



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, March 21, 2024
9:31 AM
State Capitol, Conference Room 325 and Videoconference

In Support of
HCR 213 / HR 193

**REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A
RENEWABLE LIQUID FUELS WORKING GROUP TO STUDY LOCAL
PRODUCTION, DEVELOPMENT, AND INCENTIVES FOR RENEWABLE LIQUID
FUELS.**

Chair Lowen, Vice Chair Cochran, and members of the Committee, the Hawai'i State Energy Office (HSEO) supports HCR 213 / HR 193, requesting HSEO to convene a renewable liquid fuels working group to study local production, development, and incentives for renewable liquid fuels.

Hawai'i's energy strategy seeks to establish an affordable, clean, resilient, and diversified energy resource portfolio. Locally-produced renewable fuels should play a vital role in the energy mix needed to decarbonize the transportation sector and contribute to Hawai'i's 100% renewable portfolio. However, land availability severely limits the amount of local production towards Hawai'i's economic, energy and agricultural objectives. HSEO agrees with the merit of convening local experts to identify potential opportunities, synergies, and barriers for these fuels.

Renewable liquid fuels have the potential to decrease carbon emissions from transportation, especially in aircraft and medium and heavy-duty vehicles.¹ However, the Decarbonization Report prepared by HSEO pursuant to Act 238 (2022) and submitted to the Hawai'i Legislature in December of 2023 pointed out that renewable liquid fuels have widely varying environmental and cost profiles, depending on a variety of factors. The proposed working group could bring together the appropriate energy stakeholders to meaningfully engage in an analytical review of resource base potential and the most appropriate approaches, strategies, realistic quantities, and associated incentives and recommendations for local production of renewable liquid fuels.

In support of this, HSEO recommends the following addition to page 3, starting on line 18:

“(9) And others, as invited by the chair; and”

This will allow the chair the flexibility to invite a participant not otherwise identified in the resolution.

HSEO is committed to the development of effective solutions for renewable liquid fuels that serve Hawai'i's environmental, economic, and community needs, and is already engaged in tracking the production of renewable fuels in Hawai'i. HSEO looks forward to supporting this sector of the energy economy.

Thank you for the opportunity to testify.

¹ Hawai'i State Energy Office (2023). Hawai'i Pathways to Decarbonization Report to the 2024 Hawai'i State Legislature Act 238 (SLH 2022). Available at: https://energy.hawaii.gov/wp-content/uploads/2022/10/Act-238_HSEO_Decarbonization_FinalReport_2023.pdf pages 105 and 113



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March 21, 2024

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

TESTIMONY ON HCR 213/HR 193

REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A RENEWABLE LIQUID FUELS WORKING GROUP TO STUDY LOCAL PRODUCTION, DEVELOPMENT, AND INCENTIVES FOR RENEWABLE LIQUID FUELS

Conference Room 325 & Videoconference
9:31 AM

Aloha Chair Lowen, Vice-Chair Cochran, and Members of the Committee:

I am Brian Miyamoto, Executive Director of the Hawai'i Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawai'i's voice of agriculture to protect, advocate, and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawai'i Farm Bureau supports HCR 213 and HR 193, which requests the Hawai'i State Energy Office to convene a renewable liquid fuels working group to study local production, development, and incentives for renewable liquid fuels.

Renewable energy production using biofuels can play a critical role in helping Hawai'i reach the goal of one hundred percent renewable energy by 2045, help to diversify Hawai'i's economy and agricultural sector, reduce greenhouse gas emissions, and reduce our dependence on imported oil.

HFB supports the production of dedicated energy crops, crop residues, and agricultural wastes into economically and environmentally sustainable biofuels and value-added byproducts such as livestock feed.

Finding viable uses for agricultural lands that will encourage environmental sustainability and produce positive economic cash flow for Hawai'i is a critical need. Locally grown biofuel feedstocks offer significant benefits for our farmers. These crops can thrive on marginal land, improving soil health and reducing erosion. They require less water and fertilizer than traditional row crops. By creating a demand for these crops, the renewable fuels industry can revitalize rural communities, create new jobs, and diversify farm income streams. Growing biofuel feedstocks locally helps to create new agricultural jobs, encourages food production, and does not compete with food crops when using oil seed cover crops. HFB believes these feedstocks will be able to provide a quality biofuel product and usable byproducts (such as animal feed) to help support Hawaii's sustainability goals and agricultural, ranching, and dairy sectors of the local economy.

