

JAN 22 2008

A BILL FOR AN ACT

RELATING TO RENEWABLE ENERGY.

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

1 SECTION 1. The legislature notes that renewable energy
2 resources can greatly benefit Hawaii's economy, environment,
3 energy security, and sustainability. The increased use of
4 Hawaii's abundant renewable energy resources, such as wind,
5 solar, ocean thermal, wave, and biomass resources, are keys to
6 reducing Hawaii's dependence on imported fossil fuels, reducing
7 Hawaii's green house gas emissions and contribution to global
8 warming, and creating new job opportunities and economic
9 diversification.

10 The legislature finds that Hawaii's trade deficit is also a
11 significant impediment to Hawaii's goal of economic and energy
12 security and sustainability. Specifically, in 2006, Hawaii
13 exported only \$16,300,000,000 in goods and services, including
14 visitor spending, while importing approximately \$24,000,000,000.
15 The legislature further finds that Hawaii's oil imports totaled
16 \$3,400,000,000 for the year, accounting for approximately

1 fifteen per cent of the total imports. Over ninety-three per
2 cent of Hawaii's energy is supplied by fossil fuel.

3 Act 95, Session Laws of Hawaii 2004, established a
4 renewable portfolio standard, which requires that each electric
5 utility company shall generate ten per cent of its net
6 electricity sales from renewable resources by December 31, 2010,
7 fifteen per cent by December 31, 2015, and twenty per cent by
8 December 31, 2020. Hawaii's electric utilities used fossil fuel
9 to generate ninety-two per cent of the electricity they sold in
10 2006. This represented almost twenty-five per cent of the total
11 fossil fuel imports and cost approximately \$749,102,000. Since
12 electric utilities can most readily use renewable energy
13 relative to Hawaii's other energy sectors, the legislature
14 mandated the renewable portfolio standards.

15 The renewable portfolio standards, however, also included
16 electrical energy savings brought about by the use of renewable
17 displacement or off-set technologies, as well as electrical
18 energy savings brought about by the use of energy efficiency
19 technologies including energy efficiency programs. This is
20 unique among the twenty-nine states that have renewable
21 portfolio standard requirements. It also results in double

1 counting the energy savings in calculating the renewable
2 portfolio standard achieved by the electric utilities.

3 From 2001 to the end of 2006, the Hawaiian Electric
4 companies (HECO utilities) have increased their electricity
5 generation from renewable resources by thirty-seven per cent.
6 During the same period, the electric utilities' electricity sales
7 increased by 746 gigawatthours from 9,370 gigawatthours in 2001
8 to 10,116 gigawatthours in 2006. However, the amount generated
9 from renewable resources at facilities owned by the electric
10 utilities or purchased from independent power producers only
11 increased by 221.6 gigawatthours, from 606 gigawatthours in 2001
12 to 827.6 gigawatthours in 2006. This supplied less than one-
13 third of the increase in the utilities' electricity sales. In
14 2006, the utilities' reported renewable portfolio standards
15 achieved under the current law which includes energy savings
16 from the use of renewable displacement or off-set technologies
17 as well as from energy efficiency and conservation programs
18 totaled 1,399 gigawatthours, fifty-nine per cent of which is
19 accounted by the electricity generation from renewable
20 resources.

21 To ensure that the intent and purpose of this Act are
22 clearly and unambiguously communicated, the legislature states

1 its unequivocal support for all cost-effective, technically
2 feasible uses of energy efficiency and conservation resources
3 and technology and displacement or off-set technologies.
4 Therefore, nothing in this Act shall be taken to mean that the
5 legislature intends to prevent, preclude, or in any way inhibit
6 the use of such resources and technologies as the first and best
7 choice for diminishing Hawaii's dangerous dependency on imported
8 fossil fuels, especially petroleum. Moreover, the legislature
9 finds that in addition to strengthening Hawaii's renewable
10 portfolio standards, which is the purpose of the Act, the
11 separate establishment of similarly robust energy efficiency
12 standards is an extremely attractive policy option and deserves
13 serious consideration on its own merits, which are undeniably
14 significant.

