



1 Reducing our oil dependence and the consequent price  
2 volatility and attaining a measure of energy security is  
3 critical. More than 96 percent of petroleum in Hawaii now comes  
4 from foreign sources. Clean energy from indigenous renewable  
5 resources has the potential to provide an estimated 150 percent  
6 of current installed electrical capacity.

7 On January 28, 2008, the signing of a Memorandum of  
8 Understanding between the State of Hawaii and the United States  
9 Department of Energy (USDOE) launched the Hawaii Clean Energy  
10 Initiative (HCEI). This initiative and long-term partnership  
11 between Hawaii and USDOE is aimed at accelerating the use and  
12 development of energy efficiency and renewable energy  
13 technologies; allowing Hawaii to serve as a model and  
14 demonstration for the United States and other island  
15 communities; and develop a national partnership to accelerate  
16 system transformation, whereby the following goals are attained:

- 17 (1) Achieve a 70 percent clean energy economy for Hawaii  
18 within a generation.
- 19 (2) Increase Hawaii's energy security.
- 20 (3) Capture economic benefits of clean energy for all levels  
21 of society.
- 22 (4) Contribute to greenhouse gas reduction.

1 (5) Foster and demonstrate innovation.

2 (6) Build the workforce of the future.

3 (7) Serve as a national model.

4 The purpose of this Act is to provide a first step in  
5 aligning Hawaii's energy policy laws with the State's energy  
6 goals. For Hawaii to realize energy independence and economic  
7 stability, the transformation of its energy system must  
8 encompass changes to:

9 (1) Hawaii's policy or regulatory framework;

10 (2) System-level technology development and integration;

11 (3) Financing or capital investment; and

12 (4) Institutional system planning.

13 To enable energy efficiency and renewable energy resources to  
14 meet 70 percent of Hawaii's energy demand by 2030, the Hawaii  
15 Clean Energy Initiative set goals for energy efficiency;  
16 renewable and indigenous electricity production; energy delivery  
17 and improvements to the electrical grid; and diversification of  
18 energy sources for transportation. The initiatives to achieve  
19 these goals were developed by the USDOE; the department of  
20 business, economic development, and tourism; and members of the  
21 five Hawaii clean energy initiative working groups during 2008.  
22 This effort presents a range of measures—some proven elsewhere,

1 some innovative—to reach aggressive energy goals while balancing  
2 the interests of various stakeholders.

3 PART II

4 RENEWABLE PORTFOLIO STANDARDS

5 SECTION 2. Section 269-91, Hawaii Revised Statutes, is  
6 amended to read as follows:

7 "§269-91 [f]Definitions[+] For the purposes of this  
8 [f]part[+]:

9 "Biofuels" means liquid or gaseous fuels produced from  
10 organic sources such as biomass crops, agricultural residues and  
11 oil crops, such as palm oil, canola oil, soybean oil, waste  
12 cooking oil, grease, and food wastes, animal residues and  
13 wastes, and sewage and landfill wastes.

14 "Cost-effective" means the ability to produce or purchase  
15 electric energy or firm capacity, or both, from renewable energy  
16 resources at or below avoided costs consistent with the  
17 methodology set by the public utilities commission in accordance  
18 with section 269-27.2.

19 "Electric utility company" means a public utility as  
20 defined under section 269-1, for the production, conveyance,  
21 transmission, delivery, or furnishing of power.

22 "Renewable electrical energy" means:

- 1           (1) Electrical energy generated using renewable energy as  
2           the source;
- 3           (2) Electrical energy savings brought about by the use of  
4           renewable displacement or off-set technologies,  
5           including solar water heating, sea-water air-  
6           conditioning district cooling systems, solar air-  
7           conditioning, and customer-sited, grid-connected  
8           renewable energy systems[+], provided that such  
9           electrical energy savings will not count towards the  
10           renewable portfolio standards beginning in 2015; or
- 11          (3) Electrical energy savings brought about by the use of  
12           energy efficiency technologies, including heat pump  
13           water heating, ice storage, ratepayer-funded energy  
14           efficiency programs, and use of rejected heat from co-  
15           generation and combined heat and power systems,  
16           excluding fossil-fueled qualifying facilities that  
17           sell electricity to electric utility companies and  
18           central station power projects[+], provided that such  
19           electrical energy savings will not count towards the  
20           renewable portfolio standards beginning in 2015.

