

REPORT TO THE THIRTY-FIRST LEGISLATURE
REGULAR SESSION OF 2021

In response to
Senate Concurrent Resolution 119, Senate Draft 1 (2019)



Prepared by

Hawaii State Energy Office
and
Hawaii Department of Agriculture

State of Hawaii

December 2020



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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December 29, 2020

The Honorable Ronald D. Kouchi,
President, and Members
of the Senate
Thirty-First State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,
Speaker, and Members of the
House of Representatives
Thirty-First State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Subject: Senate Concurrent Resolution 119, SD1

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

On June 12, 2019, certified copies of Senate Concurrent Resolution 119, Senate Draft 1, Session Laws of Hawaii 2019 ("SCR119"), were sent to the Administrator of the Hawaii State Energy Office (HSEO) and the Chairperson of the Board of Agriculture.

The resolution requests that the HSEO, in collaboration with the Department of Agriculture (DOA), "...create and implement a strategic plan that encompasses increasing renewable energy and local food production in a symbiotic relationship" and "...create an economic impact report based on the successful implementation of the strategic plan."

SCR119 also requests that the HSEO "...submit a report of its findings and recommendations, including any proposed legislation and the strategic plan" no later than twenty days prior to the convening of the Regular Session of 2020 and "...submit a report of its findings and recommendations, including any proposed legislation and the economic impact report" no later than twenty days prior to the convening of the Regular Session of 2021.

No funding was appropriated to support SCR119's implementation.

Discussion and Actions Regarding SCR119

Shortly after SCR119 was received by HSEO, Act 122, Session Laws of Hawai'i 2019, transformed the HSEO from a Division within the Department of Business, Economic Development, and Tourism (DBEDT) into an Agency, administratively attached to DBEDT, led by a Chief Energy Officer (CEO). The CEO, Scott Glenn, was appointed by the Governor on October 16, 2019, and confirmed by the Senate on February 27, 2020.

Act 122 also changed the source of funding for HSEO from special to general funds; reduced the portion of the State Environmental Response, Energy, and Food Security Tax (the "barrel tax") deposited in the Energy Security Special Fund (ESSF) from \$0.15 to \$0.05; and removed HSEO's access to the ESSF, requiring ESSF funding to be appropriated by the Legislature for specific projects. Prior to Act 122, HSEO could have expended ESSF funds if needed to support activities such as the creation and implementation of the strategic plan described in SCR119.

Although no funding was provided in SCR119, a meeting was held between the Chairperson of the Board of Agriculture, the then-Administrator of HSEO, the Director of DBEDT, and others, to discuss the requirements of SCR119, the available and required resources, and the agencies' respective ongoing related projects, activities, and information. The group concluded that it may be possible to bring together the various studies, analyses, and discussions to develop a baseline for managing the complementary – and sometimes contentious – technologies, economic realities, and issues. A letter summarizing the projects, efforts, and activities relevant to the objectives of SCR119 was submitted to the Legislature in January of 2000.

Discussions and coordination between the agencies have continued since then.

Although the COVID--19 pandemic in 2020 has caused the anticipated progress on initiatives to be delayed, updates are provided below for the Legislature's information.

Department of Agriculture (DOA)

The DOA's Agribusiness Development Corporation (ADC) reports on two relevant projects:

1. Under the policy of "protected agriculture," the ADC intends to build a "next-generation greenhouse" subject to reauthorization of funding. The greenhouse is to be built near Whitmore Village in central Oahu. The ADC

Board of Directors recently approved the development and operation of a privately funded climate-controlled greenhouse operation in Kekaha, Kauai to grow fruits. Other agricultural operators located on ADC-owned agricultural lands are considering greenhouses for their growing operations.

2. Under the policy of “agricultural technology,” the second project is a “prototype irrigation water treatment system to help small farms meet Food Safety Modernization Act rules” and involves ADC in partnership with the Hawaii Farm Bureau Federation. This project already has been funded and a full report of the outcome is anticipated in early 2021.

The DOA strongly recommends that government and/or private entities research, cost out, and undertake proofs-of-concept for “protected agriculture” and “agricultural technology” production systems to provide the information needed by farmers to determine whether they are able to adopt either system and do so profitably.

