HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, February 19, 2026
9:45 AM
State Capitol, Conference Room 325 and Videoconference

Providing Comments on
HB 1695, HD1

RELATING TO RENEWABLE FUEL.

Chair Lowen, Vice Chair Perruso, and Members of the Committee, the Hawai‘i State Energy Office (HSEO) offers comments on HB 1695, HD1, which expands the renewable fuels production tax credit (RFPTC), Section 235-110.32, Hawai‘i Revised Statutes, by adding an additional credit value of one dollar ($1.00) per diesel gallon equivalent for low lifecycle emissions renewable fuels; and adding an additional credit value equal to $1.00 per gallon if the renewable fuel is sustainable aviation fuel.

HSEO appreciates the intent of the bill and recognizes the critical importance of reducing greenhouse gas (GHG) emissions in the transportation sector and aviation subsector. However, HSEO cautions that the design of incentive programs must be carefully calibrated to ensure they deliver substantive, verifiable emissions reductions with an appropriate and quantifiable value to the public.

In the 2023 Pathways to Decarbonization Report to the Legislature, HSEO identified low-carbon fuels as a potentially important tool for reducing emissions in hard-to-electrify sectors. However, the analysis also emphasized that the climate benefits of alternative fuels are highly dependent on robust lifecycle GHG accounting, transparent verification methodologies, and strong safeguards against over-crediting fuels that deliver marginal or uncertain emissions reductions.

HSEO further notes that the proposed expansion and removal of the individual taxpayer or single producer claim cap could disproportionately benefit a limited number of producers or fuel pathways, while placing the fiscal burden on the general taxpayer. The bill risks functioning as a broad subsidy rather than a targeted, cost-effective climate policy tool.

While HSEO appreciates that this bill does not alter the existing $20 million aggregate program cap, the removal of the per-taxpayer cap of $3,500,000 per taxable year (page 5, lines 12-16) allows a single taxpayer to claim a substantially larger share of the available credit. Under the “single producer cap” definition, as written, and assuming a $20 million program cap, seventy-five percent (75%) of the aggregate cap (page 14, lines 18-19) equates to $15 million, meaning a single producer could potentially capture a large share of available credits in a given year.

HSEO supports the additional lifecycle greenhouse gas threshold criteria, as amended in Section 235-110.32(o), HRS (pages 11–14). However, the proposed amendments to Section 235-110.32(d)(3), HRS, would effectively remove HSEO’s obligation to determine whether a producer’s lifecycle greenhouse gas emissions meet the threshold criteria established. Absent this verification role, producers would, in practice, self-certify the lifecycle greenhouse gas reductions reported in their applications. HSEO therefore recommends clarifying statutory language to ensure that the agency’s responsibility to review and verify submitted lifecycle greenhouse gas emissions information remains intact.

Finally, HSEO recommends adding additional language to ensure the fuels receiving the tax credit remain in the state. Accordingly, HSEO suggests that language be added to the definition of renewable fuels, page 13, line 20.

“Renewable fuels” means fuels produced from renewable Feedstocks; provided that the fuel:

(1) Is sold and consumed as a fuel in the State.

Thank you for the opportunity to testify.

JOSH GREEN M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

GARY S. SUGANUMA
DIRECTOR

KRISTEN M.R. SAKAMOTO
DEPUTY DIRECTOR

STATE OF HAWAIʻI
DEPARTMENT OF TAXATION
Ka ʻOihana ʻAuhau
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TESTIMONY OF GARY S. SUGANUMA, DIRECTOR OF TAXATION

TESTIMONY ON THE FOLLOWING MEASURE:
H.B. No. 1695, H.D.1, Relating to Renewable Fuel

BEFORE THE:
House Committee on Energy & Environmental Protection

DATE: Thursday, February 19, 2026
TIME: 9:45 a.m.
LOCATION: State Capitol, Room 325

Chair Lowen, Vice-Chair Peruso, and Members of the Committee:

The Department of Taxation (DOTAX) offers the following comments regarding H.B. 1695, H.D.1, for your consideration.

H.B. 1695, H.D.1, makes significant changes to the Renewable Fuels Production Tax Credit (RFPTC) in section 235-110.32, Hawaii Revised Statutes (HRS) to expand the tax credit. The bill:

- increases the annual dollar amount that may be claimed from 20 cents to 35 cents per 76,000 British thermal units (BTUs) of renewable fuels produced and sold for distribution in the State;
- removes the $3,500,000 per taxpayer, per taxable year credit cap, and limits the credit to fuels that meet the lifecycle greenhouse gas emissions reduction threshold, and product transportation emissions threshold;
- adds an additional $1 credit amount per diesel gallon for low lifecycle emissions renewable fuels; and
- adds another $1 credit amount per gallon if the renewable fuel is

sustainable aviation fuel.

