
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 fifty-
6 five per cent of renewable energy generation for each
7 island. Notwithstanding any law to the contrary, this
8 percentage may be updated by the legislature pursuant
9 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, a situation 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

20 (C) The legislature may grant three consecutive
21 three-year extensions to this deadline.



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

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

(1) Support research and development as well as promote the use of a diversified portfolio of renewable energy sources;

(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;

(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits^[+], that may offset monetary costs;



- 1 (4) Promote all cost-effective conservation of power and
2 fuel supplies through measures, including:
3 (A) Development of cost-effective demand-side
4 management programs;
5 (B) Education;
6 (C) Adoption of energy-efficient practices and
7 technologies; and
8 (D) Increasing energy efficiency and decreasing
9 energy use in public infrastructure;
- 10 (5) Ensure, to the extent that new supply-side resources
11 are needed, that the development or expansion of
12 energy systems uses the least-cost energy supply
13 option and maximizes efficient technologies[+] subject
14 to the consideration of long-term, direct and indirect
15 economic, environmental, social, cultural, and public
16 health costs and benefits, that may offset monetary
17 costs;
- 18 (6) Support research, development, demonstration, and use
19 of energy efficiency, load management, and other
20 demand-side management programs, practices, and
21 technologies;



- 1 (7) Promote alternate fuels and transportation energy
2 efficiency;
- 3 (8) Support actions that reduce, avoid, or sequester
4 greenhouse gases in utility, transportation, and
5 industrial sector applications;
- 6 (9) Support actions that reduce, avoid, or sequester
7 Hawaii's greenhouse gas emissions through agriculture
8 and forestry initiatives;
- 9 (10) Provide priority handling and processing for all state
10 and county permits required for renewable energy
11 projects;
- 12 (11) Ensure that liquefied natural gas is used only as a
13 cost-effective transitional, limited-term replacement
14 of petroleum for electricity generation and does not
15 impede the development and use of other cost-effective
16 renewable energy sources; ~~and~~
- 17 (12) Promote the development of indigenous geothermal
18 energy resources that are located on public trust land
19 as an affordable and reliable source of firm power for
20 Hawaii~~[-]~~ ;



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

7 (14) Ensure that the development or expansion of energy
8 systems recognizes and emphasizes the need to ensure
9 grid reliability by limiting the proportion of any one
10 type of renewable energy source as defined in section
11 269-91, to a maximum of forty-five per cent of energy
12 generation on each island.

13 (d) As used in this section:

14 "Firm renewable energy" means renewable energy that is
15 always available and capable of being continuously produced
16 twenty-four hours per day, three hundred sixty-five days per
17 year, at its contracted capacity, subject only to routine
18 maintenance and emergency repairs.

19 "Intermittent renewable energy" means renewable energy that
20 does not qualify as firm renewable energy."



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

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

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

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

17 (3) Encourage entrepreneurship in innovative activity by
18 academic researchers and instructors who may not have
19 the background, skill, or initial inclination to
20 commercially exploit their discoveries or
21 achievements;



- 1 (4) Recognize that innovative activity is not exclusively
2 dependent upon individuals with advanced formal
3 education, but that many self-taught, motivated
4 individuals are able, willing, sufficiently
5 knowledgeable, and equipped with the attitude
6 necessary to undertake innovative activity;
- 7 (5) Increase the opportunities for investors in innovative
8 activity and talent engaged in innovative activity to
9 personally meet and interact at cultural, art,
10 entertainment, culinary, athletic, or visitor-oriented
11 events without a business focus;
- 12 (6) Expand Hawaii's capacity to attract and service
13 international programs, technologies, and activities
14 that generate employment for Hawaii's people;
- 15 (7) Enhance and promote Hawaii's role as a center for
16 international relations, trade, finance, services,
17 technology, education, demonstration projects for
18 innovations in sustainability, renewable energy
19 innovation and intellectual property, culture, and the
20 arts;



- 1 (8) Accelerate research and development of new energy-
2 related industries based on wind, solar, ocean,
3 underground resources, [~~and~~] solid waste[+], and firm
4 renewable energy;
- 5 (9) Promote Hawaii's geographic, environmental, social,
6 and technological advantages to attract new or
7 innovative economic activities into the State;
- 8 (10) Provide public incentives and encourage private
9 initiative to attract new or innovative industries
10 that best support Hawaii's social, economic, physical,
11 and environmental objectives;
- 12 (11) Increase research and the development of ocean-related
13 economic activities such as mining, food production,
14 energy production, and scientific research;
- 15 (12) Develop, promote, and support research and educational
16 and training programs that will enhance Hawaii's
17 ability to attract and develop economic activities of
18 benefit to Hawaii;
- 19 (13) Foster a broader public recognition and understanding
20 of the potential benefits of new or innovative growth-
21 oriented industry in Hawaii;



1 (14) Encourage the development and implementation of joint
2 federal and state initiatives to attract federal
3 programs and projects that will support Hawaii's
4 social, economic, physical, and environmental
5 objectives;

6 (15) Increase research and development of businesses and
7 services in the telecommunications and information
8 industries;

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

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

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

15 "(a) Priority guidelines to stimulate economic growth and
16 encourage business expansion and development to provide needed
17 jobs for Hawaii's people and achieve a stable and diversified
18 economy:

19 (1) Seek a variety of means to increase the availability
20 of investment capital for new and expanding
21 enterprises.



