
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 recognizes that proper
2 maintenance of public school buildings is critical to the health
3 and educational well-being of Hawaii's students. The
4 construction and maintenance of public school buildings provide
5 an opportunity to decrease current and future energy demand and
6 stimulate economic growth in the labor and manufacturing
7 industries.

8 The purpose of this Act is to improve public school
9 facilities, improve education through technology and facility
10 design, reduce the cost of energy, decrease carbon emissions and
11 energy dependence, and create "green" jobs in the technology,
12 construction, and general labor sectors.

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

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

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



- 1 (1) The remaining useful life of the school facility and
- 2 its major components;
- 3 (2) The adjusted life of the school facility and its major
- 4 components after repair or maintenance; [~~and~~]
- 5 (3) The current and future repair and maintenance
- 6 requirements of the school facility and its components
- 7 based on established industry standards or product
- 8 manufacturer recommendations; and
- 9 (4) Energy efficiency and environmental standards as
- 10 provided in section 196-9(c) to achieve high
- 11 performance classrooms;

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

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

16 "(f) The superintendent of education shall ensure that all

17 repair and maintenance projects achieve maximum cost-efficiency

18 by emphasizing functional or performance criteria, uniformity of

19 design, and commonality of products, and by avoiding unique or

20 custom requirements that increase costs[-]; provided that energy

21 efficiency and environmental standards as required under section

22 196-9(c) shall be maintained. The superintendent of education



1 shall develop project specifications based on generic
2 specifications or prescriptive specifications using standard
3 commercial products. Prescriptive specifications may include a
4 qualified product list.

5 For the purposes of this subsection:

6 "Generic specification" means a technical specification
7 that is written in a clear, unambiguous, and nonrestrictive
8 manner establishing:

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

12 "Prescriptive specification" means a technical
13 specification:

- 14 (1) Establishing that the required work to be performed is
15 written in a clear, unambiguous, and nonrestrictive
16 manner; and
17 (2) Listing manufacturers or products that are acceptable
18 for use on the project.

19 "Standard commercial product" means a product or material
20 that in the normal course of business is customarily maintained
21 in stock by, or readily available for marketing from a
22 manufacturer, distributor, or dealer.



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

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

5 "~~{}~~**\$196-9**~~{}~~ **Energy efficiency and environmental**
6 **standards for state facilities, motor vehicles, and**
7 **transportation fuel.** (a) Each agency is directed to implement,
8 to the extent possible, the following goals during planning and
9 budget preparation and program implementation.

10 (b) With regard to buildings and facilities, each agency
11 shall:

12 (1) Design and construct buildings meeting the Leadership
13 in Energy and Environmental Design silver or two green
14 globes rating system or another comparable
15 state-approved, nationally recognized, and
16 consensus-based guideline, standard, or system, except
17 when the guideline, standard, or system interferes or
18 conflicts with the use of the building or facility as
19 an emergency shelter;

20 (2) Incorporate energy-efficiency measures to prevent heat
21 gain in residential facilities up to three stories in
22 height to provide R-19 or equivalent on roofs, R-11 or



1 equivalent in walls, and high-performance windows to
2 minimize heat gain and, if air conditioned, minimize
3 cool air loss. R-value is the constant time rate
4 resistance to heat flow through a unit area of a body
5 induced by a unit temperature difference between the
6 surfaces. R-values measure the thermal resistance of
7 building envelope components such as roof and walls.
8 The higher the R-value, the greater the resistance to
9 heat flow. Where possible, buildings shall be
10 oriented to maximize natural ventilation and day-
11 lighting without heat gain and to optimize solar for
12 water heating. This provision shall apply to new
13 residential facilities built using any portion of
14 state funds or located on state lands;

15 (3) Install solar water heating systems where it is cost-
16 effective, based on a comparative analysis to
17 determine the cost-benefit of using a conventional
18 water heating system or a solar water heating system.
19 The analysis shall be based on the projected life
20 cycle costs to purchase and operate the water heating
21 system. If the life cycle analysis is positive, the
22 facility shall incorporate solar water heating. If



1 water heating entirely by solar is not cost-effective,
2 the analysis shall evaluate the life cycle, cost-
3 benefit of solar water heating for preheating water.
4 If a multi-story building is centrally air
5 conditioned, heat recovery shall be employed as the
6 primary water heating system. Single family
7 residential clients of the department of Hawaiian home
8 lands and any agency or program that can take
9 advantage of utility rebates shall be exempted from
10 the requirements of this paragraph so they may
11 continue to qualify for utility rebates for solar
12 water heating;

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

15 (5) Incorporate principles of waste minimization and
16 pollution prevention, such as reducing, revising, and
17 recycling as a standard operating practice in
18 programs, including programs for waste management in
19 construction and demolition projects and office paper
20 and packaging recycling programs;

21 (6) Use life cycle cost-benefit analysis to purchase
22 energy efficient equipment such as ENERGY STAR



1 products and use utility rebates where available to
2 reduce purchase and installation costs; and
3 (7) Procure environmentally preferable products, including
4 recycled and recycled-content, bio-based, and other
5 resource-efficient products and materials.

