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# A BILL FOR AN ACT

RELATING TO PUBLIC SCHOOL FACILITIES.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

1           SECTION 1. The legislature finds that public school  
2 buildings are critical to the health and educational well-being  
3 of Hawaii's students. The legislature also finds that the  
4 construction and maintenance of public school buildings provides  
5 an opportunity to decrease current and future energy demand and  
6 stimulate economic growth in the labor and manufacturing  
7 industries.

8           Many of the State's public schools have portable facilities  
9 that are in an advanced state of disrepair. Approximately one-  
10 half of the State's one thousand six hundred portable facilities  
11 are at least forty years old. These portable facilities may  
12 harbor mold-borne diseases and many are constructed with  
13 materials that contain a high number of volatile organic  
14 compounds. In addition, these facilities often do not meet  
15 state standards for hurricane and seismic safety, air quality,  
16 or energy use.

17           The purpose of this Act is to improve public school  
18 facilities, improve education through technology and facility



1 design, reduce the cost of energy, decrease carbon emissions and  
2 energy dependence, and create "green" jobs in the technology,  
3 construction, and general labor sectors.

4 SECTION 2. Section 36-35, Hawaii Revised Statutes, is  
5 amended as follows:

6 1. By amending subsection (c) to read:

7 "(c) Criteria used to establish current repair and  
8 maintenance requirements may include:

9 (1) The remaining useful life of the school facility and  
10 its major components;

11 (2) The adjusted life of the school facility and its major  
12 components after repair or maintenance; ~~and~~

13 (3) The current and future repair and maintenance  
14 requirements of the school facility and its components  
15 based on established industry standards or product  
16 manufacturer recommendations; and

17 (4) Energy efficiency and environmental standards as  
18 provided in section 196-9(c) to achieve high  
19 performance classrooms;

20 provided that demolition of a facility or any of its components  
21 may be recommended if the cost of the repairs do not justify the  
22 adjusted life or remaining life of the facility."



1           2. By amending subsection (f) to read:

2           "(f) The superintendent of education shall ensure that all  
3 repair and maintenance projects achieve maximum cost-efficiency  
4 by emphasizing functional or performance criteria, uniformity of  
5 design, and commonality of products, and by avoiding unique or  
6 custom requirements that increase costs[-]; provided that energy  
7 efficiency and environmental standards required by section 196-  
8 9(c) shall be maintained. The superintendent of education shall  
9 develop project specifications based on generic specifications  
10 or prescriptive specifications using standard commercial  
11 products. Prescriptive specifications may include a qualified  
12 product list.

13           For the purposes of this subsection:

14           "Generic specification" means a technical specification  
15 that is written in a clear, unambiguous, and nonrestrictive  
16 manner establishing:

- 17           (1) Design, performance, or functional requirements to  
18                 identify the work to be performed; and  
19           (2) Material standards to be used on a project.

20           "Prescriptive specification" means a technical  
21 specification:



1 (1) Establishing that the required work to be performed is  
2 written in a clear, unambiguous, and nonrestrictive  
3 manner; and

4 (2) Listing manufacturers or products that are acceptable  
5 for use on the project.

6 "Standard commercial product" means a product or material  
7 that in the normal course of business is customarily maintained  
8 in stock by, or readily available for marketing from a  
9 manufacturer, distributor, or dealer.

10 This subsection shall not apply to any school facility  
11 designated a historic property pursuant to section 6E-5.5."

12 SECTION 3. Section 196-9, Hawaii Revised Statutes, is  
13 amended to read as follows:

14 "[+]§196-9[+] **Energy efficiency and environmental**  
15 **standards for state facilities, motor vehicles, and**  
16 **transportation fuel.** (a) Each agency is directed to implement,  
17 to the extent possible, the following goals during planning and  
18 budget preparation and program implementation.

