

JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor



PHYLLIS SHIMABUKURO-GEISER
Chairperson, Board of Agriculture
DEPT. COMM. NO. 143
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Deputy to the Chairperson

State of Hawai'i
DEPARTMENT OF AGRICULTURE
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December 6, 2022

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

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

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

For your information and consideration, I am transmitting a copy of the Report on the State's Progress Toward Meeting the Milestones and Objectives of the Energy Feedstock Program as required by Act 159, SLH 2007. In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at <https://hdoa.hawaii.gov/meetings-reports/legislative-reports/>.

Sincerely,

A handwritten signature in cursive script that reads "Phyllis Shimabukuro-Geiser".

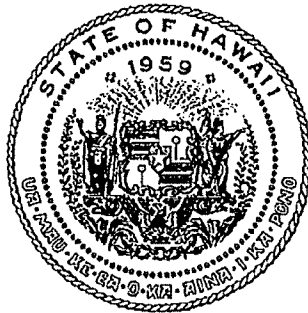
Phyllis Shimabukuro-Geiser
Chairperson, Board of Agriculture

Enclosures



**REPORT TO THE THIRTY-SECOND
LEGISLATURE 2023 REGULAR SESSION
STATE OF HAWAII**

**REPORT ON THE STATE PROGRESS TOWARD MEETING THE MILESTONES
AND OBJECTIVES OF THE ENERGY FEEDSTOCK PROGRAM
IN RESPONSE TO ACT 159, SESSION LAWS OF HAWAII 2007**



Prepared by:

**STATE OF HAWAII
DEPARTMENT OF
AGRICULTURE**

DECEMBER 2022

ENERGY FEEDSTOCK PROGRAM

Annual Report to the Legislature for Calendar Year 2022

Legislative Background

Section 141-9, Hawaii Revised Statutes, enacted pursuant to Act 159, Session Laws of Hawaii 2007 and subsequently amended, provides in full as follows:

§141-9 Energy feedstock program. (a) There is established within the department of agriculture an energy feedstock program that shall:

- (1) Maintain cognizance of actions taken by industry and by federal, state, county, and private agencies in activities relating to the production of energy feedstock, and promote and support worthwhile energy feedstock production activities in the State;
 - (2) Serve as an information clearinghouse for energy feedstock production activities;
 - (3) Coordinate development projects to investigate and solve biological and technical problems involved in raising selected species with commercial energy generating potential;
 - (4) Actively seek federal funding for energy feedstock production activities;
 - (5) Undertake activities required to develop and expand the energy feedstock production industry; and
 - (6) Perform other functions and activities as may be assigned by law, including monitoring the compliance provisions under section 205-4.5(a)(16).
- (b) The chairperson of the board of agriculture shall consult and coordinate with the chief energy officer of the Hawaii state energy office under chapter 196 to establish milestones and objectives for the production of energy feedstock that is grown in the State. The chairperson and the chief energy officer of the Hawaii state energy office shall report the State's progress toward meeting such milestones and objectives annually to the legislature.
- (c) The chairperson of the board of agriculture shall also consult and coordinate with research programs and activities at the University of Hawaii that will assist in the further growth and promotion of the energy feedstock production industry in Hawaii.
- (d) The chairperson of the board of agriculture may employ temporary staff exempt from chapters 76 and 89. The board may adopt rules pursuant to chapter 91 to effectuate the purposes of this section. [L 2007, c 159, §5; am L 2012, c 329, §2; am L 2019, c 122, §3]

Energy Feedstock Program Milestones and Objectives: Reportable Activities for the period of January 1, 2022 - December 31, 2022

While we currently import just under 90% of our fuel, we also import approximately the same percentage of food. Renewable energy development in the form of energy feedstock production is essential to Hawaii's energy security, but it should be promoted in a balanced manner with Hawaii's prime agricultural land base that is fundamental to agricultural production and food security. Farmers will generally benefit when locally-produced fuel sources are available as they should be less subject to fluctuation of world oil prices.

It is also important to note that the acreage of agricultural-zoned land for solar energy facilities permitted as "special uses" have increased in the recent past. While not considered "energy feedstock" solar energy facilities serve a similar purpose; however, solar energy facilities cannot easily be put into food production, despite what the law requires. For the purposes of this report, solar energy legislation will also be included as a part of the discussion.

This report is in five sections. Part 1 of the report discusses relevant legislative measures related to energy feedstock production. Part 2 discusses related research in the field of energy feedstock production. Part 3 discusses the dissemination of energy feedstock production to potential producers. Part 4 discusses actions taken by the government and industry that affects energy feedstock production. Part 5 discusses program limitations.

1. Related Legislative Measures Enacted or Vetoed in 2022

Act 9 (2021, First Special Session, HB1299 HD1 SD1 CD1). Last year's report did not include mention of the repeal of the 15 cents on each barrel of petroleum product (aka "Barrel Tax") that was deposited into the Agricultural Development and Food Security Special Fund that was also repealed. This fund supported personnel in the Department of Agriculture's (HDOA) administration with agricultural planning and the operational expenditures for the Board of Agriculture. This fund also supported agricultural workforce training projects, economic development projects for commodities, increased participation in energy feedstock research and development, and unexpected expenditures not provided by general funds. Elimination of this fund seriously reduced and jeopardized the Department's ability to adhere to its mission of protecting prime agricultural lands for production, maintaining the agricultural sector of Hawaii's economy in a strong and competitive condition by providing policies, subsidies, information, and increasing food security to achieve appropriate rates of growth.