The bill amends subsection 235-110.2(f) to make the credit subject to a “program cap” that remains equal to the current $20,000,000 cap, and amends the credit so that if the program cap is reached in a given tax year, the credit will be calculated by proportionally allocating the credit based on the total amount of renewable fuels production tax credit claims.

The credit is also amended to limit taxpayers:

- to a maximum “single producer cap” of 75 per cent of the total amount of credits allowed in any tax year; and
- limit taxpayers to a “sustainable aviation fuel additional value cap” of 50 per cent of the total amount of credits allowed in any tax year.

If proportional allocations of the credit, based on the single producer cap and sustainable aviation fuel additional value cap, result in total credits less than the program cap, this difference in credit amount will be allocated to all other eligible credit claims that have not exceeded the single producer cap or sustainable aviation fuel additional value cap relative to the RFPTCs for those taxpayers in the tax year.

Additionally, H.B. 1695 amends the credit period during which the RFPTC may be claimed by a taxpayer by changing the definition of "credit period" to 10 consecutive years beginning from July 1, 2026, and provides that any taxpayer that previously claimed RFPTC credits before July 1, 2026, may claim another tax credit for tax years beginning after December 31, 2025.

The measure deletes the requirement for the Hawaii State Energy Office (HSEO) to determine whether the lifecycle greenhouse gas emissions for each type of qualified fuel produced by the taxpayer are lower than that of fossil fuels. The bill also adds definitions for “feedstock transportation emissions threshold,” "lifecycle greenhouse gas emissions," "lifecycle greenhouse gas emissions reduction threshold,” “low lifecycle emissions renewable fuels,” “product transportation emissions threshold,” “program cap,” “single producer cap,” and “sustainable aviation fuel”.

The bill has a defective effective date July 1, 3000, and would apply to taxable years beginning after December 31, 2025.

DOTAX notes that it is unable to administer the “program cap,” the “additional value cap,” and the allocation of excess credits in the subsequent year. Without a third party administering the caps and allocations, DOTAX requests that these provisions be deleted.

Further, DOTAX notes that the amendment to section 235-110.32(a) at page 6, lines 16-19, where it states "provided that taxpayers who previously claimed a tax credit under this section before July 1, 2026, may claim another tax credit for taxable years beginning after December 31, 2025" may be ambiguous to taxpayers. For clarity, DOTAX suggests amending the provision to read as follows:

> Each taxpayer, together with all of its related entities as determined under section 267(b) of the Internal Revenue Code and all business entities under common control, as determined under sections 414(b), 414(c), and 1563(a) of the Internal Revenue Code, shall not be eligible for more than a single [~~ten-year~~] credit period[~~.~~]; provided that taxpayers who previously claimed the tax credit for a single credit period for taxable years beginning before January 1, 2027 may claim another tax credit for taxable years beginning after December 31, 2026.

Lastly, DOTAX requests that given the complex changes the bill proposes, the effective date of the bill be amended to apply to taxable years beginning after December 31, 2026, to allow sufficient time for development of new forms, system changes, and notice to taxpayers.

Thank you for the opportunity to provide comments on this measure.

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA

EDWIN H. SNIFFEN
DIRECTOR
KA LUNA HO'OKELE

Deputy Directors
Nā Hope Luna Ho'okele
DREANALEE K. KALILI
TAMMY L. LEE
CURT T. OTAGURO
ROBIN K. SHISHIDO

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU
869 PUNCHBOWL STREET
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Thursday, February 19, 2026
9:45 AM
State Capitol, 325

HB1695, HD1
RELATING TO A RENEWABLE FUEL

House Committee on Energy & Environmental Protection

The Department of Transportation (DOT) supports House Bill 1695 HD1, relating to the expansion of the renewable fuels production tax credit, and suggests amendments.

This bill proposes amendments to enhance the renewable fuels production tax credit with a particular focus on sustainable aviation fuel (SAF) production. The DOT's support for this measure is consistent with our Energy Security and Waste Reduction Plan (October 2025), which highlights conversion to clean fuels, primarily in aviation, as the most impactful emissions reduction strategy statewide, followed by electrification, primarily in ground transportation.