21           "Renewable energy" means energy generated or produced  
22           utilizing the following sources:

- 1 (1) Wind;
- 2 (2) The sun;
- 3 (3) Falling water;
- 4 (4) Biogas, including landfill and sewage-based digester
- 5 gas;
- 6 (5) Geothermal;
- 7 (6) Ocean water, currents, and waves;
- 8 (7) Biomass, including biomass crops, agricultural and
- 9 animal residues and wastes, and [~~municipal~~] solid
- 10 waste;
- 11 (8) Biofuels; and
- 12 (9) Hydrogen produced from renewable energy sources.

13 "Renewable portfolio standard" means the percentage of  
14 electrical energy sales that is represented by renewable  
15 electrical energy."

16 SECTION 3. Section 269-92, Hawaii Revised Statutes, is  
17 amended by amending subsections (a) and (b) to read as follows:

18 "(a) Each electric utility company that sells electricity  
19 for consumption in the State shall establish a renewable  
20 portfolio standard of:

- 21 (1) Ten per cent of its net electricity sales by December
- 22 31, 2010;

1           (2) Fifteen per cent of its net electricity sales by  
2           December 31, 2015; [~~and~~]

3           (3) [~~Twenty~~] Twenty-five per cent of its net electricity  
4           sales by December 31, 2020[~~-~~]; and

5           (4) Forty per cent of its net electricity sales by  
6           December 31, 2030.

7           (b) The public utilities commission may establish  
8 standards for each utility that prescribe what portion of the  
9 renewable portfolio standards shall be met by specific types of  
10 renewable electrical energy resources; provided that:

11           (1) [~~A~~] Before 2015, at least fifty per cent of the  
12           renewable portfolio standards shall be met by  
13           electrical energy generated using renewable energy as  
14           the source[~~-~~], and beginning 2015, the entire  
15           renewable portfolio standards shall be met by  
16           electrical generation from renewable energy sources;

17           (2) Where electrical energy is generated or displaced by a  
18           combination of renewable and nonrenewable means, the  
19           proportion attributable to the renewable means shall  
20           be credited as renewable energy; [~~and~~]

21           (3) Where fossil and renewable fuels are co-fired in the  
22           same generating unit, the unit shall be considered to

1 generate renewable electrical energy (electricity) in  
2 direct proportion to the percentage of the total heat  
3 input value represented by the heat input value of the  
4 renewable fuels[-]; and

5 (4) The public utilities commission shall not approve  
6 applications to build new additional fossil-based  
7 electric generation units with rated capacity greater  
8 than two megawatts."

9 SECTION 4. Section 269-95, Hawaii Revised Statutes, is  
10 amended to read as follows:

11 "**§269-95 Renewable portfolio standards study.** The public  
12 utilities commission shall:

13 (1) By December 31, 2007, develop and implement a utility  
14 ratemaking structure, which may include performance-  
15 based ratemaking, to provide incentives that encourage  
16 Hawaii's electric utility companies to use cost-  
17 effective renewable energy resources found in Hawaii  
18 to meet the renewable portfolio standards established  
19 in section 269-92, while allowing for deviation from  
20 the standards in the event that the standards cannot  
21 be met in a cost-effective manner or as a result of  
22 events or circumstances, such as described in section



1           269-92(d), beyond the control of the utility that  
2           could not have been reasonably anticipated or  
3           ameliorated;

4           (2) Gather, review, and analyze empirical data to  
5           determine the extent to which any proposed utility  
6           ratemaking structure would impact electric utility  
7           companies' profit margins and to ensure that the  
8           electric utility companies' opportunity to earn a fair  
9           rate of return is not diminished;

10          (3) Using funds from the public utilities special fund,  
11          contract with the Hawaii natural energy institute of  
12          the University of Hawaii to conduct independent  
13          studies to be reviewed by a panel of experts from  
14          entities such as the United States Department of  
15          Energy, National Renewable Energy Laboratory, Electric  
16          Power Research Institute, Hawaii electric utility  
17          companies, environmental groups, and other similar  
18          institutions with the required expertise. These  
19          studies shall include findings and recommendations  
20          regarding:

21           (A) The capability of Hawaii's electric utility  
22           companies to achieve renewable portfolio

1 standards in a cost-effective manner and shall  
2 assess factors such as the impact on consumer  
3 rates, utility system reliability and stability,  
4 costs and availability of appropriate renewable  
5 energy resources and technologies, permitting  
6 approvals, effects on the economy, balance of  
7 trade, culture, community, environment, land and  
8 water, climate change policies, demographics, and  
9 other factors deemed appropriate by the  
10 commission; and

11 (B) Projected renewable portfolio standards to be set  
12 five and ten years beyond the then current  
13 standards;

14 (4) [Revise] Evaluate the renewable portfolio standards  
15 every five years beginning in 2013, and may revise the  
16 standards based on the best information available at  
17 the time [~~if the results of the studies conflict with~~]  
18 to determine if the renewable portfolio standards  
19 established by section 269-92[+] remain achievable;  
20 and

21 (5) Report its findings and revisions to the renewable  
22 portfolio standards, based on its own studies and

1           ~~[those contracted under paragraph (3),]~~ other  
2           information, to the legislature no later than twenty  
3           days before the convening of the regular session of  
4           ~~[2009,]~~ 2014, and every five years thereafter."

