JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor

SHARON HURD
Chairperson
Board of Agriculture & Biosecurity

DEAN M. MATSUKAWA
Deputy to the Chairperson

DEPT. COMM. NO. 319

State of Hawai'i
DEPARTMENT OF AGRICULTURE & BIOSECURITY
KA 'OIHANA MAHI'AI A KIA'I MEAOLA
1428 South King Street
Honolulu, Hawai'i 96814-2512
Phone: (808) 973-9560 FAX: (808) 973-9613

January 21, 2026

The Honorable Ronald D. Kouchi,
President, and Members of the Senate
Thirty-Third Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

The Honorable Nadine K. Nakamura,
Speaker, and Members of the
House of Representatives
Thirty-Third Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Dear Senate President Kouchi, Speaker Nakamura, 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 pursuant to 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://dab.hawaii.gov/meetings-reports/legislative-reports/.

Sincerely,

Sharon Hurd

Sharon Hurd, Chairperson
Board of Agriculture and Biosecurity

Attachment

Island Fresh

REPORT TO THE THIRTY-THIRD LEGISLATURE
2026 REGULAR SESSION
STATE OF HAWAIʻI

REPORT ON THE STATE'S PROGRESS TOWARD MEETING THE MILESTONES AND OBJECTIVES OF THE ENERGY FEEDSTOCK PROGRAM

PURSUANT TO ACT 159, SESSION LAWS OF HAWAIʻI 2007

Prepared by:

THE STATE OF HAWAIʻI
DEPARTMENT OF AGRICULTURE AND BIOSECURITY

DECEMBER 2025

ENERGY FEEDSTOCK PROGRAM

Annual Report to the Legislature for Calendar Year 2025

Legislative Background

Section 141-9, Hawai‘i Revised Statutes, enacted pursuant to Act 159, Session Laws of Hawaii 2007, provides in full as follows:

[§141-9] Energy feedstock program. (a) There is established within the department of agriculture and biosecurity 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 and biosecurity shall consult and coordinate with the chief energy officer of the Hawai‘i 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 Hawai‘i 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 and biosecurity 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 and biosecurity 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. [L2007, 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, 2025 - December 31, 2025.

While Hawai‘i currently imports approximately 90% of our fuel, we also import approximately the same percentage of food. Renewable energy development in the form of energy feedstock production is a part of Hawaii’s energy supply, but its promotion should be done in a manner that does not adversely affect access to agricultural lands by agricultural operations that contribute to Hawai‘i’s food self-sufficiency.

It is also important to note that approvals of special use permit applications for solar energy facilities on agricultural land have been increasing over the past several years. While not considered "energy feedstock", solar energy facilities serve a similar purpose and are required by law to make an effort to establish "compatible agricultural activities" that, to date, have been primarily small animal livestock whose purpose is to reduce the cost of weed control. The passage of the federal "One Big Beautiful Bill Act", (Public Law No. 119-21), is repealing the 30% federal tax credit for project costs for planned construction of utility-scaled solar farms. The cessation of the 30% federal tax credit may significantly reduce the number of special use permit applications for utility-scaled solar energy facilities on agricultural land.

This report has 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 affect energy feedstock production. Part 5 discusses program limitations.

1. Related Legislative Measures Enacted in 2025.

There were no legislative measures enacted during the 2025 legislative session relating to energy feedstock production.

2. Related Research.

In 2025, the Hawai‘i Department of Agriculture and Biosecurity ("DAB") continued their collaboration with the University of Hawai‘i College of Tropical Agriculture and Human Resilience ("CTAHR") on the Black Soldier Fly ("BSF") Hatchery project that process campus food waste from food centers on the University of Hawai‘i campus into biodiesel, chicken feed and compost. BSF larvae can consume several times their body weight in waste and after processing, yield oil for biodiesel and a protein-nutrient rich byproduct from the larvae bodies for animal feed. This closed-loop system reduces landfill waste and petroleum imports while creating renewable liquid fuel.

The following are CTAHR initiated projects relating to feedstocks and renewable energy:

CTAHR is continuing their on-going research on the BSF Biorefinery project to include the design of specialized modular units for a biorefinery system of appropriate scale to accommodate larger waste streams to efficiently convert organic waste into feed, fertilizer and bioproducts. CTAHR also designed and tested a modular mating chamber to ensure a supply of BSF eggs. CTAHR's plan is to develop a bioreactor design that is optimal in size with modular units, using technology for climate control, tray movement, and waste handling to turn waste into feed and fertilizer.

CTAHR studied and evaluated the agricultural crop waste from locally grown, indigenous breadfruit, taro, and sweet potato crops as feedstocks for biofuel. The study focused on using parts of the plant that were discarded to create valuable energy and to have a "zero waste" system for biofuel production. The study identified breadfruit crop waste as most versatile since the breadfruit peels and cores has have a high starch content that easily converts to fermentable sugars suitable for processing into ethanol or other biofuels.

Recent CTAHR research highlights the versatility of macroalgae and other seaweeds in developing sustainably-produced materials and bioethanol. The research indicates microwave-treated microalgae converts into bio-oil more efficiently through conventional heating. The study found that the macroalgae biomass grown in a marine environment is a promising renewable energy source that produces high bio-oil yields for biofuel. Further, Macroalgae does not compete with land for food crops and captures carbon.