15 The purpose of this Act is to ensure that more renewable
16 resources will be deployed in energy generation to meet the
17 renewable portfolio standards with attendant reductions in
18 greenhouse gas emissions, replacement of fossil fuel oil, and
19 other economic and environmental benefits.

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

1 "§269-91 [{}Definitions {}]. For the purposes of this
2 [{}part {}]:

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

8 "Cost-effective" means the ability to produce or purchase
9 electric energy or firm capacity, or both, from renewable energy
10 resources at or below avoided costs consistent with the
11 methodology set by the public utilities commission in accordance
12 with section 269-27.2.

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

16 "Renewable electrical energy" means [+

17 ~~(1) Electrical]~~ Electrical energy generated using
18 renewable energy as the source{,;}

19 ~~(2) Electrical energy savings brought about by the use of~~
20 ~~renewable displacement or off set technologies,~~
21 ~~including solar water heating, seawater air~~
22 ~~conditioning district cooling systems, solar air~~

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1 ~~conditioning, and customer sited, grid connected~~
2 ~~renewable energy systems; or~~
3 ~~[(3)] Electrical energy savings brought about by the use of~~
4 ~~energy efficiency technologies, including heat pump~~
5 ~~water heating, ice storage, ratepayer funded energy~~
6 ~~efficiency programs, and use of rejected heat from co-~~
7 ~~generation and combined heat and power systems,~~
8 ~~excluding fossil fueled qualifying facilities that~~
9 ~~sell electricity to electric utility companies and~~
10 ~~central station power projects].~~

11 "Renewable energy" means energy generated or produced
12 utilizing the following sources:

- 13 (1) Wind;
- 14 (2) The sun;
- 15 (3) Falling water;
- 16 (4) Biogas, including landfill and sewage-based digester
17 gas;
- 18 (5) Geothermal;
- 19 (6) Ocean water, currents, and waves;
- 20 (7) Biomass, including biomass crops, agricultural and
21 animal residues and wastes, and municipal solid waste;
- 22 (8) Biofuels; and

1 (9) Hydrogen produced from renewable energy sources.
2 "Renewable portfolio standard" means the percentage of
3 electrical energy sales that is [~~represented~~] generated by
4 renewable [~~electrical~~] energy."

5 SECTION 3. Section 269-92, Hawaii Revised Statutes, is
6 amended to read as follows:

7 "**§269-92 Renewable portfolio standards.** (a) Each electric
8 utility company that sells electricity for consumption in the
9 State shall establish a renewable portfolio standard of:

- 10 (1) Ten per cent of its net electricity sales by December
11 31, 2010;
12 (2) Fifteen per cent of its net electricity sales by
13 December 31, 2015; and
14 (3) Twenty per cent of its net electricity sales by
15 December 31, 2020.

16 (b) The public utilities commission may establish
17 standards for each utility that prescribe what portion of the
18 renewable portfolio standards shall be met by specific types of
19 renewable [~~electrical~~] energy resources; provided that:

- 20 (1) [~~At least fifty per cent of the~~] The renewable
21 portfolio standards shall be met by electrical energy
22 generated using renewable energy as the source;

1 (2) Where electrical energy is generated or displaced by a
2 combination of renewable and nonrenewable means, the
3 proportion attributable to the renewable means shall
4 be credited as renewable energy; and

5 (3) Where fossil and renewable fuels are co-fired in the
6 same generating unit, the unit shall be considered to
7 generate renewable electrical energy (electricity) in
8 direct proportion to the percentage of the total heat
9 value represented by the heat value of the renewable
10 fuels.

11 (c) If the public utilities commission determines that an
12 electric utility company failed to meet the renewable portfolio
13 standard, after a hearing in accordance with chapter 91, the
14 utility shall be subject to penalties to be established by the
15 public utilities commission; provided that if the commission
16 determines that the electric utility company is unable to meet
17 the renewable portfolio standards due to reasons beyond the
18 reasonable control of an electric utility, as set forth in
19 subsection (d), the commission, in its discretion, may waive in
20 whole or in part any otherwise applicable penalties.

