
A BILL FOR AN ACT

RELATING TO RENEWABLE ENERGY.

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

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PART I

SECTION 1. The legislature finds that Hawaii's energy sector is undergoing a transition to one hundred per cent renewable energy that is strengthening the State's economy, environment, and security. To complete this transition successfully, and to ensure maximum benefits for Hawaii's residents and businesses, it is important that all relevant entities are aligned in the goal of rapid decarbonization to avoid the worst impacts of climate change. The legislature is concerned that requiring electric utilities, but not gas utilities, to increase their reliance on renewable energy creates an unfair playing field that may unintentionally harm consumers by promoting suboptimal long-lived investments in fossil fuels through gas-fired distributed electrical generation. These effects may also have near- and long-term impacts on the viability of the State's electric utilities, and



1 near- and long-term impacts on the viability of the State's gas
2 utilities.

3 The legislature further finds that, globally, natural gas,
4 also known as "fossil gas", is the fastest-growing source of
5 climate change emissions, according to a 2019 study published in
6 Environmental Research Letters, a peer-reviewed open-access
7 scientific journal. Although gas only represents approximately
8 two per cent of energy expenditures in Hawaii, the legislature
9 believes it is important to continue to strive toward achieving
10 the State's renewable energy and climate mitigation goals, and
11 additional information regarding costs, reliable quantities, and
12 impacts - including economic and environmental costs associated
13 with continuing to rely on fossil gas - is needed to assist the
14 legislature in setting renewable energy standards for gas
15 utility companies.

16 The purpose of this part is to fund and require the public
17 utilities commission to conduct a study regarding the
18 availability, feasibility, and costs of the use of renewable gas
19 in Hawaii by gas utility companies.

20 SECTION 2. (a) The public utilities commission shall
21 contract with the Hawaii natural energy institute of the



1 University of Hawaii to conduct an independent renewable gas
2 study.

3 (b) The study shall include but not be limited to:

4 (1) The potential quantity and cost of renewable gas that
5 could be produced in the State and delivered for use,
6 and, if necessary, could be produced out of the State
7 and delivered to the State for use:

8 (A) By residential, commercial, and industrial
9 consumers; and

10 (B) As a transportation fuel;

11 (2) The identification and inventory of feedstock and
12 acreage for renewable gas production currently
13 available in the State;

14 (3) The identification of commercial conversion
15 technologies for renewable gas production and economic
16 scalability of capacity;

17 (4) The identification of incentives that are currently
18 available to develop renewable gas resources and the
19 identification of incentives available to develop
20 renewable gas resources in other jurisdictions;



- 1 (5) The potential for the use of renewable gas in the
2 State to measurably reduce greenhouse gas emissions;
- 3 (6) The potential for renewable gas in the State to
4 measurably improve air quality;
- 5 (7) The technical, market, policy, and regulatory barriers
6 to developing and utilizing renewable gas in the
7 State, produced in the State and delivered for use,
8 and produced out of the State and delivered to the
9 State for use, and possible solutions to overcoming
10 such barriers;
- 11 (8) The identification of available renewable
12 alternatives, such as the procurement and importation
13 of renewable gas;
- 14 (9) The ability to use renewable gas at reasonable costs,
15 including an assessment of factors such as:
 - 16 (A) The impact on consumer rates;
 - 17 (B) Gas utility company system reliability and
18 stability;
 - 19 (C) Availability and reliability of renewable gas
20 supply;



- 1 (D) Costs and availability of appropriate renewable
- 2 gas resources and technologies, including the
- 3 impact of renewable gas requirements on the gas
- 4 prices offered by renewable energy suppliers or
- 5 developers;
- 6 (E) Permitting requirements and necessary approvals
- 7 for renewable gas projects;
- 8 (F) Effects on the economy;
- 9 (G) Balance of trade, culture, community,
- 10 environment, land, and water;
- 11 (H) Climate change policies;
- 12 (I) Demographics;
- 13 (J) Gas price volatility;
- 14 (K) Effects on existing gas production, supply chain,
- 15 and gas utility company suppliers;
- 16 (L) Required gas utility company infrastructure
- 17 improvements and additions;
- 18 (M) Gas quality and safety;
- 19 (N) Risks associated with the use of renewable gas;