Thank you for the opportunity to comment on this measure.



Testimony of
ALASKA AIRLINES

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, March 21, 2024, 9:31 a.m.
Hawai'i State Capitol, Room 325

in consideration of
HCR 213 / HR 193

**REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A RENEWABLE LIQUID FUELS
WORKING GROUP TO STUDY LOCAL PRODUCTION, DEVELOPMENT, AND INCENTIVES FOR
RENEWABLE LIQUID FUELS.**

Aloha Chair Lowen, Vice Chair Cochran, and Members of the Committee,

Alaska Airlines supports [House Concurrent Resolution 213 / House Resolution 193](#), which requests the Hawai'i State Energy Office to convene a renewable liquid fuels working group to study local production, development, and incentives for renewable liquid fuels. The convening of this proposed working group is critical to best facilitate and incentivize the production of a range of renewable liquid fuels in Hawai'i, including sustainable aviation fuel (SAF).

However, we would like to propose the following amendments to the measure:

Amendment #1: Add the Airlines Committee of Hawai'i (ACH) to the list of invited individuals to participate on the working group.

Rationale for Amendment: The inclusion of the Airlines Committee of Hawai'i (ACH) alongside Airlines for America (A4A) is critical. While A4A serves as a trade association for North American member airlines, ACH's participation would broaden the representation to include international carriers that serve Hawai'i's airports, thus ensuring that the perspectives and interests of global airline partners crucial to Hawai'i's aviation sector are also considered.

Amendment #2: On page 3, strike lines 19 to 35 and replace with the following:

*(1) Facilitate and prioritize the local production of renewable liquid fuels, **with a special emphasis on sustainable aviation fuel**, while also including renewable diesel and naphtha;*

(2) Identify potential feedstock and production technologies suitable for production and use within the State;

(3) Evaluate existing and potential new tax incentives for the development and utilization of renewable liquid fuels in Hawai'i, with a specific goal of expediting the development and utilization of sustainable aviation fuels;

(4) Evaluate the adoption of a clean fuel standard to incentivize the use of renewable liquid fuels.

Rationale for Amendment: Prioritizing sustainable aviation fuel is crucial because, unlike ground transportation, which can shift towards electrification, aviation lacks feasible alternatives to traditional liquid fuels due to the high energy density required for flight.

Amendment #3: On page 4, strike lines 1 to 6 and replace with the following:

(1) A list of proposed policy recommendations for the development and utilization of sustainable aviation fuel, aimed for introduction in the 2025 legislative session, to be submitted no later than December 1, 2024; and

(2) A report providing an update of its work and progress no later than December 1, 2025; and

(3) A final report of its findings and recommendations, including any proposed legislation, no later than December 1, 2026; and

Rational for Amendment: Delaying the introduction of proposed legislation for two years could impede airlines' efforts to meet sustainability goals and hinder potential producers from commencing production. Certain regulatory frameworks are needed to make investment decisions and initiate production processes

Emphasizing the critical need to increase the production and utilization of sustainable aviation fuel in Hawai'i is crucial to our industry's combined efforts to reduce our carbon footprint and better support the state's broader sustainability goals.

Mahalo for the opportunity to testify on this measure.



**Testimony to
The House Committee on Energy & Environmental Protection
March 21, 2024
9:31 AM
Conference Room 325 & VIA videoconference
Hawaii State Capitol

HCR 213 / HR 193**

Chair Lowen, Vice Chair Cochran and members of the committee,

Hawaii Gas **supports** HCR 213 / HR 193 requesting the Hawaii State Energy Office to convene a renewable liquid fuels working group to study local production, development, and incentives for renewable liquid fuels.

