
A BILL FOR AN ACT

RELATING TO RENEWABLE ENERGY.

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

1 SECTION 1. The purpose of this Act is to:

- 2 (1) Require the office of planning and sustainable
3 development to update the state energy plan;
- 4 (2) Ensure grid reliability by diversifying the State's
5 renewable energy portfolio to include firm and
6 intermittent renewable energy;
- 7 (3) Establish a state energy policy that requires at least
8 fifty-five per cent of renewable energy to be
9 generated by firm renewable energy and for renewable
10 energy to replace fossil fuel energy and achieve one
11 hundred per cent renewable energy generation;
- 12 (4) Establish a state energy policy that requires the
13 State to maintain a diversified renewable energy
14 portfolio; and
- 15 (5) Amend other statutory provisions to achieve at least
16 fifty-five per cent firm renewable energy generation
17 for each island.



SECTION 2. Section 226-18, Hawaii Revised Statutes, is amended to read as follows:

"§226-18 Objectives and policies for facility systems-- energy. (a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:

(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;

(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation;

(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;

(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; ~~[and]~~

(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority~~[+]~~;

(6) Greater diversification of renewable energy generation to include intermittent and firm renewable generation



1 to improve reliability and achieve one hundred per
2 cent renewable energy objectives;

3 (7) Reliable replacement of fossil fuel generation with
4 firm renewable generation;

5 (8) Firm renewable generation shall be a minimum of
6 fifty-five per cent of renewable energy generation for
7 each island. Notwithstanding any law to the contrary,
8 this percentage may be updated by the legislature
9 pursuant to the following:

10 (A) By adoption of a concurrent resolution based on
11 data from a study by the Hawaii natural energy
12 institute, as described in section 7 of
13 Act _____, Session Laws of Hawaii 2022; and

14 (B) The office of planning and sustainable
15 development shall submit for introduction to the
16 legislature a concurrent resolution for review of
17 the proposed firm renewable energy generation
18 minimum percentage;

19 (9) Limit the percentage of any one type of renewable
20 energy source to forty-five per cent of all generation
21 for each island. Notwithstanding any law to the



1 contrary, this percentage may be updated pursuant to
2 paragraph (a)(8) of this section; and

3 (10) Fossil fuel generation shall be prohibited after
4 December 31, 2045; except in cases of emergencies or
5 natural disaster, situations where unavailability of
6 renewable fuels would require limited use of fossil
7 fuels to maintain grid reliability, and events or
8 circumstances that are outside of an electric utility
9 company's reasonable control, to the extent the event
10 or circumstance could not be reasonably foreseen and
11 ameliorated. Notwithstanding any law to the contrary,
12 the legislature may extend this deadline by three
13 years pursuant to the following:

14 (A) By adoption of a concurrent resolution;

15 (B) The office of planning and sustainable
16 development shall submit for introduction to the
17 legislature a concurrent resolution for review of
18 the proposed extension of fossil fuel generation;
19 and



1 (C) The legislature may grant no more than three
2 consecutive three-year extensions to this
3 deadline.

4 (b) To achieve the energy objectives, it shall be the
5 policy of this State to ensure the short- and
6 long-term provision of adequate, reasonably priced,
7 reliable, and dependable energy services to
8 accommodate demand.

9 (c) To further achieve the energy objectives, it shall be
10 the policy of this State to:

- 11 (1) Support research and development as well as promote
12 the use of a diversified portfolio of renewable energy
13 sources;
- 14 (2) Ensure that the combination of energy supplies and
15 energy-saving systems is sufficient to support the
16 demands of growth;
- 17 (3) Base decisions of least-cost supply-side and
18 demand-side energy resource options on a comparison of
19 their total costs and benefits when a least-cost is
20 determined by a reasonably comprehensive,
21 quantitative, and qualitative accounting of their



1 long-term, direct and indirect economic,
2 environmental, social, cultural, and public health
3 costs and benefits[+], that may offset monetary costs;

4 (4) Promote all cost-effective conservation of power and
5 fuel supplies through measures, including:

6 (A) Development of cost-effective demand-side
7 management programs;

8 (B) Education;

9 (C) Adoption of energy-efficient practices and
10 technologies; and

11 (D) Increasing energy efficiency and decreasing
12 energy use in public infrastructure;

13 (5) Ensure, to the extent that new supply-side resources
14 are needed, that the development or expansion of
15 energy systems uses the least-cost energy supply
16 option and maximizes efficient technologies[+],
17 subject to the consideration of long-term, direct and
18 indirect economic, environmental, social, cultural,
19 and public health costs and benefits, that may offset
20 monetary costs;



1 (6) Support research, development, demonstration, and use
2 of energy efficiency, load management, and other
3 demand-side management programs, practices, and
4 technologies;