1 (O) The availability of land, water, labor, and other
2 resources needed for the development of renewable
3 gas resources;

4 (P) Lifecycle greenhouse gas emissions for existing
5 and renewable gas supply; and

6 (Q) Other factors deemed appropriate by the public
7 utilities commission; and

8 (10) Consideration of the potential of a renewable gas
9 renewable portfolio standard, including interim goals
10 and a one hundred per cent goal for facilitating a
11 transition to renewable gas, and consideration of a
12 timeline for this transition.

13 (c) The public utilities commission shall submit a report
14 of its findings and recommendations resulting from the study,
15 including any proposed legislation, to the legislature no later
16 than twenty days prior to the convening of the regular session
17 of 2022.

18 (d) For the purposes of this section:

19 "Biogas" means gas that is generated from organic waste or
20 other organic materials through anaerobic digestion,



1 gasification, pyrolysis, or other technology that converts
2 organic waste to gas.

3 "Gas utility company" means a public utility as defined
4 under section 269-1, Hawaii Revised Statutes, for the
5 production, conveyance, transmission, delivery, or furnishing of
6 gas or of light, power, heat, or cold produced from gas.

7 "Renewable gas" means any of the following products
8 processed or upgraded to be interchangeable with conventional
9 natural gas for the purpose of meeting pipeline quality
10 standards, end use requirements, or transportation fuel grade
11 requirements:

- 12 (1) Biogas;
- 13 (2) Hydrogen gas derived from renewable energy sources; or
- 14 (3) Carbon dioxide from waste.

15 SECTION 3. There is appropriated out of the public
16 utilities commission special fund the sum of \$ or so
17 much thereof as may be necessary for fiscal year 2020-2021 to
18 conduct the study required by section 2 of this part.

19 The sum appropriated shall be expended by the public
20 utilities commission for the purposes of this part.



1 SECTION 4. The public utilities commission shall submit a
2 report of its findings and recommendations resulting from the
3 study, including any proposed legislation, to the legislature no
4 later than twenty days prior to the convening of the regular
5 session of 2022.

6 PART II

7 SECTION 5. The legislature finds that Act 97, Session Laws
8 of Hawaii 2015, amended section 269-92, Hawaii Revised Statutes,
9 to establish a one hundred per cent renewable portfolio standard
10 by December 31, 2045, with the intent to transition the State
11 away from imported fuels and toward renewable local resources
12 that provide a secure source of affordable energy. Currently,
13 the calculation of the renewable portfolio standard, based on
14 the definition of renewable portfolio standard enacted in 2001
15 and amended in 2006, is the percentage of electrical energy
16 sales that is represented by renewable electrical energy. The
17 legislature finds that the calculation of the renewable
18 portfolio standard based on electrical energy sales (renewable
19 electrical energy sales divided by total electrical energy
20 sales), rather than on electrical energy generation (renewable
21 electrical energy generation divided by total electrical energy



1 generation), overestimates the amount of renewable energy
2 serving Hawaii's electric utility customers. There are two
3 fundamental issues that lead to the current discrepancy:

- 4 (1) The current renewable portfolio standard calculation
5 inflates the reported percentage of renewable energy
6 by excluding customer-sited, grid-connected energy
7 generation in the denominator, which becomes material
8 with higher levels of customer-sited, grid-connected
9 renewable energy generation and higher renewable
10 portfolio standard percentages; and
- 11 (2) The current electrical energy sales number does not
12 include energy losses that occur between the points of
13 electrical energy generation and the customer meter,
14 where sales are measured.

15 Failure to address these issues creates an incorrect measure of
16 the State's progress toward its statutory goal of one hundred
17 per cent renewable energy.