Since 1904, Hawaii Gas has been a pioneer in the gas industry. Hawaii Gas is again at the leading edge of our industry given our integration of both renewable natural gas (RNG) and hydrogen into our fuel supply mix and distributing it through our utility pipeline system. Hawaii Gas plays a vital role in Hawaii's energy portfolio by providing clean, reliable, and cost-effective energy to over 70,000 customers on all islands, all of whom depend on the company for water heating, cooking, drying, and other commercial and industrial applications. Hawaii Gas continues to look towards new, innovative, and economic ways to incorporate renewable energy sources while also reducing our greenhouse gas emissions.

Renewable liquid fuels, including renewable diesel, naphtha, and sustainable aviation fuels, offer additional solutions for the State to achieve its goal of net zero greenhouse gas emissions while ensuring energy security and fostering economic growth.

The establishment of a Renewable Liquid Fuels Working Group, as proposed in the resolution, will provide a platform for stakeholders to advance the production, development, and utilization of renewable liquid fuels in Hawaii.

We urge you to support HCR 213 / HR 213, which will help accelerate Hawaii's journey towards a cleaner, more sustainable energy future.

Thank you for the opportunity to testify.



March 19, 2024

**TESTIMONY IN SUPPORT OF HCR 213 / HR 193
REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A RENEWABLE LIQUID
FUELS WORKING GROUP TO STUDY LOCAL PRODUCTION, DEVELOPMENT, AND
INCENTIVES FOR RENEWABLE LIQUID FUELS**

House Committee on Energy and Environmental Protection (EEP)
The Honorable Nicole E. Lowen, Chair
The Honorable Elle Cochran, Vice Chair

Thursday, March 21, 2024, 9:31 AM
Conference Room 325 & Videoconference
Hawaii State Capitol; 415 South Beretania Street

Aloha Chair Lowen, Vice Chair Cochran, and members of the Committee,

Thank you for the opportunity to provide testimony in SUPPORT of HCR 213 and HR 193. Pono Pacific supports the creation of a Renewable Liquid Fuels Working Group to study local production, development, and incentives, convened by the Hawai'i State Energy Office. We support this resolution and offer the following comments.

Pono Pacific is the state leader in land management with over 20+ years of experience across the Hawaiian Islands with an emphasis on conservation lands, agriculture, and renewable energy. Pono Pacific has partnered with Par Hawaii to develop a supply of locally grown feedstocks for biofuel production. Locally grown feedstocks will provide farmers with a viable economic commodity to supply the refinery, provide much needed local animal feed, and help put idle lands to work.

Pono Pacific is currently conducting, or will soon be conducting, field trials of Camelina at four sites, including Kuilima Farm on Oahu's North Shore, as well as with partner farmers Mahi Pono on Maui, Meadow Gold Dairies Hawaii on Hawaii Island, and Aloun Farms on Kauai. Our intention is to determine the viability of growing Camelina as a source of locally-produced renewable fuel, including SAF, in different geographic locations and growing conditions. Pono Pacific worked with the Hawaii Natural Energy Institute (HNEI) to assess land areas throughout the State and create a model identifying ideal production sites based on zoning, slope, rainfall, and temperature data. Using this information, we sought out and established relationships with key landowners to begin crop trials. Through our trials, we



are gathering data on methodology, crop management, yield, costs, and mechanization to scale for Camelina production. Seed produced through these trials will be provided to Par Hawaii for quality analysis. Biomass produced will be tilled back into the soil at trial sites to improve soil health and tested for any potential positive impacts to soil conditions, as well as potentially used as animal feed with our crop trial partner Meadow Gold Dairy.

Pono Pacific has gained substantial experience through its ongoing self-performed Camelina crop trials, which we have been working on for a year and have completed several crop rotations. Photo of Camelina at the Kuilima Farm crop trial site:



We offer the following suggested amendments:

1. The composition of the Working Group currently proposes to include a “representative from local feedstock producers.” We respectfully ask the committee to consider adding a Working Group representative from Pono Pacific. Pono Pacific is currently engaged in producing local feedstock and would be a valuable contributor to the Working Group.



2. Pono Pacific believes the Working Group should be able to complete its work and be in a position to present recommendations to the Legislature in time for the 2025 session.

Thank you for the opportunity to share our support and comments on the Renewable Fuels Working Group.

