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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. The legislature finds that Hawaii's economic  
2 viability is dependent on the availability of affordable energy  
3 pricing. In early 2008, the price of crude oil surpassed the  
4 \$100 per barrel mark from the 2007 annual average of \$65 per  
5 barrel, burdening Hawaii's residents and businesses with  
6 increasingly high electricity and gasoline costs.

7           Recognizing the critical importance of energy to the State,  
8 the legislature in 1976 enacted Act 189 establishing state  
9 income tax credits to encourage private investment in renewable  
10 energy systems among other measures, and these incentives have  
11 proven successful, beneficial, and cost effective. The original  
12 Act has been amended 11 times, varying credit rates,  
13 applicability, and duration, demonstrating that past progress  
14 and prior accomplishments in energy sustainability confer no  
15 license for complacency. The legislature finds, in fact, fossil  
16 fuel imports now account for a greater impact upon Hawaii's  
17 economy than at any prior time in the past, substantially



1 exceeding that of every other state despite the fact that we are  
2 blessed with the greatest number of renewable energy resources  
3 in the nation.

4 According to the January 2002 report of the energy-  
5 efficiency policy task force, in 2001 when oil prices averaged  
6 \$23 per barrel, the State of Hawaii refunded an estimated  
7 \$2,765,000 to 2,500 solar thermal system purchasers. This  
8 spending was estimated to have led to the following economic  
9 outcomes:

- 10 (1) Support for 300 jobs each year that the energy  
11 conservation income tax credit remained at a 35 per  
12 cent level and creation of 64 new jobs for every 2,500  
13 new systems installed, a job impact that increased in  
14 relation to the number of systems continuously  
15 installed; and
- 16 (2) A return to the State of \$5,200,000 in tax revenues  
17 for every 2,500 systems installed over the 25-year  
18 life of these systems, a revenue impact that increased  
19 in relation to the number of systems continuously  
20 installed. For example, if the number of systems  
21 installed each year grows to 5,000, it was predicted  
22 that \$10,400,000 in tax revenue would be generated



1           over the life of these systems at current tax  
2           incentive levels.

3           However, the legislature finds that, with crude oil prices  
4 rising from \$65 to over \$100 per barrel in less than one year  
5 and with no relief under the State's direct control and  
6 jeopardizing the State's economic viability, the State must  
7 seriously consider requiring the installation of solar water  
8 heater systems in all new single-family dwellings constructed  
9 after December 31, 2009, to accelerate the installation of this  
10 type of energy saving device to benefit the owners and renters  
11 of newly constructed homes. A government mandate of this  
12 technology in new home construction effectively shifts from  
13 government investment in this technology via tax credits to a  
14 required investment by the private sector that will result in  
15 greater benefit to the public at large through the prudent  
16 investment in this type of renewable energy saving device.

17           The legislature finds that a conventional electric water  
18 tank accounts for 30 to 35 per cent of a home's electric bill.  
19 It is estimated that the savings from a home's electricity bill  
20 through the installation of a solar water heater system could  
21 result in the system being paid off in eight to ten years  
22 without a state tax incentive. If oil prices continue to rise,



1 it is possible that energy savings may pay for the system even  
2 sooner. Furthermore, if the expense of the installation of a  
3 solar water heater system is included in the mortgage of a new  
4 home, given the high and unpredictable cost of oil, the savings  
5 from the lowered electricity costs may exceed the additional  
6 monthly payments for the solar water heater system, which itself  
7 has the added benefit of being an allowable tax deductible  
8 expense that may also be eligible for a federal renewable energy  
9 tax credit. Therefore, the legislature finds that with a solar  
10 water heater system mandate, and with a properly sized and  
11 installed solar water heater system, a household can increase  
12 its disposable income through this type of prudent, energy  
13 saving investment.

14 The legislature further finds that the favorable impact of  
15 this policy on the environment is undeniable. In 2006, there  
16 were 5,700 new residences constructed; assuming that the number  
17 of new single-homes constructed remains approximately the same,  
18 this would amount to over 10,260 tons of greenhouse gas  
19 emissions avoided per year.

20 The legislature recognizes and finds that the  
21 discontinuation of the tax credit for installation of solar  
22 energy water heating devices for homes with building permits



1 issued prior to January 1, 2010, would remove an important  
2 financial incentive for the installation of these devices where  
3 the upfront cost, when not rolled into a mortgage, may be cost  
4 prohibitive. The availability of the tax credit, in this  
5 situation, has proven to be beneficial to the occupant of the  
6 home where the device is installed and also has provided a  
7 positive revenue impact to the State. Furthermore, the  
8 legislature has provided a mechanism for the establishment of  
9 other demand side incentives and benefits through the public  
10 benefits fund under part VII, chapter 269, Hawaii Revised  
11 Statutes. The legislature is confident that the transition  
12 provisions established in section 269-124, Hawaii Revised  
13 Statutes, will facilitate the provision of suitable demand-side  
14 management and energy-efficiency programs for energy consumers.