5 (7) Promote alternate fuels and transportation energy
6 efficiency;

7 (8) Support actions that reduce, avoid, or sequester
8 greenhouse gases in utility, transportation, and
9 industrial sector applications;

10 (9) Support actions that reduce, avoid, or sequester
11 Hawaii's greenhouse gas emissions through agriculture
12 and forestry initiatives;

13 (10) Provide priority handling and processing for all state
14 and county permits required for renewable energy
15 projects;

16 (11) Ensure that liquefied natural gas is used only as a
17 cost-effective transitional, limited-term replacement
18 of petroleum for electricity generation and does not
19 impede the development and use of other cost-effective
20 renewable energy sources; [and]



(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii[-];

(13) Ensure that the development or expansion of energy systems recognizes and emphasizes the need to increase the proportion of firm renewable energy generation to a minimum of fifty-five per cent of renewable energy for each island, to reliably replace fossil fuel generation; and

(14) Ensure that the development or expansion of energy systems recognizes and emphasizes the need to ensure grid reliability by limiting the proportion of any one source of renewable energy as defined in section 269-91, to a maximum of forty-five per cent of energy generation on each island.

(d) As used in this section:

"Firm renewable energy" means renewable energy that is always available and capable of being continuously produced twenty-four hours per day, three hundred sixty-five days per



1 year, at its contracted capacity, subject only to routine
2 maintenance and emergency repairs.

3 "Intermittent renewable generation" means the generation of
4 renewable energy that does not qualify as firm renewable
5 energy."

6 SECTION 3. Section 226-10, Hawaii Revised Statutes, is
7 amended by amending subsection (b) to read as follows:

8 "(b) To achieve the potential growth and innovative
9 activity objective, it shall be the policy of this State to:

10 (1) Facilitate investment and employment growth in
11 economic activities that have the potential to expand
12 and diversify Hawaii's economy, including but not
13 limited to diversified agriculture, aquaculture,
14 renewable energy development, creative media, health
15 care, and science and technology-based sectors;

16 (2) Facilitate investment in innovative activity that may
17 pose risks or be less labor-intensive than other
18 traditional business activity, but if successful, will
19 generate revenue in Hawaii through the export of
20 services or products or substitution of imported
21 services or products;



- 1 (3) Encourage entrepreneurship in innovative activity by
2 academic researchers and instructors who may not have
3 the background, skill, or initial inclination to
4 commercially exploit their discoveries or
5 achievements;
- 6 (4) Recognize that innovative activity is not exclusively
7 dependent upon individuals with advanced formal
8 education, but that many self-taught, motivated
9 individuals are able, willing, sufficiently
10 knowledgeable, and equipped with the attitude
11 necessary to undertake innovative activity;
- 12 (5) Increase the opportunities for investors in innovative
13 activity and talent engaged in innovative activity to
14 personally meet and interact at cultural, art,
15 entertainment, culinary, athletic, or visitor-oriented
16 events without a business focus;
- 17 (6) Expand Hawaii's capacity to attract and service
18 international programs, technologies, and activities
19 that generate employment for Hawaii's people;
- 20 (7) Enhance and promote Hawaii's role as a center for
21 international relations, trade, finance, services,



1 technology, education, demonstration projects for
2 innovations in sustainability, renewable energy
3 innovation and intellectual property, culture, and the
4 arts;

5 (8) Accelerate research and development of new
6 energy-related industries based on wind, solar, ocean,
7 underground resources, [~~and~~] solid waste[+], and firm
8 renewable energy;

9 (9) Promote Hawaii's geographic, environmental, social,
10 and technological advantages to attract new or
11 innovative economic activities into the State;

12 (10) Provide public incentives and encourage private
13 initiative to attract new or innovative industries
14 that best support Hawaii's social, economic, physical,
15 and environmental objectives;

16 (11) Increase research and the development of ocean-related
17 economic activities such as mining, food production,
18 energy production, and scientific research;

19 (12) Develop, promote, and support research and educational
20 and training programs that will enhance Hawaii's



1 ability to attract and develop economic activities of
2 benefit to Hawaii;

3 (13) Foster a broader public recognition and understanding
4 of the potential benefits of new or innovative
5 growth-oriented industry in Hawaii;

6 (14) Encourage the development and implementation of joint
7 federal and state initiatives to attract federal
8 programs and projects that will support Hawaii's
9 social, economic, physical, and environmental
10 objectives;

11 (15) Increase research and development of businesses and
12 services in the telecommunications and information
13 industries;

14 (16) Foster the research and development of nonfossil fuel
15 and energy efficient modes of transportation; and

16 (17) Recognize and promote health care and health care
17 information technology as growth industries."