Mahalo,

Chris Bennett
Vice President of Sustainable Energy Solutions
Pono Pacific Land Management, LLC



March 20, 2024

Testimony on HCR 213/HR 193

REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A RENEWABLE LIQUID FUELS WORKING GROUP TO STUDY LOCAL PRODUCTION, DEVELOPMENT, AND INCENTIVES FOR RENEWABLE LIQUID FUELS.

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Nicole E. Lowen, Chair
Rep. Elle Cochran, Vice Chair

Conference Room 308
State Capitol 415 South Beretania Street

Dear Chair Lowen, Vice Chair Cochran, and Members of the Committee:

Thank you for the opportunity to provide supportive comments on HCR 213/HR 193. Airlines for America® (A4A) is the principal trade and service organization of the U.S. airline industry¹. A4A and its members have a strong climate change record and are committed to working across the aviation industry and with government leaders in a positive partnership to achieve net-zero carbon emissions by 2050, which parallels the Biden administration's goal to achieve net-zero greenhouse gas emissions in the aviation sector by 2050.

Airlines, governments and other aviation stakeholders have recognized that achieving net-zero aviation emissions by 2050 will require a very rapid transition from conventional (fossil) jet fuel to sustainable aviation fuel (SAF). SAF is a drop-in fuel, meaning that it works with existing aircraft engines, pipelines, and storage infrastructure, as long as it is blended up to 50% with conventional jet fuel and qualified to the relevant ASTM standards for alternative jet fuel. Work is underway to approve uses up to 100% SAF. SAF can bring meaningful reductions in aviation carbon emissions, reducing lifecycle emissions intensity of fuel up to 80% compared to conventional jet fuel today, with future pathways having potential for 100% reductions.

Ensuring the sustainability and environmental integrity of feedstocks and the production technology pathways is critical to the continued recognition and acceptance of SAF to achieve the carbon emissions reduction ambitions of aviation. We support establishing strong and robust sustainability and technical requirements based on objective criteria and the latest scientific research. A4A and its members are feedstock and technology neutral for SAF production, we

¹ A4A's members are: Alaska Airlines, Inc.; American Airlines Group Inc.; Atlas Air, Inc.; Delta Air Lines, Inc.; Federal Express Corporation; Hawaiian Airlines, Inc.; JetBlue Airways Corp.; Southwest Airlines Co.; United Airlines Holdings, Inc.; and United Parcel Service Co. Air Canada, Inc. is an associate member.

firmly believe that any production pathway that can meet robust technical and sustainability requirements should be eligible for incentive programs.

Achieving this rapid transition to SAF requires industry and government to work in partnership, at both the federal and state levels, to expand SAF production capacity across the country. And, we also recognize the unique fiscal challenge the State of Hawai'i is currently facing. A4A and our member airlines value our partnership with the state and believe there is a unique opportunity to jointly develop a market for cost competitive SAF.

Thank you again for the opportunity to provide our support to this effort. Please do not hesitate to contact us if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sean Williams".

Sean Williams
Vice President, State and Local Government Affairs
swilliams@airlines.org



March 21, 2024

**TESTIMONY IN SUPPORT OF HCR 213 / HR 193
REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A
RENEWABLE LIQUID FUELS WORKING GROUP TO STUDY LOCAL
PRODUCTION, DEVELOPMENT, AND INCENTIVES FOR RENEWABLE LIQUID
FUELS.**

House Committee on Energy and Environmental Protection (EEP)
The Honorable Nicole E. Lowen, Chair
The Honorable Elle Cochran, Vice Chair

Thursday, March 21, 2024, 9:31 AM
Conference Room 325 & Videoconference
Hawaii State Capitol; 415 South Beretania Street

Aloha Chair Lowen, Vice Chair Cochran, and members of the Committee,

Thank you for the opportunity to provide testimony in support of HCR 213 and HR 193.

Par Hawaii supports HCR 213/HR 193 and appreciates the Legislature taking the lead to initiate a Renewable Liquid Fuels Working Group to study local production, development, and incentives, convened by the Hawai'i State Energy Office. We support this resolution and offer the following comments.

This working group will be critical to accelerating our state's adoption of renewable liquid fuels to reduce our dependency on fossil fuels and the carbon intensity of the transportation sector. The working group will enable Hawai'i to keep pace with other forward-looking states that have adopted incentives to support the production and use of renewable liquid fuels, including sustainable aviation fuel (SAF) and renewable diesel.