The Energy Security Plan identifies the aviation sector as one of the most challenging areas to decarbonize and emphasizes the need for clean fuels to reduce emissions. The Plan states that "sectors of the state's transportation system that will be hardest to decarbonize include long-haul aircraft" and that achieving emissions reductions in aviation hinges on "the viability of clean fuels for aircraft" (Plan p. 17). The Plan recognizes the importance of policy incentives to advance clean fuel deployment, stating that "clean fuel incentives are also critical to secure financing to build clean fuel refineries, or upgrade facilities to produce clean fuel" (Plan p. 72). Enabling the local production of SAF is a near-term option to support decarbonization of Hawaii aviation. It does not require new aircraft or airport infrastructure investment to implement. As an island state heavily dependent on air transportation, the development of a robust local SAF industry can significantly contribute to our emission reduction targets established in law, while also bolstering energy security, agriculture, and economic diversification.

The DOT appreciates the bill's comprehensive approach, including new eligibility criteria, adjusted credit values, and updated reporting requirements. These measures should help to ensure that the tax credits are effectively targeted and that their impact can be accurately assessed over time.

The inclusion of caps on aggregate tax credits demonstrates a balanced approach, promoting industry growth while maintaining fiscal responsibility. Tax incentives will position Hawaii as a leader that encourages outside private investment to support the

national transition to a cleaner aviation industry. Federal incentives alone will not be sufficient to help close the cost gap between SAF and conventional jet fuel.

In order to define the transportation emissions thresholds that are currently blank in the bill, the DOT recommends filling in the blank on page 11, rows 3 to 8 as follows: "Feedstock transportation emissions threshold" means the carbon intensity contribution associated with the oceangoing transportation of the feedstock from the feedstock producer to the renewable fuel producer is less than 0.46 grams per megajoule as determined by the lifecycle greenhouse gas emissions analysis.

The DOT also recommends filling in the blank on page 12, rows 9 to 14 as follows: "Product transportation emissions threshold" means the carbon intensity contribution associated with the oceangoing transportation of the finished fuel from the renewable fuel producer to the final distribution storage facility is less than 0.46 grams per megajoule as determined by the lifecycle greenhouse gas emissions analysis.

Thank you for the opportunity to testify in support of this bill.

Kohala Coast
RESORT ASSOCIATION

February 13, 2026

Representative Nicole Lowen, Chair
Representative Amy Perruso, Vice Chair
House Committee on Energy and Environmental Protection
Hawaii State Legislature

Support for HB1695 HD1

Dear Chair Lowen, Vice Chair Perruso and Members of the Committee on Energy and Environmental Protection,

On behalf of the Kohala Coast Resort Association, thank you for the opportunity to share our **support of HB1695 HD1** which expands and strengthens Hawai‘i’s renewable fuels production tax credit, including support for Sustainable Aviation Fuel.

Transportation accounts for nearly half of Hawai‘i’s greenhouse gas emissions, and aviation plays a significant role due to the State’s geographic realities. While reducing aviation emissions is essential, it must be done in a way that preserves safe, reliable, and affordable air service for residents and visitors.

Sustainable Aviation Fuel is currently the only feasible and scalable option for reducing aviation emissions in the near and medium term. However, SAF remains significantly more expensive than conventional jet fuel, and without targeted policy support, local production and use will remain limited.

HB1695 addresses this challenge by strengthening incentives for renewable fuel production and explicitly recognizing SAF within the credit structure. This helps close the cost gap, encourages local investment, and supports the development of a Hawai‘i-based renewable fuels industry.

Beyond aviation, this measure supports broader economic and environmental goals by creating skilled jobs, encouraging agricultural innovation, and strengthening energy resilience—particularly for neighbor island communities.

As Hawai‘i works to meet its climate obligations and reduce dependence on imported fossil fuels, policies that support local renewable fuel production are essential.

For these reasons, I respectfully urge the Committee to pass HB1695 HD1.

Mahalo for the opportunity to provide testimony.

Sincerely,

Stephanie P. Donoho

Stephanie Donoho, Administrative Director
Kohala Coast Resort Association

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February 19, 2026

COMMENTS TO
HB 1695 HD1
RELATING TO RENEWABLE FUEL

House Committee on Energy & Environmental Protection
The Honorable Nicole Lowen, Chair
The Honorable Amy Perruso, Vice Chair

Thursday, February 19, 2026, 9:45 a.m.

VIA VIDEOCONFERENCE
Conference Room 325
State Capitol
415 South Beretania Street

Chair Lowen, Vice Chair Perruso, and Members of the Committee,

Island Energy Services, LLC ("IES") offers the following comments on HB 1695 HD1, which proposes the establishment of a sustainable aviation fuel tax credit program for the State.

