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# A BILL FOR AN ACT

RELATING TO ENERGY.

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

1           SECTION 1. There have been several recent economic studies  
2 on the benefits of increasing energy efficiency and indigenous  
3 renewable energy resources as a method of stimulating local  
4 economic growth. These studies include Black and Veatch,  
5 "Assessment of the Potential Impacts of a Renewable Portfolio  
6 Standard in Pennsylvania"; a University of Nevada report, "The  
7 Potential Economic Impact of Nevada's Renewable Energy  
8 Resources"; University of Illinois, Regional Economic  
9 Applications Laboratory Report, "Job Jolt: The Economic Impact  
10 of Repowering the Midwest"; and Howard Geller, "Energy  
11 Efficiency and Job Creation."

12           An energy efficiency utility is an entity that provides a  
13 comprehensive and consistent set of energy efficiency programs  
14 to electric consumers. This innovation would significantly  
15 improve upon the energy efficiency programs delivered by  
16 individual electric utilities operating in the State. This  
17 concept takes advantage of the fact that installing energy  
18 efficiency measures can cost much less per kilowatt-hour than



1 installing new generation capacity. For example, Efficiency  
2 Vermont is an independent entity whose sole mission is energy  
3 efficiency. It provides technical advice, financial assistance,  
4 and design guidance to help make Vermont homes and businesses  
5 more energy efficient. Efficiency Vermont is funded by an  
6 "energy efficiency charge" that appears on consumers' electric  
7 bills. Efficiency Vermont was a 2003 winner of Harvard  
8 University's Kennedy School of Government's Innovations in  
9 American Government Award.

10 Under the current electricity rate structure, an electric  
11 utility company operates under conflicting objectives. An  
12 electric utility must sell electrons to earn a profit; however,  
13 public utility commission regulation also requires the electric  
14 utility to provide customers with energy efficiency devices  
15 designed to reduce their electricity usage.

16 Furthermore, electric utilities are guaranteed cost  
17 recovery plus profits for building infrastructure to meet peak  
18 demand. There are no adequate financial incentives to increase  
19 system utilization, that is, for an electric utility to flatten  
20 or level its load, which tends to be more beneficial to the  
21 rate-payer. Such a model tends to be inefficient as it overly



1 focuses on meeting peak load rather than average load at the  
2 rate-payer's expense.

3 The purpose of this Act is to authorize the public  
4 utilities commission to establish an energy efficient utility  
5 and energy efficiency portfolio standard.

6 SECTION 2. Chapter 269, Hawaii Revised Statutes, is  
7 amended by adding five new sections to be appropriately  
8 designated and to read as follows:

9 "§269-A Public benefits fund; authorization. The public  
10 utilities commission, by order or rule, may redirect all or a  
11 portion of the funds collected through the current demand-side  
12 management surcharge by Hawaii's electric utilities into a  
13 public benefits fund that may be established by the commission.  
14 If the public utilities commission establishes a public benefits  
15 fund, the surcharge shall be known as the public benefits fee.  
16 The fee shall be shown separately on each customer's bill, paid  
17 to a fund administrator appointed by the public utilities  
18 commission, and deposited into the fund. Moneys in the fund  
19 shall be ratepayer funds that shall be used to support  
20 demand-side management and renewable energy programs and  
21 services that meet the requirements of section 269-92. Balances  
22 in the fund shall be carried forward and remain in the fund at



1 the end of each fiscal year. These moneys shall not be  
2 available to meet any current or past general obligations of the  
3 State. Interest earned shall accrue to the fund.

4 **§269-B Public benefits fund administrator; establishment.**

5 The public utilities commission shall appoint a fund  
6 administrator to operate and manage the programs established in  
7 section 269-A. The fund administrator shall not expend more  
8 than ten per cent of the fund in any fiscal year for  
9 administration of the programs established by section 269-A.  
10 The fund administrator shall report to the public utilities  
11 commission on a regular basis. The fund administration shall be  
12 delegated to a third party based upon the requirements imposed  
13 upon the public utilities commission in section 269-C.