As noted in the resolution, the transportation sector, particularly aviation, contributes significantly to greenhouse gas emissions. A coalition of local companies - Par Hawaii, Hawaiian Airlines and Pono Pacific, working with a broad range of stakeholders, is making headway to decarbonize air transportation, an area of vital importance to our local economy.

We offer the following suggested amendments:

1. First, we ask the committee to consider adding a working group representative from Par Hawaii. As the state's local fuel provider, and the only company capable of producing SAF and renewable diesel locally, we believe it is vital that Par Hawaii is included in the Working Group. We suggest that local biofuel producer Pacific Biodiesel, also be named to the Working Group.
2. The composition of the working group currently proposes to include a "representative from local feedstock producers." Par Hawaii believes it is



Par Hawaii

necessary to include Pono Pacific to the working group as a local feedstock producer. Par Hawaii, Hawaiian Airlines, and Pono Pacific are boldly committed to developing local sources of plant-based feedstock to facilitate the production of SAF and other renewable fuels to reach our state's net zero greenhouse gas emission goal. Oil crop field trials are already underway with land and farming partners on Hawaii Island, Kauai, Maui and Oahu.

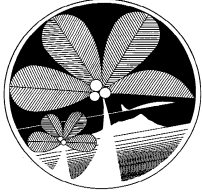
3. Finally, Par Hawaii believes the Working Group would be able to complete its work and be in a position to present recommendations to the Legislature in time for the 2025 session. The Working Group can build on recent comprehensive studies on renewable fuels by the State Energy Office and others.* Rather than recreate what has already been studied, the work group can build on the solid foundation of these studies to expedite the report to the Legislature.

Thank you for the opportunity to share our input and comments on the Renewable Fuels Working Group.

***Four Studies for the Renewable Fuels Working Group to consider:**

1. [Hawai'i Pathways to Decarbonization Act 238, Session Laws of Hawai'i 2022 Report to the State Legislature, conducted by Energy and Environmental Economics, Inc. \(E3\) and commissioned by December 2023' conducted by Legislature, December 2023.](#)
2. [Hawai'i Climate Change Mitigation & Adaptation Commission: Hawai'i Priority Climate Action Plan, contracted Hua Nani Partners and modeling work by Energy and Environmental Economics, Inc. \(E3\), March 2024.](#)
3. Catalyzing Sustainable Aviation Fuel in Hawaii, an ICF report for Hawaiian Airlines, December 2023.
4. Hawai'i Pathways to Net Zero, An Initial Assessment of Decarbonization Scenarios, conducted by Energy and Environmental Economics, Inc. (E3) and commissioned by Hawaiian Electric Company, April 2023.

AIRLINES COMMITTEE OF HAWAII



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Representative Nicole Lowen, Chair
Representative Elle Cochran, Vice Chair
Committee on Energy & Environmental Protection

Thursday, March 21, 2024; 9:31 a.m.
Conference room 325 & Videoconference

RE: HCR 213/HR 193 Requesting the Hawaii State Energy Office to Convene a Renewable Liquid Fuels Working Group to Study Local Production, Development, and Incentives for Renewable Liquid Fuels – IN SUPPORT, REQUEST AMENDMENT

Aloha Chair Lowen, Vice Chair Cochran and Members of the Committee:

The Airlines Committee of Hawaii (ACH), comprised of 20 signatory air carriers that serve the State of Hawaii, appreciates the opportunity to offer testimony in support of HCR 213 and HR 193 - Requesting the Hawaii State Energy Office to Convene a Renewable Liquid Fuels Working Group to Study Local Production, Development, and Incentives for Renewable Liquid Fuels.

As the ACH represents both domestic and international carriers, and sustainable aviation fuel initiatives are a priority of our industry, we would like to request an amendment to include a representative from the ACH be invited to participate in the working group.

Thank you for the opportunity to submit testimony. We ask for your favorable consideration in passing these resolutions with our requested amendment.

Sincerely,

Airlines Committee of Hawaii Executive Committee

A handwritten signature in black ink, appearing to read "B. Baker".