Hawaii State Energy Office (HSEO)

The HSEO is presently engaged in numerous efforts capable of informing a foundation for a more considered analysis:

1. The HSEO, in partnership with the U.S Department of Energy, University of Hawaii Laboratory for Advanced Visualization and Application, and the Hawaiian Electric Company, is developing a visualization model named HAVEN (Hawaii Advanced Visualization Energy Nexus) to assist with understanding the land use implications for Hawaii’s Renewable Portfolio Standard goals. HAVEN models the potential footprint over time of renewable energy technologies as Hawaii converts to more solar, wind, and other energy sources. While still in development, this tool also potentially allows for the examination of other land uses such as food production and housing in the context of our energy goals.
2. The HSEO published a new web resource of the seventeen (17) large solar plus storage projects being pursued on Oahu, Maui, and Hawaii Island under Stage 1 and 2 of Hawaiian Electric’s most recent procurement of renewable energy on these three islands. The Stage 1 and 2 Renewable Energy Projects list includes a map with more information on each project including location, tax map key number, and opportunities for public input. This is in addition to the existing Hawaii Renewable Energy Projects Directory.

The HSEO also created a geographic information systems (GIS) map of the Stage 1 and 2 projects overlaid with a map of the Land Study Bureau (LSB) soil ratings. The HSEO is investigating how this information can be further developed and shared with the appropriate entities to support informed decision-making.

3. The HSEO is in the process of converting its Hawaii Renewable Energy Projects Directory website to a GIS-based platform. Data points that HSEO seeks to add to the Directory include state and county zoning, energy storage projects, and LSB soil ratings.
4. The HSEO is pursuing the development of siting and permitting tools to help inform the appropriate siting of renewable energy projects with respect to agricultural and other impacts to the surrounding communities and environment. Projects under consideration include updates to the Hawaii Renewable Energy Projects Directory, Hawaii Renewable Energy Permitting Wizard, Renewable EnerGIS mapping tool, and the creation of new resources that will facilitate informed project development and decision-making regarding the required land use permits and approvals.

Other Parties

In addition to the DOA and HSEO, other parties have initiated activities relevant to the issues identified in SCR119, including the following:

1. The counties are identifying Important Agricultural Lands (IAL) in accordance with Hawaii Revised Statutes (HRS) Section 205-47. The City and County of Honolulu has completed their identification process and has submitted the maps and documentation to the Land Use Commission for their consideration for designation. The identification and designation of IAL by the counties and individual landowners will influence strategic plans related to agricultural planning in Hawaii and, therefore, are highly relevant.
2. In the most recent round of (Stage 2) requests for proposals issued by Hawaiian Electric, bidders were required to “provide evidence of Proposer’s verification with the appropriate government agency that the project complies with HRS Sections 205-2 and Section 205-4.5, relating to solar energy facilities placed on agricultural land...” This requirement

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demonstrates an opportunity to further engage the local electric utilities to address the issues raised by SCR119.

3. Several projects are under development that will involve both energy and agricultural components. Information from these projects will be useful in informing agencies, the Legislature, and other interested parties about opportunities, barriers, and potential government (or other) actions supportive of success.

Recommendations Regarding SCR119

SCR119 raises an important and timely question; namely, the nexus between land use for renewable solar energy developments and growing the State's agricultural industry. We, and our respective agencies, are working together on coordinating, discussing, understanding, defining needs, and finding solutions at a speed and scale commensurate with the needs and priorities faced by our State at this time.

Thank you for your consideration of this message.

Sincerely,



Scott J. Glenn
Chief Energy Officer



Phyllis Shimabukuro-Geiser
Chairperson, Board of Agriculture

c: Legislative Reference Bureau

ec: Governor's Office: Gov.ReportsDistribution@hawaii.gov
Lieutenant Governor's Office: LtGov.ReportsDistribution@hawaii.gov
Legislative Auditor: lao.auditors@hawaii.gov
Department of Budget and Finance: DBFLeg.DIR@hawaii.gov
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APPENDIX

Senate Concurrent Resolution 119, Senate Draft 1 (2019)

SENATE CONCURRENT RESOLUTION

REQUESTING THE STATE ENERGY OFFICE, IN COLLABORATION WITH THE DEPARTMENT OF AGRICULTURE, TO CREATE AND IMPLEMENT A STRATEGIC PLAN TO INCREASE RENEWABLE ENERGY AND LOCAL FOOD PRODUCTION AND CREATE AN ECONOMIC IMPACT REPORT BASED ON IMPLEMENTATION OF THE STRATEGIC PLAN.