14 Notwithstanding any other provision of law, the fund  
15 administrator shall not be a utility or a utility affiliate.

16 **§269-C Requirements for the public benefits fund**

17 **administrator.** The fund administrator shall:

18 (1) Have experience and expertise in energy efficient and  
19 renewable energy technologies and methods;

20 (2) Have experience and expertise in implementing  
21 demand-side management or energy efficiency and  
22 renewable energy programs;



- 1        (3) Promote and implement programs, methods, and  
2        technologies that support energy efficiency and the  
3        use of renewable energy;
- 4        (4) Require that continued or improved efficiencies be  
5        made in the production, delivery, and use of  
6        demand-side management and renewable energy products  
7        and services;
- 8        (5) Build on the energy efficiency expertise and  
9        capabilities that have developed or may develop in the  
10       State and consult with state agency experts;
- 11       (6) Promote program initiatives, incentives, and market  
12       strategies that address the needs of individuals or  
13       businesses facing the most significant barriers to  
14       participation;
- 15       (7) Promote coordinated program delivery, including  
16       coordination with low-income home energy assistance  
17       and other demand-side management and renewable energy  
18       programs, and utility programs;
- 19       (8) Consider innovative approaches to delivering  
20       demand-side management and renewable energy products  
21       and services, including strategies to encourage third  
22       party financing and customer contributions to the cost



1 of demand-side management and renewable energy  
2 products and services;

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

7 (10) Be obligated to deliver its share of the renewable  
8 portfolio standard, and energy efficiency portfolio  
9 standard if an energy efficiency portfolio is  
10 established, to the extent that the fund administrator  
11 is given the responsibility and funding to implement  
12 energy efficiency and renewable energy.

13 **§269-D Transitioning from utility demand-side management**  
14 **programs to the public benefits fund.** If the public utilities  
15 commission establishes a public benefits fund pursuant to  
16 section 269-A, the commission shall:

17 (1) Develop a transition plan that ensures that utility  
18 demand-side management programs are continued until  
19 the transition date, to be established by the public  
20 utilities commission, and that the fund administrator  
21 will be able to provide demand-side management and



- 1           renewable energy products and services on the  
2           transition date;
- 3       (2) Ensure that all retail electricity customers,  
4           including state and county agencies, regardless of the  
5           retail electricity or gas provider, have an  
6           opportunity to participate in and benefit from a  
7           comprehensive set of cost-effective demand-side  
8           management and renewable energy programs and  
9           initiatives designed to overcome barriers to  
10          participation;
- 11       (3) Approve programs, measures, and delivery mechanisms  
12          that reasonably reflect current and projected utility  
13          integrated resource planning, market conditions,  
14          technological options, and environmental benefits;
- 15       (4) Provide for delivery of these programs as rapidly as  
16          possible, taking into consideration the need for these  
17          services and cost-effective delivery mechanisms;
- 18       (5) Consider the unique geographic location of the State  
19          and the high costs of energy in developing programs  
20          that will promote technologies to advance energy  
21          efficiency and use of renewable energy and permit the  
22          State to take advantage of activities undertaken in



- 1           other states, including the opportunity for  
2           multi-state programs;
- 3       (6) Provide for independent evaluation of programs  
4           delivered under section 269-A;
- 5       (7) Require that any entity approved by the public  
6           utilities commission under section 269-C deliver  
7           programs in an effective, efficient, timely, and  
8           competent manner and meet standards that are  
9           consistent with state policy and public utilities  
10          commission decisions;
- 11       (8) On or before January 1, 2008, and every three years  
12          thereafter, require verification by an independent  
13          auditor of the reported energy and capacity savings  
14          and incremental renewable energy production savings  
15          associated with the programs delivered by any entity  
16          appointed by the public utilities commission to  
17          deliver demand-side management and renewable energy  
18          programs under section 269-A;
- 19       (9) Enforce the fund administrator's obligation to provide  
20          its share of the renewable portfolio standard, and  
21          energy efficiency portfolio standard if an energy  
22          efficiency portfolio is established, to the extent





1           that the fund administrator is given the  
2           responsibility and funding to implement energy  
3           efficiency and renewable energy; and

4       (10) If the public utilities commission determines that a  
5       fund administrator failed to meet the renewable  
6       portfolio standard, or the energy efficiency portfolio  
7       standard if an energy efficiency portfolio is  
8       established, the fund administrator shall be subject  
9       to penalties as established by the public utilities  
10       commission.