Brendan Baker

A handwritten signature in black ink, appearing to read "Mark Berg".

Mark Berg

A handwritten signature in blue ink, appearing to read "David Sellers".

David Sellers

A handwritten signature in black ink, appearing to read "Randall Fiertz".

Randall Fiertz

A handwritten signature in black ink, appearing to read "Richard Ide".

Richard Ide

**ACH members are Air Canada, Air New Zealand, Alaska Airlines, All Nippon Airways/Air Japan, Aloha Air Cargo, American Airlines, China Airlines, Delta Air Lines, Federal Express, Fiji Airways, Hawaiian Airlines, Japan Airlines, Korean Airlines, Philippine Airlines, Qantas Airways, Southwest Airlines, Sun Country, United Airlines, United Parcel Service, and WestJet.*



March 21, 2024

**TESTIMONY IN SUPPORT OF HCR 213 / HR 193
REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A RENEWABLE
LIQUID FUELS WORKING GROUP TO STUDY LOCAL PRODUCTION,
DEVELOPMENT, AND INCENTIVES FOR RENEWABLE LIQUID FUELS.**

House Committee on Energy & Environmental Protection
The Honorable Nicole E. Lowen, Chair
The Honorable Elle Cochran, Vice Chair

March 21, 2024, 9:31am
Conference Room 325
State Capitol 415 South Beretania Street

Chair Lowen, Vice Chair Cochran, and members of the Committee,

Thank you for the opportunity to provide testimony in SUPPORT of HCR 213 / HR 193.

HCR 213 / HR 193 requests the Hawaii State Energy Office to convene a renewable liquid fuels working group to study local production, development, and incentives for renewable liquid fuels in Hawaii. We support the creation of this working group, which contemplates representation from diverse stakeholders, including airlines, fuel producers, utilities, agriculture and state government, to evaluate existing and potential new incentives for the development and utilization of renewable liquid fuels in Hawaii. We appreciate the opportunity for the airline industry, represented by Airlines for America or one of its member carriers, to have a seat at the table on this working group and contribute to the advancement of this important topic.

Aviation emissions represent a very small part of overall global carbon emissions. Nonetheless, aviation represents a higher proportion of Hawaii's fossil fuel usage, given our unique dependence on air transportation and relatively limited utilization of road fuel. Within Hawaii, it is worth noting that aviation fuel usage is driven predominantly (estimated about 90%) by long-haul travel; with its short flight distances, the intrastate flying on which our community depends drives relatively little fuel consumption. In order to address the existential threat of human-caused climate change, airlines in the U.S. have all committed to reach net-zero in the decades to come.

In line with the broader aviation industry, we view sustainable aviation fuel (SAF) as the most promising technology to advance aviation decarbonization. The U.S. airline industry has pledged to work with government leaders and other stakeholders to make 3 billion gallons of cost-competitive SAF available to U.S. aircraft operators in 2030. SAF is a proven, drop-in fuel, meaning that it is certified for use in existing aircraft engines, pipelines, and storage infrastructure, as long as it is blended up to 50% with conventional jet fuel. SAF can bring meaningful reductions in aviation carbon emissions, with lifecycle emissions intensity up to 50 to 80% lower than conventional jet fuel.

The reality is that while promising alternatives to jet engines lie beyond the horizon, the commercial aviation industry's excellent safety record relies on incremental adoption of new technology. The advantage of SAF is that it is already being used in today's aircraft and engines,



which makes it one of the only credible means of reaching decarbonization goals between now and 2050.

The challenge with SAF is that it is not yet commercially viable, and it is not available at scale, and therefore incentives are needed to drive adoption in the near term. Objective economic analyses have demonstrated that the higher cost of SAF vs. jet fuel today is driven by two factors: (1) the maturity of manufacturing technologies, and (2) the lack of scale in production. Incentives and credits, therefore, are not a perpetual need but a bridge to get biofuel production to maturity and scale, when it can compete successfully against traditional petroleum-based fuels.

Other U.S. states, such as California, Oregon, Washington, Illinois and Minnesota, provide state-level incentives to advance SAF in their states. The State of Hawaii has established an ambitious target to achieve economy-wide net-zero emissions by 2045, and aviation emissions comprise about 50 percent of Hawaii's transportation emissions. If Hawaii wants to attract supply of SAF to address its aviation emissions, it will need incentives that are competitive with other U.S. states. As long as there is scarcity of supply, volume will go to the markets which provide the most value.