18 SECTION 4. Section 226-103, Hawaii Revised Statutes, is
19 amended by amending subsection (a) to read as follows:

20 "(a) Priority guidelines to stimulate economic growth and
21 encourage business expansion and development to provide needed



1 jobs for Hawaii's people and achieve a stable and diversified
2 economy:

3 (1) Seek a variety of means to increase the availability
4 of investment capital for new and expanding
5 enterprises.

6 (A) Encourage investments which:

7 (i) Reflect long-term commitments to the State;

8 (ii) Rely on economic linkages within the local
9 economy;

10 (iii) Diversify the economy;

11 (iv) Reinvest in the local economy;

12 (v) Are sensitive to community needs and
13 priorities; and

14 (vi) Demonstrate a commitment to provide
15 management opportunities to Hawaii
16 residents; and

17 (B) Encourage investments in innovative activities
18 that have a nexus to the State, such as:

19 (i) Present or former residents acting as
20 entrepreneurs or principals;



- 1 (ii) Academic support from an institution of
2 higher education in Hawaii;
3 (iii) Investment interest from Hawaii residents;
4 (iv) Resources unique to Hawaii that are required
5 for innovative activity; and
6 (v) Complementary or supportive industries or
7 government programs or projects.
- 8 (2) Encourage the expansion of technological research to
9 assist industry development and support the
10 development and commercialization of technological
11 advancements.
- 12 (3) Improve the quality, accessibility, and range of
13 services provided by government to business, including
14 data and reference services and assistance in
15 complying with governmental regulations.
- 16 (4) Seek to ensure that state business tax and labor laws
17 and administrative policies are equitable, rational,
18 and predictable.
- 19 (5) Streamline the processes for building and development
20 permit and review and telecommunication infrastructure
21 installation approval and eliminate or consolidate



1 other burdensome or duplicative governmental
2 requirements imposed on business, where scientific
3 evidence indicates that public health, safety, and
4 welfare would not be adversely affected.

5 (6) Encourage the formation of cooperatives and other
6 favorable marketing or distribution arrangements at
7 the regional or local level to assist Hawaii's
8 small-scale producers, manufacturers, and
9 distributors.

10 (7) Continue to seek legislation to protect Hawaii from
11 transportation interruptions between Hawaii and the
12 continental United States.

13 (8) Provide public incentives and encourage private
14 initiative to develop and attract industries which
15 promise long-term growth potentials and which have the
16 following characteristics:

17 (A) An industry that can take advantage of Hawaii's
18 unique location and available physical and human
19 resources.

20 (B) A clean industry that would have minimal adverse
21 effects on Hawaii's environment.



1 (C) An industry that is willing to hire and train
2 Hawaii's people to meet the industry's labor
3 needs at all levels of employment.

4 (D) An industry that would provide reasonable income
5 and steady employment.

6 (9) Support and encourage, through educational and
7 technical assistance programs and other means,
8 expanded opportunities for employee ownership and
9 participation in Hawaii business.

10 (10) Enhance the quality of Hawaii's labor force and
11 develop and maintain career opportunities for Hawaii's
12 people through the following actions:

13 (A) Expand vocational training in diversified
14 agriculture, aquaculture, information industry,
15 renewable energy and related industries, and
16 other areas where growth is desired and feasible.

17 (B) Encourage more effective career counseling and
18 guidance in high schools and post-secondary
19 institutions to inform students of present and
20 future career opportunities.



1 (C) Allocate educational resources to career areas
2 where high employment is expected and where
3 growth of new industries is desired.

4 (D) Promote career opportunities in all industries
5 for Hawaii's people by encouraging firms doing
6 business in the State to hire residents.

7 (E) Promote greater public and private sector
8 cooperation in determining industrial training
9 needs and in developing relevant curricula and
10 on- the-job training opportunities.

11 (F) Provide retraining programs and other support
12 services to assist entry of displaced workers
13 into alternative employment."

14 SECTION 5. Section 226-103, Hawaii Revised Statutes, is
15 amended by amending subsection (f) to read as follows:

16 "(f) Priority guidelines for energy use and development:

17 (1) Encourage the development, demonstration, and
18 commercialization of renewable energy sources.

19 (2) Initiate, maintain, and improve energy conservation
20 programs aimed at reducing energy waste and increasing
21 public awareness of the need to conserve energy.



(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.

(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.

(5) Provide incentives to encourage the development of firm renewable energy to replace fossil fuel generation."