11       **§269-E Energy efficiency portfolio standards.** (a) Each  
12       electric utility company that sells electricity for consumption  
13       in the State shall achieve a statewide energy efficiency  
14       portfolio standard based on an energy efficiency ratio of:

15       (1) Ten per cent by December 31, 2015;

16       (2) Fifteen per cent by December 31, 2020; and

17       (3) Twenty per cent by December 31, 2025.

18       (b) For purposes of determining the baseline standard, the  
19       baseline shall be 2005."

20       SECTION 3. Section 269-91, Hawaii Revised Statutes, is  
21       amended as follows:



1           1. By adding eleven new definitions to be appropriately  
2 inserted and to read:

3           "Biofuels" means liquid or gaseous fuels produced from  
4 organic sources such as biomass crops, agricultural residues,  
5 and oil crops such as palm oil, canola oil, soybean oil, waste  
6 cooking oil, grease and food wastes, animal residues and wastes,  
7 and sewage and landfill wastes.

8           "Energy efficiency" means electrical energy savings  
9 resulting from the use of energy saving devices and systems  
10 approved by the commission.

11          "Energy efficiency portfolio standard" means a requirement  
12 of a utility to achieve a target energy efficiency ratio in a  
13 specific year.

14          "Energy efficiency ratio" means the cumulative quantified  
15 demand-side measures divided by net electric sales in that year.

16          "Energy efficiency utility" means a public utility, as  
17 defined under section 269-1, for the reduction in needed  
18 production, conveyance, transmission, delivery, or furnishing of  
19 power.

20          "Net electric sales" means the actual electric sales  
21 recorded on the utility system.



1       "Quantified demand-side measures" means those utility  
2 demand-side measures reported to the public utilities commission  
3 as net program impacts in megawatt hours, inclusive of all  
4 public utilities commission approved adjustment factors, such as  
5 line losses.

6       "Renewable electrical energy" means electrical energy  
7 savings brought about by the use of energy efficiency  
8 technologies, including heat pump water heating, ice storage,  
9 ratepayer funded energy efficiency programs, and use of rejected  
10 heat from co-generation and combined heat and power systems  
11 excluding fossil-fueled qualifying facilities that sell  
12 electricity to electric utility companies, and central station  
13 power projects.

14       Where electric energy is generated or displaced by a  
15 combination of renewable and nonrenewable means, the proportion  
16 attributable to the renewable means shall be credited as  
17 renewable energy.

18       Where fossil and renewable fuels are co-fired in the same  
19 generating unit, the unit shall be considered to generate  
20 renewable electrical energy in direct proportion to the  
21 percentage of the total heat value represented by the heat value  
22 of the renewable fuels.



1       "Renewable energy portfolio standard" means a requirement  
2 of a utility to achieve a specific renewable energy ratio in a  
3 specific year.

4       "Renewable energy ratio" means the ratio of indigenous  
5 watts to total demand.

6       "System benefits charge" means a charge on electric bills  
7 designed to fund certain public benefits that are placed at risk  
8 in a more competitive industry, including assistance to  
9 utilities to cover integrated resource planning costs,  
10 assistance for low-income consumers, and funding renewable  
11 energy and energy efficiency research and development."

12       2. By amending the definition of "cost effective" to read:

13       "Cost-effective" means the ability to produce or purchase  
14 electric energy or firm capacity[~~, or both,~~] from renewable  
15 energy resources at or below avoided costs[-], including any  
16 adjustments for risks, expected costs associated with climate  
17 change policies, and renewable energy credits."