HCR 213 / HR 193 is opportunity to bring together diverse stakeholders and align industry and government on the development of incentives needed to decarbonize our economy in Hawaii, particularly in the aviation sector which has been deemed a 'hard to decarbonize' sector, while supporting economic development in our state.

We recommend that the working group should provide its initial report and proposed legislation 20 days prior to the start of the 2025 legislative session. The working group can build on the recently published Hawaii decarbonization studies, as well as the recent study that we commissioned at Hawaiian Airlines on catalyzing SAF in Hawaii from ICF.

Thank you for the opportunity to provide testimony in SUPPORT of this resolution.

Mahalo,

Alanna James
Managing Director, Sustainability Initiatives
Hawaiian Airlines



March 21, 2024

**TESTIMONY IN SUPPORT TO HCR213 / HR193
REQUESTING THE HAWAII STATE ENERGY OFFICE TO
CONVENE A RENEWABLE LIQUID FUELS WORKING
GROUP TO STUDY LOCAL PRODUCTION, DEVELOPMENT,
AND INCENTIVES FOR RENEWABLE LIQUID FUELS.**

House Committee on Energy & Environmental Protection
The Honorable Nicole Lowen, Chair
The Honorable Elle Cochran, Vice Chair
Tuesday, March 21, 2024, 9:31 am
VIA VIDEOCONFERENCE
Conference Room 325
State Capitol
415 South Beretania Street

Chair Lowen, Vice Chair Cochran and members of the Committee,

Island Energy Services (IES) supports the intent of HCR213 / HR193 to convene a Renewable Liquid Fuels Working Group to study the local production, development and incentives for renewable liquid fuels. IES believes the input from the “Working Group” is a critical step at this time to set in motion a smooth transition to the stated policy of reducing and ultimately eliminating the use of hydrocarbon-based liquid fuels by 2045. Determining the appropriate steps along an orderly pathway, with the least amount of disruption, will require a concerted effort from a broad range of in-state stakeholders likely informed by experiences from outside of Hawaii. Recognizing that the production of the necessary replacement liquid fuels in sufficient quantities cannot be achieved in its entirety via local production, importation will be paramount to any plan to achieve a fossil-free energy system. As a major local fuel supplier, and Hawaii’s premier importer of liquid fuels, IES strongly suggests the list of representatives include an entity with a demonstrated ability to successfully import large cargoes of liquid fuels.

BE IT FURTHER RESOLVED that the chairperson of the working group is requested to invite the following individuals to participate in the working group:

- (1) A representative from the Hawaii Farm Bureau;

- (2) A representative from Airlines for America;
- (3) A representative from Hawaiian Electric;
- (4) A representative from Hawaii Gas;
- (5) A representative from the Kauai Island Utility Cooperative;
- (6) A representative from local feedstock producers;
- (7) A representative from local fuel producers; and
- (8) A representative from a non-profit organization with a focus on climate change mitigation, environmental sustainability, or renewable energy; and
- (9) A representative from a local fuel importer, with state-wide logistical supply and distribution capability; and

IES is a locally managed and headquartered integrated logistics and retail fuel supplier providing over 20% of the liquid energy needs of the State of Hawai'i. Our operations extend across all islands with major assets on Oahu, Maui, Kauai, and Hawaii Island. At IES, our local workforce of 285 employees takes tremendous pride in serving our customers safely, environmentally responsibly, reliably, efficiently with cost competitive products and services. Whether you and your goods are moving by air, land, or sea, IES is there to support island residents now and into the future. As for the future, IES is collaborating with other partners to transition Hawai'i's energy supply to ever cleaner sources of energy including, biofuels such as renewable fuels for electrical power generation, ground and marine transportation and sustainable aviation fuel (SAF) for airplanes.

We thank the House Energy & Environmental Protection Committee for hearing this bill and thank you for the opportunity to testify.