- The current language of HB 1695 HD1 indicates it is intended to "support local production of SAF and other renewable fuels" the State goals are best served by allowing any imported finished sustainable aviation fuel and other renewable fuels produced outside of Hawai'i to qualify for the same proposed tax credit provided it meets the same lifecycle greenhouse gas emission threshold.

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
Executive Vice President Island Energy Services, LLC

Testimony of
ALASKA AIRLINES and HAWAIIAN AIRLINES

Before the House Committee on
Energy & Environmental Protection

Thursday, February 19, 2026
9:45 A.M.
Hawai‘i State Capitol, Room 325

In consideration of
HOUSE BILL 1695, H.D. 1
RELATING TO SUSTAINABLE AVIATION FUEL TAX CREDIT

The Honorable Nicole Lowen, Chair of the Committee on Energy & Environmental Protection
The Honorable Amy Perruso, Vice Chair of the Committee on Energy & Environmental Protection
Members of the Committee on Energy & Environmental Protection

Re: **Testimony in Support of H.B. 1695, Relating To Renewable Fuel**

Chair Lowen, Vice-Chair Perruso and members of the committee,

On behalf of Alaska Airlines and Hawaiian Airlines, we respectfully submit testimony in support of H.B. 1695, H.D. 1, which expands and strengthens the State's renewable fuels production tax credit to support the production of renewable fuels, including sustainable aviation fuel, in Hawai‘i.

The transportation sector accounts for approximately forty-eight percent of statewide greenhouse gas emissions, and aviation plays a critical role within that system given Hawai‘i's geographic realities and reliance on air travel. Hawai‘i consumes approximately 714 million gallons of jet fuel annually. Even producing a modest portion of that fuel locally using renewable feedstocks can yield measurable emissions reductions while strengthening energy resilience and local economic activity.

Unlike other transportation sectors, aviation does not yet have scalable electrification or hydrogen pathways that can safely serve long-haul or interisland operations. Sustainable aviation fuel is a certified, drop-in fuel that can be blended with conventional jet fuel and used in existing aircraft engines and airport infrastructure. It represents the most immediate and scalable tool available to reduce lifecycle emissions from aviation without disrupting essential air service.

H.B. 1695, H.D. 1 directly addresses the primary barrier to scaling production: cost. The measure increases the renewable fuels production tax credit to thirty-five cents per seventy-six thousand British thermal units during the ten-year credit period. It further establishes an additional credit value of $1.00 per diesel gallon equivalent for low lifecycle emissions renewable fuels and an

additional $1.00 per gallon if the renewable fuel is sustainable aviation fuel . These targeted adders appropriately recognize the higher cost of producing fuels that meet stringent lifecycle and transportation emissions thresholds and the particular importance of sustainable aviation fuel to Hawai‘i’s decarbonization strategy.

The bill also maintains strong environmental guardrails. Eligible fuels must meet the lifecycle greenhouse gas emissions reduction threshold and product transportation emissions threshold, with lifecycle emissions calculated using the Argonne National Laboratory GREET model or another methodology approved by the Hawai‘i State Energy Office . This ensures that public investment supports fuels that deliver real and verifiable carbon reductions.

H.B. 1695, H.D. 1 incorporates fiscal safeguards as well, including a program cap of $20,000,000 annually, a single producer cap of seventy-five percent of total credits in any year, and a sustainable aviation fuel additional value cap equal to fifty percent of the total aggregate credits allowed . Credits are proportionally allocated if claims exceed the program cap. These provisions strike an appropriate balance between encouraging investment and protecting the State’s fiscal interests.

Importantly, the measure explicitly references the Navahine settlement and the State’s constitutional responsibility to ensure a life-sustaining climate for current and future generations. Achieving those obligations will require coordinated action across all major sectors, including aviation. Strengthening the renewable fuels production tax credit is a practical and scalable step toward meeting those commitments.

Beyond aviation, this bill supports agricultural innovation, creates skilled jobs in feedstock development and fuel production, and allows Hawai‘i’s existing energy workforce to transition into a clean energy economy. These outcomes align climate action with economic opportunity, particularly for neighbor island communities.

Alaska Airlines and Hawaiian Airlines are committed to reducing aviation emissions and supporting Hawai‘i’s long-term sustainability goals. H.B. 1695, H.D. 1 strengthens the policy framework necessary to attract investment, build local production capacity, and ensure that lower-carbon fuels are available in the Hawai‘i market.

For these reasons, we respectfully urge the Committee to pass H.B. 1695, H.D. 1.

Mahalo for the opportunity to provide testimony.

