

JAN 21 2022

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# A BILL FOR AN ACT

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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       sixty per cent of renewable energy to be generated by  
9       firm renewable energy and for renewable energy to  
10      replace fossil fuel energy and achieve one hundred per  
11      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. Notwithstanding any law to the  
5       contrary, the legislature may extend this deadline by  
6       three years pursuant to the following:

7       (A) By adoption of a concurrent resolution;

8       (B) The office of planning and sustainable  
9       development shall submit for introduction to the  
10       legislature a concurrent resolution for review of  
11       the proposed extension of fossil fuel generation;  
12       and

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

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

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



- 1           (1) Support research and development as well as promote  
2           the use of a diversified portfolio of renewable energy  
3           sources;
- 4           (2) Ensure that the combination of energy supplies and  
5           energy-saving systems is sufficient to support the  
6           demands of growth;
- 7           (3) Base decisions of least-cost supply-side and demand-  
8           side energy resource options on a comparison of their  
9           total costs and benefits when a least-cost is  
10          determined by a reasonably comprehensive,  
11          quantitative, and qualitative accounting of their  
12          long-term, direct and indirect economic,  
13          environmental, social, cultural, and public health  
14          costs and benefits[+], that may offset monetary costs;
- 15          (4) Promote all cost-effective conservation of power and  
16          fuel supplies through measures, including:
  - 17               (A) Development of cost-effective demand-side  
18               management programs;
  - 19               (B) Education;
  - 20               (C) Adoption of energy-efficient practices and  
21               technologies; and



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

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

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

(7) Promote alternate fuels and transportation energy efficiency;

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



- 1           (9)    Support actions that reduce, avoid, or sequester  
2               Hawaii's greenhouse gas emissions through agriculture  
3               and forestry initiatives;
- 4           (10)   Provide priority handling and processing for all state  
5               and county permits required for renewable energy  
6               projects;
- 7           (11)   Ensure that liquefied natural gas is used only as a  
8               cost-effective transitional, limited-term replacement  
9               of petroleum for electricity generation and does not  
10              impede the development and use of other cost-effective  
11              renewable energy sources; [and]
- 12          (12)   Promote the development of indigenous geothermal  
13               energy resources that are located on public trust land  
14               as an affordable and reliable source of firm power for  
15               Hawaii[-];
- 16          (13)   Ensure that the development or expansion of energy  
17               systems recognizes and emphasizes the need to increase  
18               the proportion of firm renewable energy generation to  
19               a minimum of fifty-five per cent of renewable energy  
20               for each island, to reliably replace fossil fuel  
21               generation; and



1        (14) Ensure that the development or expansion of energy  
2        systems recognizes and emphasizes the need to ensure  
3        grid reliability by limiting the proportion of any one  
4        type of renewable energy source as defined in section  
5        269-91, to a maximum of forty-five per cent of energy  
6        generation on each island.

7        (d) As used in this section:

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

13       "Intermittent renewable energy" means renewable energy that  
14       does not qualify as firm renewable energy."

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

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

19       (1) Facilitate investment and employment growth in  
20       economic activities that have the potential to expand  
21       and diversify Hawaii's economy, including but not





1 limited to diversified agriculture, aquaculture,  
2 renewable energy development, creative media, health  
3 care, and science and technology-based sectors;

4 (2) Facilitate investment in innovative activity that may  
5 pose risks or be less labor-intensive than other  
6 traditional business activity, but if successful, will  
7 generate revenue in Hawaii through the export of  
8 services or products or substitution of imported  
9 services or products;

10 (3) Encourage entrepreneurship in innovative activity by  
11 academic researchers and instructors who may not have  
12 the background, skill, or initial inclination to  
13 commercially exploit their discoveries or  
14 achievements;

15 (4) Recognize that innovative activity is not exclusively  
16 dependent upon individuals with advanced formal  
17 education, but that many self-taught, motivated  
18 individuals are able, willing, sufficiently  
19 knowledgeable, and equipped with the attitude  
20 necessary to undertake innovative activity;