18       3. By amending the definition of "renewable energy" to  
19 read:

20       "Renewable energy" means [~~electrical energy produced by~~  
21 wind, solar energy, hydropower, landfill gas, waste to energy,  
22 geothermal resources, ocean thermal energy conversion, wave



1 ~~energy, biomass, including municipal solid waste, biofuels, or~~  
2 ~~fuels derived from organic sources, hydrogen fuels derived from~~  
3 ~~renewable energy, or fuel cells where the fuel is derived from~~  
4 ~~renewable sources. Where biofuels, hydrogen, or fuel cell fuels~~  
5 ~~are produced by a combination of renewable and nonrenewable~~  
6 ~~means, the proportion attributable to the renewable means shall~~  
7 ~~be credited as renewable energy. Where fossil and renewable~~  
8 ~~fuels are co-fired in the same generating unit, the unit shall~~  
9 ~~be considered to produce renewable electricity in direct~~  
10 ~~proportion to the percentage of the total heat value represented~~  
11 ~~by the heat value of the renewable fuels. "Renewable energy"~~  
12 ~~also means electrical energy savings brought about by the use of~~  
13 ~~solar and heat pump water heating, seawater air conditioning~~  
14 ~~district cooling systems, solar air conditioning and ice~~  
15 ~~storage, quantifiable energy conservation measures, use of~~  
16 ~~rejected heat from co-generation and combined heat and power~~  
17 ~~systems excluding fossil-fueled qualifying facilities that sell~~  
18 ~~electricity to electric utility companies, and central station~~  
19 ~~power projects.] energy generated or produced using wind, the~~  
20 ~~sun, falling water, biogas, including landfill and sewage-based~~  
21 ~~digester gas, geothermal, ocean water, currents and waves,~~  
22 ~~biomass, including biomass crops, agricultural and animal~~



1 residues and wastes, municipal solid waste, biofuels, and  
2 hydrogen produced from renewable energy sources. Where fuels,  
3 including hydrogen, ethanol, and biodiesel are produced by a  
4 combination of renewable and nonrenewable means, the proportion  
5 attributable to the renewable sources shall be credited as  
6 renewable energy."

7 SECTION 4. Section 269-92, Hawaii Revised Statutes, is  
8 amended to read as follows:

9 "**§269-92 Renewable portfolio standards.** (a) Each  
10 electric utility company that sells electricity for consumption  
11 in the State shall establish a renewable portfolio standard of:  
12 ~~[-(1) Seven per cent of its net electricity sales by~~  
13 ~~December 31, 2003;~~  
14 ~~-(2) Eight per cent of its net electricity sales by~~  
15 ~~December 31, 2005;~~  
16 ~~-(3)]~~ (1) Ten per cent of its net electricity sales by  
17 December 31, 2010;  
18 ~~[-(4)]~~ (2) Fifteen per cent of its net electricity sales by  
19 December 31, 2015; and  
20 ~~[-(5)]~~ (3) Twenty per cent of its net electricity sales by  
21 December 31, 2020.



1       ~~[The public utilities commission shall determine if an~~  
2 ~~electric utility company is unable to meet the renewable~~  
3 ~~portfolio standards in a cost effective manner, or as a result~~  
4 ~~of circumstances beyond its control which could not have been~~  
5 ~~reasonably anticipated or ameliorated. If this determination is~~  
6 ~~made, the electric utility company shall be relieved of~~  
7 ~~responsibility for meeting the renewable portfolio standard for~~  
8 ~~the period of time that it is unable to meet the standard.]~~

9       (b) If the public utilities commission determined that an  
10 electric utility company failed to meet the renewable portfolio  
11 standard, the utility shall be subject to penalties to be  
12 established by the public utilities commission."

13       SECTION 5. Section 269-27.2, subsection (c), Hawaii  
14 Revised Statutes, is amended to read as follows:

15       "(c) The rate payable by the public utility to the  
16 producer for the nonfossil fuel generated electricity supplied  
17 to the public utility shall be as agreed between the public  
18 utility and the supplier and as approved by the public utilities  
19 commission; provided that in the event the public utility and  
20 the supplier fail to reach an agreement for a rate, the rate  
21 shall be as prescribed by the public utilities commission  
22 according to the powers and procedures provided in this chapter.