15 Accordingly, the purpose of this Act is to increase the use  
16 of renewable energy to protect our environment, reduce  
17 pollution, make housing more affordable, and enhance Hawaii's  
18 local economy by:

- 19 (1) Requiring the installation of solar water heater  
20 systems, comparable renewable energy systems, or  
21 demand gas water heaters in all new residential



1 development projects constructed after January 1,  
2 2010; and

3 (2) Restricting the solar thermal energy system tax credit  
4 available for single-family residential properties to  
5 those properties for which building permits were  
6 issued prior to January 1, 2010.

7 SECTION 2. Chapter 196, Hawaii Revised Statutes, is  
8 amended by adding a new section to be appropriately designated  
9 and to read as follows:

10 "§196- Solar water heater system required for new  
11 single-family residential construction. (a) On or after  
12 January 1, 2010, no building permit shall be issued for a  
13 single-family dwelling that does not include a solar water  
14 heater system that meets the standards established pursuant to  
15 section 269- , unless the energy resources coordinator  
16 approves a variance. A variance shall only be approved if an  
17 architect or engineer licensed under chapter 464 attests that:

- 18 (1) Installation is impracticable due to poor solar  
19 resource;
- 20 (2) Installation is cost-prohibitive based upon a life  
21 cycle cost-benefit analysis that incorporates the  
22 average residential utility bill and the cost of the



1           new solar water heater system with a life cycle that  
2           does not exceed fifteen years;

3           (3) A substitute renewable energy technology system, as  
4           defined in section 235-12.5, is used as the primary  
5           energy source for heating water; or

6           (4) A demand water heater device approved by Underwriters  
7           Laboratories, Inc., is installed; provided that at  
8           least one other gas appliance is installed in the  
9           dwelling. For the purposes of this paragraph, "demand  
10           water heater" means a gas-tankless instantaneous water  
11           heater that provides hot water only as it is needed.

12           (b) A request for a variance shall be submitted to the  
13           energy resources coordinator on an application prescribed by the  
14           energy resources coordinator and shall include, but not be  
15           limited to, a description of the location of the property and  
16           justification for the approval of a variance using the criteria  
17           established in subsection (a). A variance shall be deemed  
18           approved if not denied within thirty working days after receipt  
19           of the variance application.

20           (c) Nothing in this section shall preclude any county from  
21           establishing procedures and standards required to implement this  
22           section.



1        (d) Nothing in this section shall preclude participation  
2 in any utility demand-side management program or public benefits  
3 fund under part VII of chapter 269."

4        SECTION 3. Chapter 269, Hawaii Revised Statutes, is  
5 amended by adding a new section to be appropriately designated  
6 and to read as follows:

7        "**§269-        Solar water heater system standards.** Not later  
8 than July 1, 2009, or as soon as reasonably practicable, the  
9 public utilities commission shall adopt or establish by rule,  
10 tariff, or order, standards for solar water heater systems to  
11 include, but not be limited to, specifications for the  
12 performance, materials, components, durability, longevity,  
13 proper sizing, installation, and quality to promote the  
14 objectives of section 269-124."

15        SECTION 4. Section 235-12.5, Hawaii Revised Statutes, is  
16 amended to read as follows:

17        "**§235-12.5 Renewable energy technologies; income tax**  
18 **credit.** (a) When the requirements of subsection (c) are met,  
19 each individual or corporate taxpayer that files an individual  
20 or corporate net income tax return for a taxable year may claim  
21 a tax credit under this section against the Hawaii state  
22 individual or corporate net income tax. The tax credit may be





1 claimed for every eligible renewable energy technology system  
2 that is installed and placed in service in the State by a  
3 taxpayer during the taxable year. This credit shall be  
4 available for systems installed and placed in service in the  
5 State after June 30, 2003. The tax credit may be claimed as  
6 follows:

7 (1) Solar thermal energy systems for:

8 (A) Single-family residential property[+] for which a  
9 building permit was issued prior to January 1,  
10 2010: thirty-five per cent of the actual cost or  
11 \$2,250, whichever is less;

12 (B) Multi-family residential property: thirty-five  
13 per cent of the actual cost or \$350 per unit,  
14 whichever is less; and

15 (C) Commercial property: thirty-five per cent of the  
16 actual cost or \$250,000, whichever is less;

17 (2) Wind-powered energy systems for:

18 (A) Single-family residential property: twenty per  
19 cent of the actual cost or \$1,500, whichever is  
20 less;



1 (B) Multi-family residential property: twenty per  
2 cent of the actual cost or \$200 per unit,  
3 whichever is less; and

4 (C) Commercial property: twenty per cent of the  
5 actual cost or \$500,000, whichever is less; and

6 (3) Photovoltaic energy systems for:

7 (A) Single-family residential property: thirty-five  
8 per cent of the actual cost or \$5,000, whichever  
9 is less;

10 (B) Multi-family residential property: thirty-five  
11 per cent of the actual cost or \$350 per unit,  
12 whichever is less; and

13 (C) Commercial property: thirty-five per cent of the  
14 actual cost or \$500,000, whichever is less;

15 provided that multiple owners of a single system shall be  
16 entitled to a single tax credit; and provided further that the  
17 tax credit shall be apportioned between the owners in proportion  
18 to their contribution to the cost of the system.