- 1           (5) Increase the opportunities for investors in innovative  
2           activity and talent engaged in innovative activity to  
3           personally meet and interact at cultural, art,  
4           entertainment, culinary, athletic, or visitor-oriented  
5           events without a business focus;
- 6           (6) Expand Hawaii's capacity to attract and service  
7           international programs, technologies, and activities  
8           that generate employment for Hawaii's people;
- 9           (7) Enhance and promote Hawaii's role as a center for  
10          international relations, trade, finance, services,  
11          technology, education, demonstration projects for  
12          innovations in sustainability, renewable energy  
13          innovation and intellectual property, culture, and the  
14          arts;
- 15          (8) Accelerate research and development of new energy-  
16          related industries based on wind, solar, ocean,  
17          underground resources, [~~and~~] solid waste, and firm  
18          renewable energy;
- 19          (9) Promote Hawaii's geographic, environmental, social,  
20          and technological advantages to attract new or  
21          innovative economic activities into the State;



- 1       (10) Provide public incentives and encourage private  
2           initiative to attract new or innovative industries  
3           that best support Hawaii's social, economic, physical,  
4           and environmental objectives;
- 5       (11) Increase research and the development of ocean-related  
6           economic activities such as mining, food production,  
7           energy production, and scientific research;
- 8       (12) Develop, promote, and support research and educational  
9           and training programs that will enhance Hawaii's  
10          ability to attract and develop economic activities of  
11          benefit to Hawaii;
- 12      (13) Foster a broader public recognition and understanding  
13          of the potential benefits of new or innovative growth-  
14          oriented industry in Hawaii;
- 15      (14) Encourage the development and implementation of joint  
16          federal and state initiatives to attract federal  
17          programs and projects that will support Hawaii's  
18          social, economic, physical, and environmental  
19          objectives;



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

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

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

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

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

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

(A) Encourage investments which:

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

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

(iii) Diversify the economy;



1 (iv) Reinvest in the local economy;

2 (v) Are sensitive to community needs and  
3 priorities; and

4 (vi) Demonstrate a commitment to provide  
5 management opportunities to Hawaii  
6 residents; and

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

9 (i) Present or former residents acting as  
10 entrepreneurs or principals;

11 (ii) Academic support from an institution of  
12 higher education in Hawaii;

13 (iii) Investment interest from Hawaii residents;

14 (iv) Resources unique to Hawaii that are required  
15 for innovative activity; and

16 (v) Complementary or supportive industries or  
17 government programs or projects.

18 (2) Encourage the expansion of technological research to  
19 assist industry development and support the  
20 development and commercialization of technological  
21 advancements.



- 1           (3)    Improve the quality, accessibility, and range of  
2                    services provided by government to business, including  
3                    data and reference services and assistance in  
4                    complying with governmental regulations.
- 5           (4)    Seek to ensure that state business tax and labor laws  
6                    and administrative policies are equitable, rational,  
7                    and predictable.
- 8           (5)    Streamline the processes for building and development  
9                    permit and review and telecommunication infrastructure  
10                  installation approval and eliminate or consolidate  
11                  other burdensome or duplicative governmental  
12                  requirements imposed on business, where scientific  
13                  evidence indicates that public health, safety, and  
14                  welfare would not be adversely affected.
- 15          (6)    Encourage the formation of cooperatives and other  
16                    favorable marketing or distribution arrangements at  
17                    the regional or local level to assist Hawaii's small-  
18                    scale producers, manufacturers, and distributors.
- 19          (7)    Continue to seek legislation to protect Hawaii from  
20                    transportation interruptions between Hawaii and the  
21                    continental United States.



1       (8) Provide public incentives and encourage private  
2       initiative to develop and attract industries which  
3       promise long-term growth potentials and which have the  
4       following characteristics:

5       (A) An industry that can take advantage of Hawaii's  
6       unique location and available physical and human  
7       resources.

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

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

13      (D) An industry that would provide reasonable income  
14      and steady employment.

15      (9) Support and encourage, through educational and  
16      technical assistance programs and other means,  
17      expanded opportunities for employee ownership and  
18      participation in Hawaii business.

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



- 1 (A) Expand vocational training in diversified  
2 agriculture, aquaculture, information industry,  
3 renewable energy and related industries, and  
4 other areas where growth is desired and feasible.
- 5 (B) Encourage more effective career counseling and  
6 guidance in high schools and post-secondary  
7 institutions to inform students of present and  
8 future career opportunities.
- 9 (C) Allocate educational resources to career areas  
10 where high employment is expected and where  
11 growth of new industries is desired.
- 12 (D) Promote career opportunities in all industries  
13 for Hawaii's people by encouraging firms doing  
14 business in the State to hire residents.
- 15 (E) Promote greater public and private sector  
16 cooperation in determining industrial training  
17 needs and in developing relevant curricula and  
18 on- the-job training opportunities.
- 19 (F) Provide retraining programs and other support  
20 services to assist entry of displaced workers  
21 into alternative employment."