19 (b) With regard to buildings and facilities, each agency  
20 shall:

21 (1) Design and construct buildings meeting the Leadership  
22 in Energy and Environmental Design silver or two green



1 globes rating system or another comparable  
2 state-approved, nationally recognized, and  
3 consensus-based guideline, standard, or system, except  
4 when the guideline, standard, or system interferes or  
5 conflicts with the use of the building or facility as  
6 an emergency shelter;

- 7 (2) Incorporate energy-efficiency measures to prevent heat  
8 gain in residential facilities up to three stories in  
9 height to provide R-19 or equivalent on roofs, R-11 or  
10 equivalent in walls, and high-performance windows to  
11 minimize heat gain and, if air conditioned, minimize  
12 cool air loss. R-value is the constant time rate  
13 resistance to heat flow through a unit area of a body  
14 induced by a unit temperature difference between the  
15 surfaces. R-values measure the thermal resistance of  
16 building envelope components such as roof and walls.  
17 The higher the R-value, the greater the resistance to  
18 heat flow. Where possible, buildings shall be  
19 oriented to maximize natural ventilation and day-  
20 lighting without heat gain and to optimize solar for  
21 water heating. This provision shall apply to new



1 residential facilities built using any portion of  
2 state funds or located on state lands;  
3 (3) Install solar water heating systems where it is cost-  
4 effective, based on a comparative analysis to  
5 determine the cost-benefit of using a conventional  
6 water heating system or a solar water heating system.  
7 The analysis shall be based on the projected life  
8 cycle costs to purchase and operate the water heating  
9 system. If the life cycle analysis is positive, the  
10 facility shall incorporate solar water heating. If  
11 water heating entirely by solar is not cost-effective,  
12 the analysis shall evaluate the life cycle, cost-  
13 benefit of solar water heating for preheating water.  
14 If a multi-story building is centrally air  
15 conditioned, heat recovery shall be employed as the  
16 primary water heating system. Single family  
17 residential clients of the department of Hawaiian home  
18 lands and any agency or program that can take  
19 advantage of utility rebates shall be exempted from  
20 the requirements of this paragraph so they may  
21 continue to qualify for utility rebates for solar  
22 water heating;



1 (4) Implement water and energy efficiency practices in  
2 operations to reduce waste and increase conservation;

3 (5) Incorporate principles of waste minimization and  
4 pollution prevention, such as reducing, revising, and  
5 recycling as a standard operating practice in  
6 programs, including programs for waste management in  
7 construction and demolition projects and office paper  
8 and packaging recycling programs;

9 (6) Use life cycle cost-benefit analysis to purchase  
10 energy efficient equipment such as ENERGY STAR  
11 products and use utility rebates where available to  
12 reduce purchase and installation costs; and

13 (7) Procure environmentally preferable products, including  
14 recycled and recycled-content, bio-based, and other  
15 resource-efficient products and materials.

16 (c) With regard to public school facilities, in addition  
17 to the requirements of subsection (b), agencies shall:

18 (1) Design and construct all public school facilities,  
19 including renovations and projects under five thousand  
20 square feet, to meet the Collaborative for High  
21 Performance Schools rating system, except when the



1 guidelines conflict with the use of the facility as an  
2 emergency shelter;

3 (2) Develop and implement a program to replace portable  
4 classrooms that are more than twenty years old with  
5 high performance classrooms that meet or exceed the  
6 requirements of paragraph (1); and

7 (3) Prioritize public school facilities projects described  
8 in paragraph (1), to the extent that they:

9 (A) Reduce energy use;

10 (B) Promote the use of renewable energy;

11 (C) Support local jobs;

12 (D) Are quick to deploy;

13 (E) Improve science, technology, engineering, and  
14 math education, and provide increased hands-on

15 learning opportunities; and

16 (F) Have forty per cent lower life-cycle costs than  
17 traditional buildings.

18 [~~e~~] (d) With regard to motor vehicles and transportation  
19 fuel, each agency shall:

20 (1) Comply with Title 10, Code of Federal Regulations,  
21 Part 490, Subpart C, "Mandatory State Fleet Program",

22 if applicable;