Act 216 (SB 2478) reinstates the renewable fuels production tax credit (Act 202, SLH 2016) that was sunsetted at the end of 2021. In defining "renewable fuels" produced from renewable feedstocks, the Act adds "logs, wood chips, wood pellets, or wood bark".

SB 2510 (vetoed by Governor Ige) would have established a State energy policy requiring at least 33.33 per cent of renewable energy to be generated by firm renewable energy. Establish requirements for the State to maintain a diversified renewable energy portfolio. Amend statutory provisions to achieve firm renewable energy generation for each island. Exclude geothermal energy production from limitations on energy production from a single renewable energy source. Prohibit fossil fuel generation after December 31, 2045, except in circumstances where unavailability of renewable fuels would require limited use of fossil fuels to maintain grid reliability.

2. Related Research

The HDOA met with leadership of Par Hawaii Refining regarding their interest in processing biofuel feedstock as an alternative to petroleum-based fuels at their facility in Kapolei. Initial feedstock will be canola oil shipped to Hawaii from Vancouver, British Columbia (Canada). Par Hawaii will also be investigating locally-grown biofuel feedstock from cover crops. Field trials are expected to take two or three years. Par Hawaii is looking to process 3,000 barrels per day or 45 million gallons per year of renewable biofuels in Hawaii.

On Kauai, Mahipapa (Hawaiian Electric Industries) purchased the Green Energy Team's 7.5MWe biomass to energy facility in Koloa. Mahipapa continues to harvest invasive *Albizia* trees on land managed by the Agribusiness Development Corporation in Kalepa, Kauai and on other privately held lands and planted 2,000 acres of non-invasive hardwoods on the Kalepa and other lands to ensure its long-term fuel supply. Mahipapa leases 1,123 acres on Kalepa. Mahipapa has a 20 + 10-year power sales agreement with the Kauai Island Utility Cooperative (KIUC), KIUC purchases Firm, Dispatchable Capacity and energy from Mahipapa constitutes over 16% of the County's renewable energy portfolio.

3. Dissemination of Energy Feedstock Information to Potential Producers

HDOA and the Agribusiness Development Corporation, continue to meet with individuals and companies seeking information about state or privately owned agricultural-zoned lands, water, and agricultural labor. Additionally, HDOA remains in contact with Pacific Biodiesel. Pacific Biodiesel manages biodiesel plants in Hawaii and Oregon. Pacific Biodiesel provides engineering, equipment, contracting, and laboratory services needed for profitable community-based production of quality biodiesel from various feedstocks.

4. Maintain Cognizance of Actions Taken by Government and Industry

Hawaii Clean Energy Initiative

HDOA is a member of the Hawaii Clean Energy Initiative (HCEI), which is a partnership between the Department of Energy and the State of Hawaii and is part of the Fuels working group. In addition to the Fuels group, there are three other working groups

addressing End-Use Efficiency, Electricity, and Transportation. These groups have met separately and together since 2008. Collectively, these four groups are tasked with:

- Benchmarking the current state of clean energy in Hawaii
- Identifying information gaps
- Identifying structural and technical barriers to reaching the 100% clean energy goal
- Developing strategies for overcoming the barriers.

Pacific Biodiesel

Pacific Biodiesel continues to strive for 100% local feedstock to support its annual production of 5.5 million gallons of premium distilled biodiesel at its refinery on Hawaii Island. In addition to recycling used cooking oil from restaurants statewide, the company is increasingly focused on sustainable agriculture to farm for “food then fuel” to support energy security and food security in Hawaii.

Pacific Biodiesel’s founders Bob and Kelly King continued their agriculture operation on 115 acres in Maui’s central valley. The primary crop was sunflower. Other crops planted include cow peas (future swine feed opportunity), sunn hemp (*crotalaria juncea*), rye, buckwheat, and clover. Plantings for continued year-round with regenerative farming practices including efficient pivot irrigation, no till practices and rotational cover cropping to help sequester carbon and improve soil health. No herbicides or pesticides have been used on any of the crops. All farm equipment and electrical power operates on 100% biodiesel, produced by Pacific Biodiesel.

The sunflower seeds are harvested on Maui then shipped to the company’s crushing mill in Keaau, Hawaii Island. There, the seeds are carefully expeller pressed to maintain high quality, without chemical refining, and continue to be sold as cosmetic oil and food-grade oil in the Hawaii market. The wholesale market for the company’s premium culinary oils has not yet fully rebounded from the effects of the pandemic, although consumer sales of the culinary oils saw a boost with an increased awareness of supporting local farmers and local food products. Residual and off specification crop oil is being recycled and processed biodiesel.

Pacific Biodiesel installed one of its mobile biodiesel fueling stations at Ma’alaea Harbor on Maui. The station is flexible and is able to serve marine customers, including tour boats, as well as on-road vehicles.

5. Program Limitations

Monitoring

Expertise in biofuel processing facilities and appurtenances is not available within the Department. Without funds to hire staff or to contract for services, HDOA continues to be unable to monitor the compliance provisions under Section 205-4.5(a) (16).

Staffing

While the Energy Feedstock Program was authorized to employ temporary staff, the Legislature did not provide any funding for the positions in FY 08 or subsequent years. As a result, HDOA has focused its efforts on maintaining an awareness of actions taken by government and industry and supporting the efforts and activities of DBEDT and other organizations. The Chairperson continues to meet with various companies interested in using agricultural lands and water resources for biofuel production and in balance with local food production. HDOA is especially interested in developments in by-products from biofuel production that can be used to replace imported animal and fish feed and fertilizer. Pacific Biodiesel has been extremely helpful and collaborative in this area.

Grant Writing

No federal grants were sought during the reporting period due to lack of funding for staff.