19 In the case of a partnership, S corporation, estate, or  
20 trust, the tax credit allowable is for every eligible renewable  
21 energy technology system that is installed and placed in service  
22 in the State by the entity. The cost upon which the tax credit



1 is computed shall be determined at the entity level.  
2 Distribution and share of credit shall be determined pursuant to  
3 section 235-110.7(a).

4 (b) For the purposes of this section:

5 "Actual cost" means costs related to the renewable energy  
6 technology systems under subsection (a), including accessories  
7 and installation, but not including the cost of consumer  
8 incentive premiums unrelated to the operation of the system or  
9 offered with the sale of the system and costs for which another  
10 credit is claimed under this chapter.

11 "Renewable energy technology system" means a new system  
12 that captures and converts a renewable source of energy, such as  
13 wind, heat (solar thermal), or light (photovoltaic) from the sun  
14 into:

- 15 (1) A usable source of thermal or mechanical energy;
- 16 (2) Electricity; or
- 17 (3) Fuel.

18 "Solar or wind energy system" means any identifiable  
19 facility, equipment, apparatus, or the like that converts  
20 insolation or wind energy to useful thermal or electrical energy  
21 for heating, cooling, or reducing the use of other types of  
22 energy that are dependent upon fossil fuel for their generation.



1 (c) For taxable years beginning after December 31, 2005,  
2 the dollar amount of any utility rebate shall be deducted from  
3 the cost of the qualifying system and its installation before  
4 applying the state tax credit.

5 (d) The director of taxation shall prepare any forms that  
6 may be necessary to claim a tax credit under this section,  
7 including forms identifying the technology type of each tax  
8 credit claimed under this section, whether for solar thermal,  
9 photovoltaic from the sun, or wind. The director may also  
10 require the taxpayer to furnish reasonable information to  
11 ascertain the validity of the claim for credit made under this  
12 section and may adopt rules necessary to effectuate the purposes  
13 of this section pursuant to chapter 91.

14 (e) If the tax credit under this section exceeds the  
15 taxpayer's income tax liability, the excess of the credit over  
16 liability may be used as a credit against the taxpayer's income  
17 tax liability in subsequent years until exhausted. All claims  
18 for the tax credit under this section, including amended claims,  
19 shall be filed on or before the end of the twelfth month  
20 following the close of the taxable year for which the credit may  
21 be claimed. Failure to comply with this subsection shall  
22 constitute a waiver of the right to claim the credit.



1 (f) By or before December, 2005, to the extent feasible,  
2 using existing resources to assist the energy-efficiency policy  
3 review and evaluation, the department shall assist with data  
4 collection on the following:

5 (1) The number of renewable energy technology systems that  
6 have qualified for a tax credit during the past year  
7 by:

8 (A) Technology type (solar thermal, photovoltaic from  
9 the sun, and wind); and

10 (B) Taxpayer type (corporate and individual); and

11 (2) The total cost of the tax credit to the State during  
12 the past year by:

13 (A) Technology type; and

14 (B) Taxpayer type.

15 (g) For systems installed and placed in service in 2009,  
16 no residential home developer shall be entitled to claim the  
17 credit under subsections (a) (1) (A), (a) (2) (A), and (a) (3) (A). A  
18 residential home developer is defined as a person who holds more  
19 than one residential dwelling for sale as inventory."

20 SECTION 5. Statutory material to be repealed is bracketed  
21 and stricken. New statutory material is underscored.



1           SECTION 6. This Act shall take effect upon approval;  
2 provided that section 4 shall apply to taxable years beginning  
3 after December 31, 2008.



**Report Title:**

Solar Energy Devices; Water Heating; Residential; Tax Credit

**Description:**

Directs the public utilities commission to establish standards for solar water heater systems. Prohibits issuance of a building permit on or after 1/1/2010 for single-family residences that do not include a solar water heater system that meets the standards. Allows the energy resources coordinator to approve a variance for installation of solar water heater systems. Restricts the solar thermal energy systems tax credit available for single-family residential properties to those properties for which permits were issued prior to 1/1/2010. Provides that renewable energy technologies tax credits for systems installed and placed in service in 2009 for single-family residential properties may not be claimed by residential home developers. (CD1)