## PART III

## NET ENERGY METERING

7           SECTION 5. Section 269-101.5, Hawaii Revised Statutes, is  
8           amended to read as follows:

9           "~~[+]§269-101.5[+]~~ **Maximum capacity of eligible customer-**  
10 **generator.** The eligible customer-generator shall have a  
11 capacity of not more than fifty kilowatts; provided that the  
12 public utilities commission may ~~[increase]~~ by rule or order,  
13 modify the maximum allowable capacity that eligible customer-  
14 generators may have ~~[to an amount greater than fifty kilowatts~~  
15 ~~by rule or order.],~~ or eliminate and replace it with a limit on  
16 a per-circuit basis for some electric utility companies, which  
17 will require such electric utility companies to perform a  
18 circuit-specific analysis to determine how the limit can be  
19 increased or mitigated for those circuits where the  
20 interconnection requests are approaching the specified limit."

21           SECTION 6. Section 269-102, Hawaii Revised Statutes, is  
22           amended by amending subsection (b) to read as follows:

1           "(b) Each net energy metering contract or tariff shall be  
2 identical, with respect to rate structure, to the contract or  
3 tariff to which the same customer would be assigned if the  
4 customer was not an eligible customer-generator[-], provided  
5 that the public utilities commission may, by rule or order,  
6 allow some electric utility companies to assign eligible  
7 customer-generators to other applicable rates, tariffs, or  
8 contracts determined reasonable by the public utilities  
9 commission to encourage the increased use and development of  
10 renewable energy systems in Hawaii. The charges for all retail  
11 rate components for eligible customer-generators shall be based  
12 exclusively on the eligible customer-generator's net kilowatt-  
13 hour consumption over a monthly billing period. Any new or  
14 additional demand charge, standby charge, customer charge,  
15 minimum monthly charge, interconnection charge, or other charge  
16 that would increase an eligible customer-generator's costs  
17 beyond those of other customers in the rate class to which the  
18 eligible customer-generator would otherwise be assigned are  
19 contrary to the intent of this section, and shall not form a  
20 part of net energy metering contracts or tariffs."

21           SECTION 7. Section 269-104, Hawaii Revised Statutes, is  
22 amended to read as follows:



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- 1           (1) Formulate plans, including objectives, criteria to  
2                    measure accomplishment of objectives, programs through  
3                    which the objectives are to be attained, and financial  
4                    requirements for the optimum development of Hawaii's  
5                    energy resources;
- 6           (2) Conduct systematic analysis of existing and proposed  
7                    energy resource programs, evaluate the analysis  
8                    conducted by government agencies and other  
9                    organizations and recommend to the governor and to the  
10                  legislature programs which represent the most  
11                  effective allocation of resources for the development  
12                  of energy sources;
- 13          (3) Formulate and recommend specific proposals, as  
14                  necessary, for conserving energy and fuel, including  
15                  the allocation and distribution thereof, to the  
16                  governor and to the legislature;
- 17          (4) Assist public and private agencies in implementing  
18                  energy conservation and related measures;
- 19          (5) Coordinate the State's energy conservation and  
20                  allocation programs with [~~that~~] those of the federal  
21                  government, other state governments, governments of

- 1           nations with interest in common energy resources, and  
2           the political subdivisions of the State;
- 3           (6) Develop programs to encourage private and public  
4           exploration and research of alternative energy  
5           resources which will benefit the State;
- 6           (7) Conduct public education programs to inform the public  
7           of the energy situation as may exist from time to time  
8           and of the government actions taken thereto;
- 9           (8) Serve as consultant to the governor, public agencies,  
10          and private industry on matters related to the  
11          acquisition, utilization, and conservation of energy  
12          resources;
- 13          (9) Contract for services when required for implementation  
14          of this chapter;
- 15          (10) Review proposed state actions which the coordinator  
16          finds to have significant effect on energy consumption  
17          and report to the governor their effect on the energy  
18          conservation program, and perform such other services  
19          as may be required by the governor and the  
20          legislature;
- 21          (11) Prepare and submit an annual report and such other  
22          reports as may be requested to the governor and to the

