
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 The legislature also finds that fossil fuel imports now
8 account for a greater impact upon Hawaii's economy than at any
9 prior time in the past, substantially exceeding that of every
10 other state despite the fact that we are blessed with the
11 greatest number of renewable energy resources in the nation.

12 The legislature further finds that, with crude oil prices
13 rising from \$65 to over \$100 per barrel in less than one year
14 and with no relief under the State's direct control and
15 jeopardizing the State's economic viability, the State must
16 seriously consider requiring the installation of solar thermal
17 systems to heat water in all new single-family dwellings



1 constructed after December 31, 2009, to accelerate the
2 installation of this type of energy saving device to benefit the
3 owners and renters of newly constructed homes. A government
4 mandate of this technology in new home construction effectively
5 requires the private sector to jointly invest with the State so
6 that the result will be greater benefits to the public at large
7 through the prudent investment in this type of renewable energy
8 saving device.

9 The legislature finds that a conventional electric water
10 tank accounts for 30 to 35 per cent of a home's electric bill.
11 It is estimated that the savings from a home's electricity bill
12 through the installation of a solar thermal water heater system
13 could result in the system being paid off in eight to ten years
14 or less. Furthermore, if the expense of the installation of a
15 solar thermal water heater system is included in the mortgage of
16 a new home, given the high and unpredictable cost of oil, the
17 savings from the lowered electricity costs may exceed the
18 additional monthly payments for the solar thermal water heater
19 system, which itself has the added benefit of being an allowable
20 tax deductible expense that may also be eligible for a federal
21 renewable energy tax credit. Therefore, the legislature finds
22 that with a solar thermal water heater system mandate, and with



1 a properly sized and installed solar thermal water heater
2 system, a household can increase its disposable income through
3 this type of prudent, energy saving investment.

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

10 The purpose of this Act is to increase the use of renewable
11 energy to protect our environment, reduce pollution, make
12 housing more affordable, and enhance Hawaii's local economy by
13 requiring the installation of solar thermal water heater systems
14 in all new residential projects.

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

18 "§196- _____ Solar thermal water heater required for new
19 single-family residential construction. (a) Beginning January
20 1, 2010, a solar thermal water heater shall be installed as the
21 primary water heating system in the construction of every new
22 residential detached single-family residence.



1 (b) Solar thermal water heaters required under subsection
2 (a) shall be installed by a contractor licensed in this state in
3 compliance with the residential solar thermal water heating
4 system standards and specifications promulgated by any ratepayer
5 financed energy efficiency rebate program administered by an
6 electric utility or by the public benefits fund administrator
7 under section 269-123, that are in effect at the time at which
8 construction permits are issued for the construction of the new
9 residential detached single-family residence. In the event that
10 compliance with these standards and specifications is
11 technically impracticable, as determined solely by the
12 administrator of the ratepayer financed energy efficiency rebate
13 program, the administrator may grant a waiver that results in
14 the greatest contribution by the solar thermal water heater to
15 the residential water heating load.

16 SECTION 3. Section 269-121, Hawaii Revised Statutes, is
17 amended by amending subsection (b) to read as follows:

18 "(b) If the public utilities commission establishes a
19 public benefit fund, the surcharge shall be known as the public
20 benefits fee. Moneys in the fund shall be ratepayer funds that
21 shall be used to support energy-efficiency and demand-side
22 management programs and services, and to support compliance



1 verification of a solar thermal water heater installed in the
2 construction of every new residential single-family residence,
3 subject to the review and approval of the public utilities
4 commission. These moneys shall not be available to meet any
5 current or past general obligations of the State.

6 SECTION 4. Section 269-123, Hawaii Revised Statutes, is
7 amended to read as follows:

8 "[+]§269-123[+] **Requirements for the public benefits fund**
9 **administrator.** (a) Any fund administrator appointed pursuant
10 to section 269-122 shall satisfy the qualification requirements
11 established by the public utilities commission by rule or order.
12 These requirements may include experience and expertise in:

13 (1) Energy-efficient and renewable energy technologies and
14 methods; and

15 (2) Identifying, developing, administering, and
16 implementing demand-side management and
17 energy-efficiency programs.

18 (b) The fund administrator's duties and responsibilities
19 shall be established by the public utilities commission by rule
20 or order, and may include:

21 (1) Identifying, developing, administering, promoting,
22 implementing, and evaluating programs, methods, and



- 1 technologies that support energy-efficiency and
2 demand-side management programs;
- 3 (2) Encouraging the continuance or improvement of
4 efficiencies made in the production, delivery, and use
5 of energy-efficiency and demand-side management
6 programs and services;
- 7 (3) Using the energy-efficiency expertise and capabilities
8 that have developed or may develop in the [State]
9 state and consulting with state agency experts;
- 10 (4) Promoting program initiatives, incentives, and market
11 strategies that address the needs of persons facing
12 the most significant barriers to participation;
- 13 (5) Promoting coordinated program delivery, including
14 coordination with electric public utilities regarding
15 the delivery of low-income home energy assistance,
16 other demand-side management or energy-efficiency
17 programs, and any utility programs;
- 18 (6) Consideration of innovative approaches to delivering
19 demand-side management and energy-efficiency services,
20 including strategies to encourage third party
21 financing and customer contributions to the cost of



1 demand-side management and energy-efficiency services;
2 and

3 (7) Submitting, to the public utilities commission for
4 review and approval, a multi-year budget and planning
5 cycle that promotes program improvement, program
6 stability, and maturation of programs and delivery
7 resources.

8 (c) The fund administrator's duties and responsibilities
9 shall include:

10 (1) Maintaining or improving current residential solar
11 thermal water heating system standards and
12 specifications based on the performance, prescriptive,
13 durability, longevity, and quality assurance standards
14 and mechanisms first developed by Hawaiian Electric
15 Company, Inc., including:

16 (A) Solar thermal water heater system design and
17 sizing criteria that provide for a ninety per
18 cent annualized solar contribution, not to exceed
19 one hundred and ten per cent, and ensure that
20 each solar thermal water heating system
21 installation yields significant demand-side
22 management benefits;



- 1 (B) A solar thermal water heater system design life
2 of no less than fifteen years;
- 3 (C) Prescriptive standards and specifications
4 governing solar thermal water heater system
5 components and the installation of solar thermal
6 water heater systems;
- 7 (D) An approved components and equipment list to
8 ensure that solar thermal water heater system
9 installations use only high quality durable and
10 reliable components suitable for Hawaii's
11 environment; and
- 12 (E) A post-installation inspection regimen that
13 ensures each solar thermal water heater system is
14 installed in accordance with the performance
15 guidelines, durability requirements, standards
16 and specifications, and quality assurance
17 mechanisms of this subsection;
- 18 (2) Verifying compliance with the standards and
19 specifications under paragraph (1); and
- 20 (3) Determining the necessity for the convening of a
21 technical advisory committee by the fund administrator
22 or any electric utility, composed of representatives



1 from the solar and building industries, electric
2 utilities, and other stakeholders, to propose changes
3 or to address any proposed changes to the residential
4 solar thermal water heating system standards and
5 specifications, and where necessary convening a
6 technical advisory committee."

7 SECTION 5. Statutory material to be repealed is bracketed
8 and stricken. New statutory material is underscored.

9 SECTION 6. This Act shall take effect July 1, 2020.



Report Title:

Solar Energy Devices; Water Heating; Residential; Tax Credit

Description:

Requires installation of solar thermal water heaters in single-family residences constructed after January 1, 2010.

Establishes system standards and requires any Public Benefit Fund to provide resources to the fund administrator to verify compliance. (SB644 HD3)