Albert D.K. Chee, Jr.
Vice President



P.O. Box 1459
Kahului, Hawaii 96733
Phone (808) 877-3144
Fax (808) 877-5030
www.biodiesel.com

March 21, 2024

TESTIMONY ON HCR 213

SUPPORT

Rep. Nicole E. Lowen, Chair
Rep. Elle Cochran, Vice Chair
Committee on Energy & Environmental Protection

Aloha Chair Lowen, Vice Chair Cochran, and Members of the Committee,

Pacific Biodiesel supports HCR 213 which REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A RENEWABLE LIQUID FUELS WORKING GROUP TO STUDY LOCAL PRODUCTION, DEVELOPMENT, AND INCENTIVES FOR RENEWABLE LIQUID FUELS.

Major investments are needed in firm renewable energy to meet Hawaii's mandate to reach 100% renewable energy by 2045.

- A. Hawaii's utility companies rely on and need more of Pacific Biodiesel's locally produced firm renewable energy. HRS section 269-92(a) requires each electric utility company that sells electricity for consumption in the State to establish a renewable portfolio standard of forty percent of its net electricity sales by December 31, 2030, seventy percent of its net electricity sales by December 31, 2040, and one hundred percent of its net electricity sales by December 31, 2045. In order for electric utility companies to meet the required renewable portfolio standards by 2045, an indispensable component of the electric utility companies' renewable portfolio standard must include sufficient locally sourced firm renewable energy sources to offset the intermittent nature of wind and solar power renewable energy.

- B. Speaking for the liquid biofuels industry, it is well known that the cost to move from 70% to 100% renewables will be extremely expensive using any other technology. Biodiesel can cost effectively optimize battery sizing by providing firm renewable power, quickly dispatched at any time. Fast-start, efficient diesel engines – when fueled with clean biodiesel – are enabling higher penetration of intermittent PV and wind assets while maintaining grid stability. Biodiesel allows for an immediate reduction of greenhouse gas emissions. Our biodiesel is a 100% renewable Advanced Biofuel that is a crucially important firm renewable power source in Hawaii to back up other renewables on the grid. And, more importantly now than ever, Hawaii's locally produced biodiesel is supporting energy security in our island state and reducing reliance on imported fossil fuel. **It is a direct replacement for petroleum diesel fuel that can be used right now in any diesel engine without modification, helping to reduce greenhouse gas emissions**

renewable • sustainable • community-based

by 86% compared to petroleum diesel. The diesel engine is NOT the problem. Petroleum diesel FUEL – fossil fuel – used in efficient diesel engines is the problem. **Biodiesel has one of the lowest carbon footprints of any fuel.** A California Air Resources Board (CARB) report* shared findings that total greenhouse gas (GHG) reductions from biomass-based diesel were three times the total reductions from electric vehicles. In Hawaii, where the carbon intensity of our electricity grid is significantly higher than the US average, the assumption would be an even greater GHG reduction with the use of 100% biodiesel compared to EVs charged by an electricity grid that is currently only 30% powered by renewables.

- C. Unfortunately, Hawaii is rushing to support electrification while ignoring the many environmental and economic benefits of biofuels. We cannot and should not sit back and wait for a 100% zero emission future. The State must get serious, soon, about requiring a lifecycle GHG reduction analysis on its “zero emission” strategies before Hawaii spends millions on electrification.

Our locally produced 2nd Generation biodiesel is produced from recycled used cooking oil from Hawaii and recycled used cooking oil from the mainland. Increasing production using locally grown or recycled feedstock is our goal, and that goal is becoming reality at our new project on Kauai. Pacific Biodiesel and other companies need this incentive to increase local production with from local feedstock over the next 20 years. That is how we achieve energy independence.

The further we move towards our goal of 100% renewable, the more critical firm energy like liquid biofuel sources will be. At Pacific Biodiesel’s refinery on Hawaii Island, we produce 6 million gallons per year of premium distilled biodiesel – the equivalent of 220 MWh per DAY of 100% renewable energy for Hawaii. **But, building up the supply is a long process. We must accelerate implementation and support additional local production now to meet expanding demand in the future and to ensure that our firm energy needs can be met with firm renewable energy by 2045.**

Mahalo,

Sincerely,



Robert A. King, President
Pacific Biodiesel Technologies, LLC