1           In the exercise of its authority to determine the just and  
2 reasonable rate for the nonfossil fuel generated electricity  
3 supplied to the public utility by the producer, the commission  
4 shall establish that the rate for purchase of electricity by a  
5 public utility shall not be more than one hundred per cent of  
6 the cost avoided by the utility when the utility purchases the  
7 electrical energy rather than producing the electrical energy.

8           The commission's determination of the just and reasonable  
9 rate shall be accomplished by establishing a methodology, by  
10 rule or order, that removes or significantly reduces any linkage  
11 between the price of fossil fuels and the rate for the nonfossil  
12 fuel generated electricity. As the commission deems  
13 appropriate, the just and reasonable rate for nonfossil fuel  
14 generated electricity supplied to the public utility by the  
15 producer shall include mechanisms for reasonable incremental  
16 adjustments, such as adjustments linked to consumer price  
17 indexes, to ensure that utility customers share the benefits of  
18 fuel cost savings resulting from the use of nonfossil fuel  
19 generated electricity."

20           SECTION 6. Section 269-95, Hawaii Revised Statutes, is  
21 amended to read as follows:





1 " ~~[f]~~ §269-95 ~~[f]~~ Renewable portfolio standards study. The  
2 public utilities commission shall:

- 3 (1) By December 31, 2006, develop and implement a utility  
4 ratemaking structure which may include ~~[but is not~~  
5 ~~limited to]~~ performance-based ratemaking, to provide  
6 incentives that encourage Hawaii's electric utility  
7 companies to use cost-effective renewable energy  
8 resources found in Hawaii to meet the renewable  
9 portfolio standards established in section 269-92,  
10 while allowing for deviation from the standards in the  
11 event that the standards cannot be met in a  
12 cost-effective manner, or as a result of circumstances  
13 beyond the control of the utility which could not have  
14 been reasonably anticipated or ameliorated;
- 15 (2) Gather, review, and analyze empirical data to  
16 determine the extent to which any proposed utility  
17 ratemaking structure would impact electric utility  
18 companies' profit margins, and to ensure that ~~[these~~  
19 ~~profit margins do not decrease as a result of the~~  
20 ~~implementation of the proposed ratemaking structure;]~~  
21 the electric utility companies' opportunity to earn a  
22 fair rate of return is not diminished;



1           (3) Using funds from the public utilities special fund,  
2                   contract with the Hawaii natural energy institute of  
3                   the University of Hawaii to conduct independent  
4                   studies to be reviewed by a panel of experts from  
5                   entities such as the United States Department of  
6                   Energy, National Renewable Energy Laboratory, Electric  
7                   Power Research Institute, Hawaii electric utility  
8                   companies, environmental groups, and other similar  
9                   institutions with the required expertise. These  
10                  studies shall include findings and recommendations  
11                  regarding:

12                (A) The capability of Hawaii's electric utility  
13                   companies to achieve renewable portfolio  
14                   standards in a cost-effective manner, and shall  
15                   assess factors such as the impact on consumer  
16                   rates, utility system reliability and stability,  
17                   costs and availability of appropriate renewable  
18                   energy resources and technologies, permitting  
19                   approvals, impacts on the economy, balance of  
20                   trade, culture, community, environment, land and  
21                   water, climate change policies, demographics, and



1 other factors deemed appropriate by the  
2 commission; and  
3 (B) Projected renewable portfolio standards to be set  
4 five and ten years beyond the then current  
5 standards;  
6 (4) Revise the standards based on the best information  
7 available at the time if the results of the studies  
8 conflict with the renewable portfolio standards  
9 established by section 269-92; and  
10 (5) Report its findings and revisions to the renewable  
11 portfolio standards based on its own studies and those  
12 contracted under paragraph (3), to the legislature no  
13 later than twenty days before the convening of the  
14 regular session of 2009, and every five years  
15 thereafter."

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

18 SECTION 8. This Act shall take effect on July 1, 2050.



HB3222, SD1

**Report Title:**

Energy Resources; Renewable Energy

**Description:**

Establishes a statewide energy efficiency utility and energy efficiency portfolio standards. (SD1)

