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# A BILL FOR AN ACT

RELATING TO ENERGY RESOURCES

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

1           SECTION 1. Section 196-9, Hawaii Revised Statutes, is  
2 amended to read as follows:

3           "~~§~~196-9~~§~~ **Energy efficiency and environmental**  
4 **standards for state facilities, motor vehicles, and**  
5 **transportation fuel.** (a) Each agency is directed to implement,  
6 to the extent possible, the following goals during planning and  
7 budget preparation and program implementation.

8           (b) With regard to buildings and facilities, each agency  
9 shall:

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



- 1           (2) Incorporate energy-efficiency measures to prevent heat  
2           gain in residential facilities up to three stories in  
3           height to provide R-19 or equivalent on roofs, R-11 or  
4           equivalent in walls, and high-performance windows to  
5           minimize heat gain and, if air conditioned, minimize  
6           cool air loss. R-value is the constant time rate  
7           resistance to heat flow through a unit area of a body  
8           induced by a unit temperature difference between the  
9           surfaces. R-values measure the thermal resistance of  
10          building envelope components such as roof and walls.  
11          The higher the R-value, the greater the resistance to  
12          heat flow. Where possible, buildings shall be  
13          oriented to maximize natural ventilation and day-  
14          lighting without heat gain and to optimize solar for  
15          water heating. This provision shall apply to new  
16          residential facilities built using any portion of  
17          state funds or located on state lands;
- 18          (3) Install solar water heating systems where it is cost-  
19          effective, based on a comparative analysis to  
20          determine the cost-benefit of using a conventional  
21          water heating system or a solar water heating system.  
22          The analysis shall be based on the projected life



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

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

18 (5) Incorporate principles of waste minimization and  
19 pollution prevention, such as reducing, revising, and  
20 recycling as a standard operating practice in  
21 programs, including programs for waste management in



1 construction and demolition projects and office paper  
2 and packaging recycling programs;

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

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

10 (c) With regard to motor vehicles and transportation fuel,  
11 each agency shall:

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

15 (2) Comply with all applicable state laws regarding  
16 vehicle purchases;

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



- 1           (4) Purchase alternative fuels and ethanol blended
- 2                   gasoline when available;
- 3           (5) Evaluate a purchase preference for biodiesel blends,
- 4                   as applicable to agencies with diesel fuel purchases;
- 5           (6) Promote efficient operation of vehicles;
- 6           (7) Use the most appropriate minimum octane fuel; provided
- 7                   that vehicles shall use 87-octane fuel unless the
- 8                   owner's manual for the vehicle states otherwise or the
- 9                   engine experiences knocking or pinging;
- 10          (8) Beginning with fiscal year 2005-2006 as the baseline,
- 11                   collect and maintain, for the life of each vehicle
- 12                   acquired, the following data:
- 13                   (A) Vehicle acquisition cost;
- 14                   (B) United States Environmental Protection Agency
- 15                   rated fuel economy;
- 16                   (C) Vehicle fuel configuration, such as gasoline,
- 17                   diesel, flex-fuel gasoline/E85, and dedicated
- 18                   propane;
- 19                   (D) Actual in-use vehicle mileage;
- 20                   (E) Actual in-use vehicle fuel consumption; and
- 21                   (F) Actual in-use annual average vehicle fuel
- 22                   economy; and



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

5           (A) Information on the vehicles in the fleet,  
6           including vehicle year, make, model, gross  
7           vehicle weight rating, and vehicle fuel  
8           configuration;

9           (B) Fleet fuel usage, by fuel;

10          (C) Fleet mileage; and

11          (D) Overall annual average fleet fuel economy and  
12          average miles per gallon of gasoline and diesel.

13          (d) All new state buildings and facilities for which  
14 construction commences after January 1, 2010, shall be designed  
15 and constructed so that no less than ten per cent of their  
16 electricity requirements are supplied by renewable energy  
17 technology; provided that exempt facilities shall not be subject  
18 to this requirement.

19          As used in this subsection, "exempt facility" and  
20 "renewable energy technology" shall have the same meanings as in  
21 section 196-11."



# H.B. NO. 737

1           SECTION 2. Statutory material to be repealed is bracketed  
2 and stricken. New statutory material is underscored.

3           SECTION 3. This Act shall take effect upon its approval.

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INTRODUCED BY:

John M. Pappas  
Numeri Shani  
Cynthia Thelen

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**Report Title:**

Energy Resources; State Buildings

**Description:**

Requires all new state buildings and facilities for which construction commences after 1/1/10, to have no less than 10% of electricity usage supplied by renewable energy.