Lastly, CTAHR continues to map the distribution of agricultural waste by using geographical information systems and remote sensing technology. The information will help planners with a statewide database identifying areas with sufficient agricultural biomass to support anerobic digestion, biogas recovery and renewable energy generation facilities.

The Hawaii Natural Energy Institute ("HNEI") continued its research on oilseed and woody crops such as pongamia, leucaena, and eucalyptus for renewable fuel production. Studies examined crop yield, site conditions, and production costs by island to estimate the production potential of Sustainable Aviation Fuel ("SAF"). HNEI also provided analysis on potential in-state production of plant-based oils by Pono Pacific for use in the local production of SAF by Par Hawai'i, in a partnership with Hawaiian Airlines.

Pono Pacific Land Management conducted statewide growing trials of Camelina Sativa to evaluate oil yield, cost feasibility and performance. The results of the trials helped Par Hawai'i assess their ongoing development of local feedstock sources for biofuel production. By early 2026, Pono Pacific and Par Hawai'i together plan their first delivery of locally sourced and processed SAF to Hawaiian Airlines and Alaska Airlines.

3. Dissemination of Energy Feedstock Information to Potential Producers.

The DAB and the Agribusiness Development Corporation ("ADC") continued to meet with individuals and companies seeking information about State and privately-owned agricultural lands, water, and agricultural labor. Additionally, DAB remains in contact with Pacific Biodiesel who manages biodiesel plants in Hawaii and Oregon. Pacific Biodiesel provides engineering, equipment, contracting, and laboratory services supporting the production of biodiesel from various feedstocks.

4. Maintain Cognizance of Actions Taken by Government and Industry.

The Energy Feedstock Program requires both the Hawaii State Energy Office ("HSEO") and DAB to "maintain cognizance of" local developments in the area of energy feedstocks and report these activities to the Legislature.

The HSEO and the DAB continue to monitor renewable fuel initiatives and projects undertaken by both the government and the private industry in 2025. The coordination supports the alignment of the HSEO's energy, environmental and clean transportation objectives and the DAB's agricultural objectives of supporting energy feedstock production. Both departments support the State's renewable energy goal of 100% clean electricity generation by year 2045.

Activities Summary

Par Pacific announced in 2025 the creation of Hawai‘i Renewables, a joint venture to build a renewable fuel production facility in the Campbell Industrial Park, Kapolei, Oahu. Hawai‘i Renewables will upgrade Par Pacific’s existing refinery and transportation system with improved processing technology. The facility expects to produce 61 million gallons per year of renewable diesel and SAF and is projected to be completed in early 2026.

Pacific Biodiesel annually produces nearly 60 million gallons of biodiesel on Hawai‘i Island using used cooking oil and oil seed crops. In 2025, Pacific Biodiesel delivered 6,500 gallons of biodiesel, the first large-scale shipment of biofuel made entirely from 200-acres of feedstock from sunflowers grown on Kauai and Maui, to Schofield Barracks on Oahu for the 50-megawatt Schofield Generating Station. This achievement demonstrates the viability of a fully local, farm-to-fuel renewable energy system.

Hawai‘i Gas continued its renewable natural gas production at the City and County of Honolulu’s Hono‘uli‘uli wastewater treatment plant facility. Hawai‘i Gas processes biomethane for injection into their existing pipeline network and mixed with synthetic natural gas. The company continues to evaluate energy crop options to expand the local biomethane supply.

In 2025, Simonpietri Enterprises LLC continues to advance the planned Aloha Sustainable Materials Recovery and Fertilizer Facility project on Oahu that converts demolition debris and invasive plants into renewable fuels and fertilizer using gasification technology. The facility expects to produce renewable fuels from 20-40 truckloads a day of construction and demolition waste.

The Department of Hawaiian Home Lands (“DHHL”) in partnership with Hawai‘i Land and Power, continued their work on the Alahao Renewable Energy project in Hilo that will generate up to 60 megawatts of power using biodiesel supplied by Pacific Biodiesel.

Mahipapa LLC’s closed-loop biomass-to-energy plant on Kauai in which feedstock was grown specifically for the purpose of power generation, experienced financial and operational challenges in 2025. The plant is in the process of being sold but the sale may be postponed due to litigation.

In conclusion, government and industry renewable energy initiatives in 2025 reflected continued progress towards the State’s renewable energy goals. These projects represent a diversified, locally sourced energy portfolio while maintaining focus on agricultural productivity and environmental sustainability.

5. Program Limitations.

Monitoring

DAB does have staff experienced in land use permit review and will evaluate applications for biofuel processing facilities and agricultural-energy facilities and their respective appurtenances as currently permitted on lands within the Agricultural District. DAB is on the alert for policies, projects, and programs, including subsidies, that support growing energy feedstock on currently productive or potentially productive agricultural lands in Hawaii and to include impact analysis of

the effect this competition for agricultural land will have on the State's priorities to increase food self-sufficiency.

Staffing

While the Energy Feedstock Program was authorized to employ temporary staff, the Legislature did not provide funding for positions in FY 2008 or subsequent years. As a result, the DAB has focused its efforts on maintaining an awareness of actions taken by government and industry and supporting the efforts and activities of the HSEO. DAB is especially interested in the development of byproducts from biofuel production that can be used to replace imported animal and fish feed and fertilizer. Pacific Biodiesel has been very active in this area.

Grant Writing

No federal grants were sought during the reporting period.