- 1           (2) Comply with all applicable state laws regarding
- 2           vehicle purchases;
- 3           (3) Once federal and state vehicle purchase mandates have
- 4           been satisfied, purchase the most fuel-efficient
- 5           vehicles that meet the needs of their programs;
- 6           provided that life cycle cost-benefit analysis of
- 7           vehicle purchases shall include projected fuel costs;
- 8           (4) Purchase alternative fuels and ethanol blended
- 9           gasoline when available;
- 10          (5) Evaluate a purchase preference for biodiesel blends,
- 11          as applicable to agencies with diesel fuel purchases;
- 12          (6) Promote efficient operation of vehicles;
- 13          (7) Use the most appropriate minimum octane fuel; provided
- 14          that vehicles shall use 87-octane fuel unless the
- 15          owner's manual for the vehicle states otherwise or the
- 16          engine experiences knocking or pinging;
- 17          (8) Beginning with fiscal year 2005-2006 as the baseline,
- 18          collect and maintain, for the life of each vehicle
- 19          acquired, the following data:
- 20                (A) Vehicle acquisition cost;
- 21                (B) United States Environmental Protection Agency
- 22                rated fuel economy;



- 1 (C) Vehicle fuel configuration, such as gasoline,
- 2 diesel, flex-fuel gasoline/E85, and dedicated
- 3 propane;
- 4 (D) Actual in-use vehicle mileage;
- 5 (E) Actual in-use vehicle fuel consumption; and
- 6 (F) Actual in-use annual average vehicle fuel
- 7 economy; and
- 8 (9) Beginning with fiscal year 2005-2006 as the baseline
- 9 with respect to each agency that operates a fleet of
- 10 thirty or more vehicles, collect and maintain, in
- 11 addition to the data in paragraph (8), the following:
- 12 (A) Information on the vehicles in the fleet,
- 13 including vehicle year, make, model, gross
- 14 vehicle weight rating, and vehicle fuel
- 15 configuration;
- 16 (B) Fleet fuel usage, by fuel;
- 17 (C) Fleet mileage; and
- 18 (D) Overall annual average fleet fuel economy and
- 19 average miles per gallon of gasoline and diesel."

20 SECTION 4. Section 302A-1312, Hawaii Revised Statutes, is  
21 amended by amending subsection (a) to read as follows:

1           "(a) The department of education shall prepare a six-year  
2 program and financial plan for school repair and maintenance  
3 that shall be:

- 4           (1) Based on:
- 5                 (A) Estimated preventive and scheduled maintenance
  - 6                 costs;
  - 7                 (B) Budgeted recurring maintenance;
  - 8                 (C) Health and safety requirements; [~~and~~]
  - 9                 (D) Legal mandates; and
  - 10                (E) Energy efficiency and environmental standards
  - 11                required under section 196-9(c);

12           (2) Insofar as is practical, prepared in accordance with  
13 the principles and procedures contained in section  
14 514A-83.6 or 514B-148; and

15           (3) Submitted initially to the legislature not less than  
16 thirty days prior to the convening of the 2002 regular  
17 session, with annual funding requirements for the  
18 physical plant operations and maintenance account  
19 submitted not less than thirty days prior to the  
20 convening of the 2002 regular session and each regular  
21 session thereafter;

1 provided that the governor may incorporate the six-year program  
2 and financial plan required by this subsection into the six-year  
3 program and financial plan required by section 37-69, if the  
4 plan required by this subsection is incorporated without  
5 reductions or restrictions."

6 SECTION 5. Section 302A-1505, Hawaii Revised Statutes, is  
7 amended by amending subsection (c) to read as follows:

8 "(c) In prioritizing a school's repair and maintenance  
9 needs, the department and the school's principal shall consider  
10 energy efficiency and environmental standards required by  
11 section 196-9(c), as well as the availability of donated and  
12 discounted repair and maintenance services and materials that  
13 will be provided by community groups, volunteers, and  
14 businesses."

15 SECTION 6. This Act shall apply to all school  
16 construction, repair, and maintenance contracts executed after  
17 its effective date.

18 SECTION 7. Statutory material to be repealed is bracketed  
19 and stricken. New statutory material is underscored.

20 SECTION 8. This Act shall take effect on July 1, 2010.

21

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**Report Title:**

Public School Facilities; Construction Standards; Green Schools

**Description:**

Requires construction and renovation of public school facilities to meet the Collaborative for High Performance Schools standards. Requires replacement of old portable buildings with high performance classrooms. Also requires prioritization of public school facilities projects in accordance with certain criteria.