1 legislature on the implementation of this chapter and  
2 all matters related to energy resources; [~~and~~]

3 (12) Formulate a systematic process including the  
4 development of requirements, to identify geographic  
5 areas that are rich with renewable energy resource  
6 potential which can be developed in a cost-effective  
7 and environmentally benign manner, and designate such  
8 areas as renewable energy zones;

9 (13) Develop and recommend incentives plans and programs to  
10 encourage the development of renewable energy resource  
11 projects within the renewable energy zones;

12 (14) Assist public and private agencies in identifying the  
13 utility transmission projects or infrastructure that  
14 are required to accommodate and facilitate the  
15 development of renewable energy resources;

16 (15) Assist public and private agencies in coordination  
17 with the department of budget and finance in accessing  
18 use of special purpose revenue bonds to finance the  
19 engineering, design, and construction of transmission  
20 projects and infrastructure that are deemed critical  
21 to the development of renewable energy resources;





- 1 (1) Engaged in manufacturing, the wholesale sale of  
2 tangible personal property as defined in section 237-  
3 4, or a service business as defined in this chapter;
- 4 (2) Engaged in producing agricultural products where the  
5 business is a producer as defined in section 237-5, or  
6 engaged in processing agricultural products, all or  
7 some of which were grown within an enterprise zone;
- 8 (3) Engaged in research, development, sale, or production  
9 of all types of genetically-engineered medical,  
10 agricultural, or maritime biotechnology products; or
- 11 (4) Engaged in [~~producing electric power from wind energy~~  
12 ~~for sale primarily to a public utility company for~~  
13 ~~resale to the public.~~] development or production of  
14 fuels or thermal energy or electrical energy from  
15 renewable resources, including:
- 16 (A) Wind;
- 17 (B) The sun;
- 18 (C) Falling water;
- 19 (D) Biogas, including landfill and sewage-based  
20 digester gas;
- 21 (E) Geothermal;
- 22 (F) Ocean water, currents and waves;

- 1 (G) Biomass, including biomass crops, agriculture and
- 2 animal residues and wastes, and solid waste;
- 3 (H) Biofuels; and
- 4 (I) Hydrogen produced from renewable energy sources.

5 PART VI

6 RENEWABLE ENERGY FACILITATOR

7 SECTION 10. Section 201-12.5, Hawaii Revised Statutes, is  
8 amended by amending subsection (b) to read as follows:

9 "(b) The renewable energy facilitator shall have the  
10 following duties:

- 11 (1) Facilitate the efficient permitting of renewable  
12 energy projects~~[-]~~, which include the land parcel on  
13 which the facility is situated, any renewable energy  
14 production structure or equipment, any energy  
15 transmission line from the facility to a public  
16 utility's electricity system, and any on-site  
17 infrastructure necessary for the production of  
18 electricity or biofuel from the renewable energy site;
- 19 (2) Initiate the implementation of key renewable energy  
20 projects by permitting various efficiency improvement  
21 strategies identified by the department;

- 1 (3) Administer the day-to-day coordination for renewable  
2 energy projects on behalf of the department and the  
3 day-to-day operations of the renewable energy facility  
4 siting process established in [+]Act 207, Session Laws  
5 of Hawaii 2008[+]; and
- 6 (4) Submit periodic reports to the legislature on  
7 renewable energy facilitation activities and the  
8 progress of the renewable energy facility siting  
9 process."

## PART VII

## RENEWABLE ENERGY PERMITTING

12 SECTION 11. Section 201N-1, Hawaii Revised Statutes, is  
13 amended by amending the definition of "renewable energy  
14 facility" to read as follows:

15 ""Renewable energy facility" or "facility" means a new  
16 facility located in the State with the capacity to produce from  
17 renewable energy at least two hundred megawatts of  
18 electricity[-]; provided that biofuel production facilities of  
19 at least one million gallons per year and electricity production  
20 facilities with capacities between five and two hundred  
21 megawatts may apply to the coordinator for designation as  
22 renewable energy facilities, with such designation to be at the

1 sole discretion of the coordinator. The term includes any of  
2 the following associated with the initial permitting and  
3 construction of the facility:

4 (1) The land parcel on which the facility is situated;

5 (2) Any renewable energy production structure or  
6 equipment;

7 (3) Any energy transmission line from the facility to a  
8 public utility's electricity transmission or  
9 distribution system;

10 (4) Any on-site infrastructure; and

11 (5) Any on-site building, structure, other improvement, or  
12 equipment necessary for the production of electricity  
13 or biofuel from the renewable energy site,  
14 transmission of the electricity or biofuel, or any  
15 accommodation for employees of the facility.