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

8 (1) Design and construct all public school facilities,
9 including renovation projects under five thousand
10 square feet, to meet the Collaborative for High
11 Performance Schools rating system, except when the
12 guidelines conflict with the use of the facility as an
13 emergency shelter; and

14 (2) Prioritize public school facilities projects described
15 in paragraph (1), to the extent that they:

16 (A) Promote energy efficiency by requiring forty per
17 cent less energy demands compared to the
18 International Energy Conservation Code;

19 (B) Incorporate renewable energy resources;

20 (C) Prioritize local and regional jobs;

21 (D) Are deployable within twelve months of funding;



1 (E) Improve science, technology, engineering, and
2 math education, and provide increased hands-on
3 learning opportunities; and

4 (F) Anticipate twenty-five per cent lower life-cycle
5 costs than traditional buildings.

6 ~~(e)~~ (d) With regard to motor vehicles and transportation
7 fuel, each agency shall:

8 (1) Comply with Title 10, Code of Federal Regulations,
9 Part 490, Subpart C, "Mandatory State Fleet Program",
10 if applicable;

11 (2) Comply with all applicable state laws regarding
12 vehicle purchases;

13 (3) Once federal and state vehicle purchase mandates have
14 been satisfied, purchase the most fuel-efficient
15 vehicles that meet the needs of their programs;
16 provided that life cycle cost-benefit analysis of
17 vehicle purchases shall include projected fuel costs;

18 (4) Purchase alternative fuels and ethanol blended
19 gasoline when available;

20 (5) Evaluate a purchase preference for biodiesel blends,
21 as applicable to agencies with diesel fuel purchases;

22 (6) Promote efficient operation of vehicles;



1 (7) Use the most appropriate minimum octane fuel; provided
2 that vehicles shall use 87-octane fuel unless the
3 owner's manual for the vehicle states otherwise or the
4 engine experiences knocking or pinging;

5 (8) Beginning with fiscal year 2005-2006 as the baseline,
6 collect and maintain, for the life of each vehicle
7 acquired, the following data:

8 (A) Vehicle acquisition cost;

9 (B) United States Environmental Protection Agency
10 rated fuel economy;

11 (C) Vehicle fuel configuration, such as gasoline,
12 diesel, flex-fuel gasoline/E85, and dedicated
13 propane;

14 (D) Actual in-use vehicle mileage;

15 (E) Actual in-use vehicle fuel consumption; and

16 (F) Actual in-use annual average vehicle fuel
17 economy; [~~and~~]

18 and

19 (9) Beginning with fiscal year 2005-2006 as the baseline
20 with respect to each agency that operates a fleet of
21 thirty or more vehicles, collect and maintain, in
22 addition to the data in paragraph (8), the following:



- 1 (A) Information on the vehicles in the fleet,
- 2 including vehicle year, make, model, gross
- 3 vehicle weight rating, and vehicle fuel
- 4 configuration;
- 5 (B) Fleet fuel usage, by fuel;
- 6 (C) Fleet mileage; and
- 7 (D) Overall annual average fleet fuel economy and
- 8 average miles per gallon of gasoline and diesel."

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

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

- 14 (1) Based on:
 - 15 (A) Estimated preventive and scheduled maintenance
 - 16 costs;
 - 17 (B) Budgeted recurring maintenance;
 - 18 (C) Health and safety requirements; ~~and~~
 - 19 (D) Legal mandates; and
 - 20 (E) Energy efficiency and environmental standards as
 - 21 required under section 196-9(c);



1 (2) Insofar as is practical, prepared in accordance with
2 the principles and procedures contained in section
3 514A-83.6 or 514B-148; and

4 (3) Submitted initially to the legislature not less than
5 thirty days prior to the convening of the 2002 regular
6 session, with annual funding requirements for the
7 physical plant operations and maintenance account
8 submitted not less than thirty days prior to the
9 convening of the 2002 regular session and each regular
10 session thereafter;

11 provided that the governor may incorporate the six-year program
12 and financial plan required by this subsection into the six-year
13 program and financial plan required by section 37-69, if the
14 plan required by this subsection is incorporated without
15 reductions or restrictions."

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

18 "(c) In prioritizing a school's repair and maintenance
19 needs, the department and the school's principal shall consider
20 energy efficiency and environmental standards as required under
21 section 196-9(c), as well as the availability of donated and
22 discounted repair and maintenance services and materials that



1 will be provided by community groups, volunteers, and
2 businesses."

3 SECTION 6. This Act shall apply to all school
4 construction, repair, and maintenance contracts executed after
5 its effective date.

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

8 SECTION 8. This Act shall take effect on July 1, 2009.



Report Title:

Energy Efficiency and Environmental Standards; Public 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. (HB986 CD1)