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

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

4       (1) Encourage the development, demonstration, and  
5 commercialization of renewable energy sources.

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

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

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

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

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

19       "**§226-55 Functional plans; preparation; update.** (a) The  
20 state agency head primarily responsible for a given functional  
21 area shall prepare and periodically update the functional plan



1 for the area. In the preparation or update of the functional  
2 plan, the state agency head shall work in close cooperation with  
3 the advisory committee, respective officials, and people of each  
4 county. In the formulation of the initial or updated functional  
5 plan, the preparing agency shall solicit public views and  
6 concerns. The formulation and revision of a state functional  
7 plan shall conform to the provisions of this chapter and shall  
8 take into consideration the county general plans. Functional  
9 plans and any revisions thereto shall be accepted by the  
10 governor to serve as guidelines for funding requests and  
11 implementation by state and county agencies.

12 (b) The functional plan shall identify priority issues in  
13 the functional area and shall contain objectives, policies, and  
14 implementing actions to address those priority issues. Actions  
15 may include organizational or management initiatives, facility  
16 or physical infrastructure development initiatives, initiatives  
17 for programs and services, or legislative proposals.

18 (c) For each functional plan, the lead state agency, with  
19 the concurrence of the governor, shall establish an advisory  
20 committee, where an advisory body which meets the criteria set  
21 out hereunder is not already in existence, whose membership



1 shall be composed of at least one public official from each  
2 county; members of the public; experts in the field for which a  
3 functional plan is being prepared; and state officials. The  
4 advisory committee shall advise the lead state agency in  
5 preparing, implementing, monitoring, and updating the functional  
6 plan to be in conformance with the overall theme, goals,  
7 objectives, policies, and priority guidelines contained within  
8 this chapter. The draft functional plan shall be submitted to  
9 relevant federal, state, and county agencies for review and  
10 input. The advisory committee shall serve as a temporary  
11 advisory body to the state agency responsible for preparing each  
12 respective functional plan. The terms of members from the  
13 public and experts in the field for which a functional plan is  
14 prepared shall be for four years. Each term shall commence on  
15 July 1 and expire on June 30. No member from the public or  
16 expert in the field shall be appointed consecutively to more  
17 than two terms. These appointments shall not be subject to  
18 senate confirmation, and shall be exempt from sections 26-34(a)  
19 and 78-4(a) regarding the appointment to boards and commissions.

20 (d) The office of planning and sustainable development  
21 shall update the energy state functional plan to include a



diversified renewable energy portfolio and firm renewable energy for electricity generation to enhance the State's energy security, resilience, and sustainability. The updated energy state functional plan shall be integrated into any future updated functional plans. The updated energy state functional plan shall be submitted to the legislature no later than twenty days prior to the convening of the 2023 legislative session. The office of planning and sustainable development shall submit an annual report to the legislature regarding progress to the energy state functional plan. The energy state functional plan shall be updated every five years.

(e) The office of planning and sustainable development shall receive up to \$ \_\_\_\_\_ once every five years to update the energy state functional plan, as described in subsection (d).

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

(g) The office of planning and sustainable development shall submit a report to the legislature no later than twenty days prior to the convening of each regular session. This



1 report shall contain detailed information regarding the status  
2 of the plan and related policies."

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

11 SECTION 8. There is appropriated out of the general  
12 revenues of the State of Hawaii the sum of \$ or so  
13 much thereof as may be necessary for fiscal year 2022-2023 for  
14 the Hawaii natural energy institute to conduct the study as  
15 required by this Act.

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

18 SECTION 9. Statutory material to be repealed is bracketed  
19 and stricken. New statutory material is underscored.

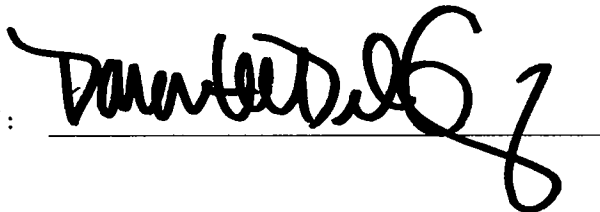
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1 SECTION 10. This Act shall take effect on July 1, 2022.

2

INTRODUCED BY:





**Report Title:**

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

**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 policy of incentives to facilitate and encourage fuel-producing crops and energy-producing crops and bioenergy and standards for achieving renewable portfolio standards.

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