16 SECTION 12. Section 201N-4, Hawaii Revised Statutes, is  
17 amended by amending subsection (g) to read as follows:

18 "(g) Each appropriate state and county agency shall  
19 diligently endeavor to process and approve or deny any permit in  
20 the permit plan no later than twelve months after a completed  
21 permit plan application is approved by the coordinator. If a  
22 permit is not approved or denied within twelve months after

1 approval of a completed permit plan application, the permitting  
2 agency, within thirty days following the twelve-month period,  
3 shall provide the coordinator with a report identifying diligent  
4 measures that are being taken by the agency to complete  
5 processing and action as soon as practicable. If no further  
6 processing and action are reported by the permitting agency  
7 within five months, the permit shall be deemed approved. If a  
8 permitting agency fails to provide this report and if the permit  
9 has not been approved or denied within eighteen months following  
10 the approval of a completed permit plan application by the  
11 coordinator, the permit shall be deemed approved."

12 SECTION 13. There is appropriated out of the renewable  
13 energy facility siting special fund the sum of \$1,000,000, or so  
14 much thereof as may be necessary, for fiscal year 2009-2010 and  
15 the sum of \$1,000,000, or so much thereof as may be necessary  
16 for fiscal year 2010-2011. The sums appropriated by this Act  
17 shall be expended by the department of business, economic  
18 development, and tourism for the purposes of the fund created in  
19 section 201N-11, Hawaii Revised Statutes.

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

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1 SECTION 14. This Act shall take effect upon its approval.

2

3

INTRODUCED BY:

Calvin K. Boy

4

BY REQUEST

JAN 26 2009

**Report Title:**

Hawaii Clean Energy Initiative; Electric Generation and Delivery.

**Description:**

Establishes electric generation and delivery initiatives necessary for and contributing to the transition of Hawaii's energy sector to 70 percent non-petroleum energy sources by 2030.



JUSTIFICATION SHEET

DEPARTMENT: Business, Economic Development, and Tourism

TITLE: A BILL FOR AN ACT RELATING TO HAWAII'S CLEAN ENERGY INITIATIVE IN ELECTRIC GENERATION AND DELIVERY.

PURPOSE: To align Hawaii's energy policy laws with the State's clean energy goals of achieving a 70 percent clean energy economy by 2030 implementing changes to transform Hawaii's electric generation and delivery system, encompassing changes to:

- (1) Renewable Portfolio Standards;
- (2) Net Energy Metering; and
- (3) Renewable Energy Zones, Transmission Siting, and Permitting Facilitation.

MEANS: Amend sections: 196, -4; 201-12; 201N-1; 209E; 269, -1, -91, -92, -95, -101, -104 Hawaii Revised Statutes.

JUSTIFICATION: A clean energy economy will reduce Hawaii's oil dependence and its consequent price volatility impact on the State's economy; and achieve energy security. On January 28, 2008, the signing of a Memorandum of Understanding between the State of Hawaii and the U.S. Department of Energy, launched Hawaii's Clean Energy Initiative. An initiative to utilize clean, renewable energy technologies, whereby Hawaii serves as an integrated model and demonstration for the U.S. and other island communities - a national partnership to accelerate system transformation with the following goals:

- (1) Achieve a 70 percent clean energy economy for Hawaii within a generation.
- (2) Increase Hawaii's energy security.
- (3) Contribute to greenhouse gas reduction.

- (4) Capture economic benefits of clean energy for all levels of society.
- (5) Foster and demonstrate innovation.
- (6) Build the workforce of the future.
- (7) Serve as a national model.

Impact on the public: The transformation to a clean energy economy will reduce the dependence and consequent price volatility of petroleum, and increase energy security, reduce greenhouse gas, reduce oil imports and the dollar outflow from Hawaii's economy, promote economic development and diversification.

Impact on the department and other agencies: The activities, programs, and resources of the state energy office will be impacted by the requirements of supporting and implementing this bill. The state energy office's resource requirements are included in the biennium budget.

GENERAL FUND: None for FY10

OTHER FUNDS: None

PPBS PROGRAM  
DESIGNATION: BED-120 SI

OTHER AFFECTED  
AGENCIES: Attorney General, Budget and Finance, Consumer Advocate, Public Utilities Commission, Taxation, Accounting and General Services, Land and Natural Resources

EFFECTIVE DATE: Upon approval.