18 Therefore, the purpose of this part is to amend the
19 definition of renewable portfolio standard to more accurately
20 reflect the percentage of total electrical energy generated that
21 is represented by renewable electrical energy in the State.



1 SECTION 6. Section 269-91, Hawaii Revised Statutes, is
2 amended by amending the definition of "renewable portfolio
3 standard" to read as follows:

4 "Renewable portfolio standard" means the percentage of
5 electrical energy [~~sales~~] generation that is represented by
6 renewable electrical energy."

7 SECTION 7. 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) Ten per cent of its net electricity sales by
13 December 31, 2010;

14 (2) Fifteen per cent of its net electricity sales by
15 December 31, 2015;

16 (3) Thirty per cent of its net electricity sales by
17 December 31, 2020;

18 (4) Forty per cent of its net electricity [~~sales~~]
19 generation by December 31, 2030;

20 (5) Seventy per cent of its net electricity [~~sales~~]
21 generation by December 31, 2040; and



1 (6) One hundred per cent of its net electricity [~~sales~~]
2 generation by December 31, 2045.

3 (b) The public utilities commission may establish
4 standards for each electric utility company that prescribe
5 [~~what~~] the portion of the renewable portfolio standards that
6 shall be met by specific types of renewable energy resources;
7 provided that:

8 (1) Prior to January 1, 2015, at least fifty per cent of
9 the renewable portfolio standards shall be met by
10 electrical energy generated using renewable energy as
11 the source, and after December 31, 2014, the entire
12 renewable portfolio standard shall be met by
13 electrical generation from renewable energy sources;

14 (2) Beginning January 1, 2015, electrical energy savings
15 shall not count toward renewable energy portfolio
16 standards;

17 (3) 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



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

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

18 (d) Events or circumstances that are [~~outside of~~] beyond
19 an electric utility company's reasonable control may include, to
20 the extent the event or circumstance could not be reasonably
21 foreseen and ameliorated:



- 1 (1) Weather-related damage;
- 2 (2) Natural disasters;
- 3 (3) Mechanical or resource failure;
- 4 (4) Failure of renewable electrical energy producers to
- 5 meet contractual obligations to the electric utility
- 6 company;
- 7 (5) Labor strikes or lockouts;
- 8 (6) Actions of governmental authorities that adversely
- 9 affect the generation, transmission, or distribution
- 10 of renewable electrical energy under contract to an
- 11 electric utility company;
- 12 (7) Inability to acquire sufficient renewable electrical
- 13 energy due to lapsing of tax credits related to
- 14 renewable energy development;
- 15 (8) Inability to obtain permits or land use approvals for
- 16 renewable electrical energy projects;
- 17 (9) Inability to acquire sufficient cost-effective
- 18 renewable electrical energy;
- 19 (10) Inability to acquire sufficient renewable electrical
- 20 energy to meet the renewable portfolio standard goals
- 21 beyond 2030 in a manner that is beneficial to Hawaii's



1 economy in relation to comparable fossil fuel
2 resources;
3 (11) Substantial limitations, restrictions, or prohibitions
4 on utility renewable electrical energy projects; and
5 (12) Other events and circumstances of a similar nature[-]
6 that could not be reasonably foreseen and
7 ameliorated."

8 PART III

9 SECTION 8. This Act does not affect rights and duties that
10 matured, penalties that were incurred, and proceedings that were
11 begun before its effective date.

12 SECTION 9. Statutory material to be repealed is bracketed
13 and stricken. New statutory material is underscored.

14 SECTION 10. This Act shall take effect on July 1, 2050.



Report Title:

Renewable Energy; Renewable Gas Study; Renewable Portfolio Standard; Electricity; Appropriation

Description:

Requires the Public Utilities Commission to contract with HNEI to conduct an independent renewable gas study. Appropriates funds from the Public Utilities Commission Special Fund. Amends the definition of renewable portfolio standard to be a percentage of electrical energy generation, rather than sales. Effective 7/1/2050. (HD1)

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