1 (A) Encourage investments which:

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

3 (ii) Rely on economic linkages within the local
4 economy;

5 (iii) Diversify the economy;

6 (iv) Reinvest in the local economy;

7 (v) Are sensitive to community needs and
8 priorities; and

9 (vi) Demonstrate a commitment to provide
10 management opportunities to Hawaii
11 residents; and

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

14 (i) Present or former residents acting as
15 entrepreneurs or principals;

16 (ii) Academic support from an institution of
17 higher education in Hawaii;

18 (iii) Investment interest from Hawaii residents;

19 (iv) Resources unique to Hawaii that are required
20 for innovative activity; and



1 (v) Complementary or supportive industries or
2 government programs or projects.

3 (2) Encourage the expansion of technological research to
4 assist industry development and support the
5 development and commercialization of technological
6 advancements.

7 (3) Improve the quality, accessibility, and range of
8 services provided by government to business, including
9 data and reference services and assistance in
10 complying with governmental regulations.

11 (4) Seek to ensure that state business tax and labor laws
12 and administrative policies are equitable, rational,
13 and predictable.

14 (5) Streamline the processes for building and development
15 permit and review and telecommunication infrastructure
16 installation approval and eliminate or consolidate
17 other burdensome or duplicative governmental
18 requirements imposed on business, where scientific
19 evidence indicates that public health, safety, and
20 welfare would not be adversely affected.



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

5 (7) Continue to seek legislation to protect Hawaii from
6 transportation interruptions between Hawaii and the
7 continental United States.

8 (8) Provide public incentives and encourage private
9 initiative to develop and attract industries which
10 promise long-term growth potentials and which have the
11 following characteristics:

12 (A) An industry that can take advantage of Hawaii's
13 unique location and available physical and human
14 resources.

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

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

20 (D) An industry that would provide reasonable income
21 and steady employment.



1 (9) Support and encourage, through educational and
2 technical assistance programs and other means,
3 expanded opportunities for employee ownership and
4 participation in Hawaii business.

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

8 (A) Expand vocational training in diversified
9 agriculture, aquaculture, information industry,
10 renewable energy and related industries, and
11 other areas where growth is desired and feasible.

12 (B) Encourage more effective career counseling and
13 guidance in high schools and post-secondary
14 institutions to inform students of present and
15 future career opportunities.

16 (C) Allocate educational resources to career areas
17 where high employment is expected and where
18 growth of new industries is desired.

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



1 (E) Promote greater public and private sector
2 cooperation in determining industrial training
3 needs and in developing relevant curricula and
4 on- the-job training opportunities.

5 (F) Provide retraining programs and other support
6 services to assist entry of displaced workers
7 into alternative employment."

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

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

11 (1) Encourage the development, demonstration, and
12 commercialization of renewable energy sources.

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

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

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



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

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

6 "**§226-55 Functional plans; preparation; update.** (a) The
7 state agency head primarily responsible for a given functional
8 area shall prepare and periodically update the functional plan
9 for the area. In the preparation or update of the functional
10 plan, the state agency head shall work in close cooperation with
11 the advisory committee, respective officials, and people of each
12 county. In the formulation of the initial or updated functional
13 plan, the preparing agency shall solicit public views and
14 concerns. The formulation and revision of a state functional
15 plan shall conform to the provisions of this chapter and shall
16 take into consideration the county general plans. Functional
17 plans and any revisions thereto shall be accepted by the
18 governor to serve as guidelines for funding requests and
19 implementation by state and county agencies.

20 (b) The functional plan shall identify priority issues in
21 the functional area and shall contain objectives, policies, and



1 implementing actions to address those priority issues. Actions
2 may include organizational or management initiatives, facility
3 or physical infrastructure development initiatives, initiatives
4 for programs and services, or legislative proposals.

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



1 prepared shall be for four years. Each term shall commence on
2 July 1 and expire on June 30. No member from the public or
3 expert in the field shall be appointed consecutively to more
4 than two terms. These appointments shall not be subject to
5 senate confirmation[7] and shall be exempt from sections
6 26-34(a) and 78-4(a) regarding the appointment to boards and
7 commissions.

8 (d) The office of planning and sustainable development
9 shall update the energy state functional plan to include a
10 diversified renewable energy portfolio and firm renewable energy
11 for electricity generation to enhance the State's energy
12 security, resilience, and sustainability. The updated energy
13 state functional plan shall be integrated into any future
14 updated functional plans. The updated energy state functional
15 plan shall be submitted to the legislature no later than twenty
16 days prior to the convening of the 2023 legislative session.
17 The office of planning and sustainable development shall submit
18 an annual report to the legislature regarding progress to the
19 energy state functional plan. The energy state functional plan
20 may be updated every five years.



1 (e) Any agency that does not comply with this plan shall
2 gain approval by the office of planning and sustainable
3 development. Any disputes shall be appealed to the governor.

4 (f) The office of planning and sustainable development
5 shall submit a report to the legislature no later than twenty
6 days prior to the convening of each regular session. This
7 report shall contain detailed information regarding the status
8 of the plan and related policies."

9 SECTION 7. The Hawaii natural energy institute shall
10 conduct a study by December 31, 2022, to update the minimum
11 percentage of firm renewable generation for each island and the
12 maximum proportion of any one renewable energy source on each
13 island. This study may be updated every five years. The Hawaii
14 natural energy institute shall submit to the legislature a
15 report on the study twenty days prior to the convening of the
16 regular session of 2023.

17 SECTION 8. There is appropriated out of the energy systems
18 development special fund pursuant to section 304A-2169.1, the
19 sum of \$ or so much thereof as may be necessary for
20 fiscal year 2022-2023 for the Hawaii natural energy institute to
21 conduct the study as required by this Act.



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

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

8 The sum appropriated shall be expended by the office of
9 planning and sustainable development for the purposes of this
10 Act.

11 SECTION 10. Statutory material to be repealed is bracketed
12 and stricken. New statutory material is underscored.

13 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 funds. Takes effect 7/1/2050.
(SD1)

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