SECTION 6. Section 226-55, Hawaii Revised Statutes, is amended to read as follows:

"§226-55 Functional plans; preparation; update. (a) The state agency head primarily responsible for a given functional area shall prepare and periodically update the functional plan for the area. In the preparation or update of the functional plan, the state agency head shall work in close cooperation with the advisory committee, respective officials, and people of each county. In the formulation of the initial or updated functional plan, the preparing agency shall solicit public views and concerns. The formulation and revision of a state functional plan shall conform to the provisions of this chapter and shall take into consideration the county general plans. Functional



1 plans and any revisions thereto shall be accepted by the
2 governor to serve as guidelines for funding requests and
3 implementation by state and county agencies.

4 (b) The functional plan shall identify priority issues in
5 the functional area and shall contain objectives, policies, and
6 implementing actions to address those priority issues. Actions
7 may include organizational or management initiatives, facility
8 or physical infrastructure development initiatives, initiatives
9 for programs and services, or legislative proposals.

10 (c) For each functional plan, the lead state agency, with
11 the concurrence of the governor, shall establish an advisory
12 committee, where an advisory body which meets the criteria set
13 out hereunder is not already in existence, whose membership
14 shall be composed of at least one public official from each
15 county; members of the public; experts in the field for which a
16 functional plan is being prepared; and state officials. The
17 advisory committee shall advise the lead state agency in
18 preparing, implementing, monitoring, and updating the functional
19 plan to be in conformance with the overall theme, goals,
20 objectives, policies, and priority guidelines contained within
21 this chapter. The draft functional plan shall be submitted to



1 relevant federal, state, and county agencies for review and
2 input. The advisory committee shall serve as a temporary
3 advisory body to the state agency responsible for preparing each
4 respective functional plan. The terms of members from the
5 public and experts in the field for which a functional plan is
6 prepared shall be for four years. Each term shall commence on
7 July 1 and expire on June 30. No member from the public or
8 expert in the field shall be appointed consecutively to more
9 than two terms. These appointments shall not be subject to
10 senate confirmation[7] and shall be exempt from sections
11 26-34(a) and 78-4(a) regarding the appointment to boards and
12 commissions.

13 (d) The office of planning and sustainable development
14 shall update the energy state functional plan to include a
15 diversified renewable energy portfolio and firm renewable energy
16 for electricity generation to enhance the State's energy
17 security, resilience, and sustainability. The updated energy
18 state functional plan shall be integrated into any future
19 updated functional plans. The updated energy state functional
20 plan shall be submitted to the legislature no later than twenty
21 days prior to the convening of the 2023 legislative session.



1 The office of planning and sustainable development shall submit
2 an annual report to the legislature regarding progress to the
3 energy state functional plan. The energy state functional plan
4 may be updated every five years.

5 (e) Any agency that does not comply with this plan shall
6 seek approval of the office of planning and sustainable
7 development for the noncompliance. Any disputes shall be
8 appealed to the governor.

9 (f) The office of planning and sustainable development
10 shall submit a report to the legislature no later than twenty
11 days prior to the convening of each regular session. This
12 report shall contain detailed information regarding the status
13 of the plan and related policies."

14 SECTION 7. The Hawaii natural energy institute shall
15 conduct a study to update the minimum percentage of firm
16 renewable generation for each island and the maximum proportion
17 of any one renewable energy source on each island. This study
18 may be updated every five years. The Hawaii natural energy
19 institute shall submit to the legislature a report on the study
20 twenty days prior to the convening of the regular session of
21 2023.



1 SECTION 8. There is appropriated out of the energy systems
2 development special fund established pursuant to section
3 304A-2169.1, Hawaii Revised Statutes, the sum of \$ or
4 so much thereof as may be necessary for fiscal year 2022-2023
5 for the Hawaii natural energy institute to conduct the study as
6 required by this Act.

7 The sum appropriated shall be expended by the University of
8 Hawaii for the purposes of this Act.

9 SECTION 9. There is appropriated out of the general
10 revenues of the State of Hawaii the sum of \$ or so
11 much thereof as may be necessary for fiscal year 2022-2023 for
12 the office of planning and sustainable development to update the
13 energy state functional plan.

14 The sum appropriated shall be expended by the office of
15 planning and sustainable development for the purposes of this
16 Act.

17 SECTION 10. Statutory material to be repealed is bracketed
18 and stricken. New statutory material is underscored.

19 SECTION 11. This Act shall take effect on July 1, 2050.



Report Title:

Office of Planning and Sustainable Development; State Energy Plan; Renewable Energy; Appropriation

Description:

Establishes firm renewable energy generation policy in the Hawaii State Planning Act to ensure the reliable one hundred per cent replacement of fossil fuel electricity generation to increase the sustainability and energy self-sufficiency of the State to improve the quality of life for residents and visitors. Includes exceptions for fossil fuel generation during emergency circumstances. Appropriates moneys. Takes effect 7/1/2050.
(SD2)

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