industrial facilities in this state from**]** conservation and load management programs and measures begun on or after January 1, 2006, provided residential customers may receive credit for said programs and measures financed by the Conservation and Load Management Fund pursuant to section 16-245m, as amended.

Sec. 8. Subsection (e) of section 16-243q of the 2006 supplement to the general statutes is repealed and the following is substituted in lieu thereof (*Effective October 1, 2006*):

(e) The Department of Public Utility Control shall conduct a contested proceeding to develop the administrative processes and program specifications that are necessary to implement a Class III conservation and distributed resources trading program. The proceeding shall include, but not be limited to, an examination of issues such as (1) the manner in which qualifying activities are certified, tracked and reported, (2) the manner in which Class III certificates are created, accounted for and transferred, **[**(3) the feasibility and benefits of expanding eligible Class III resources to include those resulting from electricity savings made by residential customers, (4)**]** (3) verification of the accuracy of conservation and customer-side distributed resources credits, **[**(5)**]** (4) verification of the fact that resources or credits used to satisfy the requirement of this section have not been used to satisfy any other portfolio or similar requirement, **[**(6)**]** (5) the manner in which credits created by conservation and customer-side distributed resources may best be

allocated to maximize the impact of the trading program, and **[**(7)**]** (6) setting such alternative payment amounts at a level that encourages development of conservation and customer-side distributed resources. The department may retain the services of a third party entity with expertise in the development of energy efficiency trading or verification programs to assist in the development and operation of the program. The department shall issue a decision no later than February 1, **[**2006**]** 2007.

This act shall take effect as follows and shall amend the following sections:		
Section 1	*October 1, 2006*	New section
Sec. 2	*October 1, 2006*	10-286
Sec. 3	*October 1, 2006*	16a-48(a)(16)
Sec. 4	*October 1, 2006*	16a-48(a)
Sec. 5	*October 1, 2006*	16a-48(d)(1)
Sec. 6	*October 1, 2006*	4a-67c
Sec. 7	*October 1, 2006*	16-1(a)(44)
Sec. 8	*October 1, 2006*	16-243q(e)

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