1 WHEREAS, renewable energy and agriculture can coexist and
2 contribute to the State's self-sufficiency, energy security, and
3 resilience; and

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5 WHEREAS, the State currently imports fossil fuels and is
6 highly dependent on foreign imports; and

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8 WHEREAS, Act 97, Session Laws of Hawaii 2015, established
9 the electric renewable portfolio standard of one hundred percent
10 of net electricity sales by 2045, and the Governor has set a
11 goal of doubling local food production by 2020; and

12
13 WHEREAS, utility-scale solar developments in Hawaii need to
14 increase to reach the one hundred percent renewable portfolio
15 standard and be able to provide stable, low-cost energy,
16 especially for low to moderate income ratepayers and small
17 businesses; and

18
19 WHEREAS, the State has not yet developed a long-term
20 strategic plan to achieve one hundred percent renewable
21 electricity to achieve the State's renewable portfolio standard
22 and policies; and

23
24 WHEREAS, renewable energy developments such as utility-
25 scale solar developments will require thousands of acres of flat
26 land that are close to major transmission lines to keep
27 infrastructure costs low; and

28



1 WHEREAS, the Department of Agriculture has not yet
2 developed a strategic plan that incorporates renewable energy
3 development in its plans and policies to increase local food
4 production; and

5
6 WHEREAS, the State has thousands of acres of agricultural
7 land that is classified by the Land Study Bureau with B, C, D,
8 and E land-based productivity ratings, but these lands are
9 fallow and not being utilized for farming; and

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11 WHEREAS, new agricultural technology creates updated
12 requirements for land use that are not dependent on the
13 seemingly outdated Land Study Bureau's land-based rating system;
14 and

15
16 WHEREAS, the Netherlands has embraced new agricultural
17 technology, shifted away from land-based farming, and utilizes
18 low cost renewable energy to power greenhouse and vertical
19 farms, leading the Netherlands to become one of the largest
20 producers of agricultural exports in the world; and

21
22 WHEREAS, the majority of Hawaii's commercially farmed
23 produce is grown on lands owned by non-farmers who issue short-
24 term leases to farmers, who therefore are unable to make the
25 capital investments necessary to upgrade and modernize Hawaii's
26 food production; and

27
28 WHEREAS, the State must entertain new alternatives to
29 current agricultural operations that protect and promote
30 agriculture in a manner that assures long-term secure access to
31 land and supports capital investments to increase agricultural
32 production; and

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34 WHEREAS, there is a nexus between land use for renewable
35 solar energy developments and growing the State's agricultural
36 industry; now, therefore,

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38 BE IT RESOLVED by the Senate of the Thirtieth Legislature
39 of the State of Hawaii, Regular Session of 2019, the House of
40 Representatives concurring, that the State Energy Office, in
41 collaboration with the Department of Agriculture, is requested
42 to create and implement a strategic plan that encompasses



1 increasing renewable energy and local food production in a
2 symbiotic relationship; and

3
4 BE IT FURTHER RESOLVED that the strategic plan is requested
5 to include findings and recommendations related to the
6 following:

- 7
8 (1) Land use policy initiatives;
9
10 (2) Protected agriculture;
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12 (3) Agricultural technology;
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14 (4) Necessary recommendations for legislation at the state
15 and county levels to implement agricultural technology
16 and energy developments on the same lands;
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18 (5) Identification and implementation of mutually-
19 beneficial relationships between agriculture and
20 energy; and
21
22 (6) Identification of potential conflicting relationships
23 and solutions to those conflicts; and
24

25 BE IT FURTHER RESOLVED that the State Energy Office, in
26 collaboration with the Department of Agriculture, is requested
27 to create an economic impact report based on the successful
28 implementation of the strategic plan; and
29

30 BE IT FURTHER RESOLVED that the State Energy Office is
31 requested to submit a report of its findings and
32 recommendations, including any proposed legislation and the
33 strategic plan, to the Legislature no later than twenty days
34 prior to the convening of the Regular Session of 2020; and
35

36 BE IT FURTHER RESOLVED that the State Energy Office is
37 requested to submit a report of its findings and
38 recommendations, including any proposed legislation and the
39 economic impact report, to the Legislature no later than twenty
40 days prior to the convening of the Regular Session of 2021; and
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1 BE IT FURTHER RESOLVED that certified copies of this
2 Concurrent Resolution be transmitted to the Administrator of the
3 State Energy Office and the Chairperson of the Board of
4 Agriculture.