21 (d) Events or circumstances that are outside of an
22 electric utility company's reasonable control may include, to the

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- 1 extent the event or circumstance could not be reasonably
2 foreseen and ameliorated:
- 3 (1) Weather-related damage;
 - 4 (2) Natural disasters;
 - 5 (3) Mechanical or resource failure;
 - 6 (4) Failure of renewable [~~electrical~~] energy producers to
7 meet contractual obligations to the electric utility
8 company;
 - 9 (5) Labor strikes or lockouts;
 - 10 (6) Actions of governmental authorities that adversely
11 affect the generation, transmission, or distribution
12 of renewable electrical energy under contract to an
13 electric utility company;
 - 14 (7) Inability to acquire sufficient renewable electrical
15 energy due to lapsing of tax credits related to
16 renewable energy development;
 - 17 (8) Inability to obtain permits or land use approvals for
18 renewable [~~electrical~~] energy projects;
 - 19 (9) Inability to acquire sufficient cost-effective
20 renewable [~~electrical~~] energy;
 - 21 (10) Substantial limitations, restrictions, or prohibitions
22 on utility renewable [~~electrical~~] energy projects; and

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1 (11) Other events and circumstances of a similar nature."

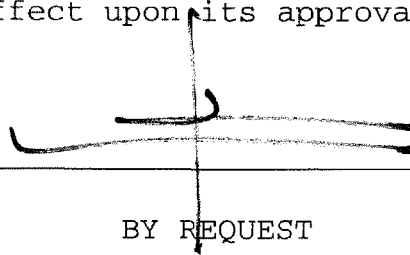
2 SECTION 4. Statutory material to be repealed is bracketed
3 and stricken. New statutory material is underscored.

4 SECTION 5. This Act shall take effect upon its approval.

5

6

INTRODUCED BY:

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7

BY REQUEST

Report Title:

Renewable Energy; electricity

Description:

Requires that the renewable portfolio standards of 20 per cent by 2020 be met by classic electricity generation from renewable sources.

JUSTIFICATION SHEET

DEPARTMENT: BUSINESS, ECONOMIC DEVELOPMENT, AND TOURISM

TITLE: A BILL FOR AN ACT RELATING TO RENEWABLE ENERGY.

PURPOSE: To require the electric utilities to use electricity generation from renewable energy resources to meet the standards set in Hawaii's Renewable Portfolio Standard law.

MEANS: Amend Sections 269-91 and 269-92, Hawaii Revised Statutes.

JUSTIFICATION: Requiring the electric utilities to use renewable generation systems to meet the renewable portfolio standards, and excluding the use of energy efficiency savings from the use of renewable displacement or off-set technologies, and from energy efficiency programs, will ensure the deployment and development of more renewable energy generation. The increased use of Hawaii's abundant renewable energy resources are keys to reducing Hawaii's dependence on imported fossil fuels, reducing Hawaii's greenhouse gas emissions and contribution to global warming, and creating new job opportunities and economic diversification. The increased use and development of renewable energy resources will benefit Hawaii's economy, environment, energy security, and sustainability.

Impact on the public: This proposal will help ensure the achievement of the State's energy goals of decreasing Hawaii's dependence on imported fossil fuels, increasing Hawaii's energy security which is essential to Hawaii's economic growth and stability, and creating new job opportunities for Hawaii's residents. It is difficult to estimate the number of new jobs that could result from this proposal.

Impact on the department and other agencies:

This proposal will help the department in its role of promoting the increased use and development of renewable energy resources. The deployment and development of more renewable resources will provide other agencies with energy supply choices to meet their energy needs that comport with the State's energy goals.

GENERAL FUND: None.

OTHER FUNDS: None.

PPBS PROGRAM
DESIGNATION: BED-120

OTHER AFFECTED
AGENCIES: None.

EFFECTIVE DATE: Upon approval.