LEGISLATIVE TAX BILL SERVICE

TAX FOUNDATION OF HAWAII

735 Bishop Street, Suite 417 Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: INCOME, Renewable Fuel Production Credit Amendments

BILL NUMBER: HB 1695 HD1

INTRODUCED BY: TRN

EXECUTIVE SUMMARY: Expands the provisions of the renewable fuels production tax credit. Applies to taxable years beginning after December 31, 2025. Effective 7/1/3000.

SYNOPSIS: Amends section 235-110.32, HRS, to amend the renewable fuels production tax credit by:

- Raising the credit from 20 to 35 cents per 76,000 BTU.
- Specifying that the credit may only be claimed for fuels that meet the lifecycle greenhouse gas emissions reduction threshold and product transportation emissions threshold.
- Allowing an additional $1 per gallon credit for low lifecycle emissions renewable fuels.
- Allowing an additional $1 per gallon credit for sustainable aviation fuel.
- Providing that notwithstanding the limitation of one credit in a ten-year period, taxpayers who previously claimed a credit before July 1, 2026, may claim another credit for taxable years beginning after December 31, 2025.
- Establishing credit caps including an overall program cap ($20 million), a single producer cap (75% of this amount), and a sustainable aviation fuel additional value cap (apparently 50% of the overall program cap).
- Providing that credits disallowed by the caps carry over to the subsequent taxable year but are subject to the following year's caps and cannot be carried forward further than one year.

EFFECTIVE DATE: July 1, 3000, and shall apply to taxable years beginning after December 31, 2025.

STAFF COMMENTS: Act 202, SLH 2016, enacted a renewable energy production credit with a five-year life. The credit sunset on December 31, 2021. The credit was revived by Act 16, SLH 2022 with an aggregate cap of $20 million.

While the idea of providing a tax credit to encourage such activities may have been acceptable a few years ago when the economy was on a roll and advocates could point to credits like those to encourage construction and renovation activities, what lawmakers and administrators have learned in these past few years is that unbridled tax incentives, where there is no accountability or limits on how much in credits can be claimed, are irresponsible as the cost of these credits goes far beyond what was ever intended. Instead, lawmakers should encourage alternative energy production through the appropriation of a specific number of taxpayer dollars. The State could

directly purchase energy, or it could give a subsidy to developers. Then, lawmakers would have a better idea of what is being funded and hold the developers of these alternate forms of energy to a deliberate timetable or else lose the funds altogether. A direct appropriation would be preferable to the tax credit as it would: (1) provide some accountability for the taxpayers' funds being utilized to support this effort; and (2) not be a blank check.

We also have technical comments. The interplay between the different credit caps appears to be complex. We have some concerns over whether it is administrable. For example, the bill says that the single producer cap is 75% of the total amount of credits allowed in any calendar year. If this language doesn't mean 75% of the program cap but 75% of the total claims *actually* submitted, the amount is not determinable until twelve months after the close of the taxable year in which the production took place, because claims or amended claims can be filed within those twelve months.

The bill also says, "To the extent that the proportional allocation and applications of the single producer cap and sustainable aviation fuel additional value cap results in total credits lower than the program cap, the difference between the program cap and the total shall be allocated to any remaining eligible claims from taxpayers that have not exceeded either the single producer cap or sustainable aviation fuel additional value cap in proportion to the renewable fuels production tax credit claims for those taxpayers in the calendar year." We are not sure how this works, but are concerned that this calculation as well cannot be performed until twelve months after the close of the taxable year in which the production took place.

Digested: 2/15/2026

February 18, 2026

TESTIMONY IN SUPPORT OF HB 1695 HD1
RELATING TO RENEWABLE FUEL

House Committee on Energy & Environmental Protection (EEP)
The Honorable Nicole E. Lowen, Chair
The Honorable Amy A. Perruso, Vice Chair

February 19, 2026, 9:45 am
Conference Room 325
State Capitol
415 South Beretania Street

Chair Lowen and Vice Chair Perruso, and Members of the Committee,

Thank you for the opportunity to provide testimony in **STRONG SUPPOR**T of **HB 1695 HD1**, Relating to Renewable Fuel. We believe that the proposed legislation presents a meaningful opportunity to make a positive impact on our state, our environment, and our agricultural sector. We respectfully request that you amend the definition of "Renewable feedstocks" to specifically include camelina. The definition in subsection (3) currently includes "Oil crops, including but not limited to algae, canola, jatropha, palm, soybean, and sunflower."

Pono Pacific is Hawai'i's first and largest private natural resource conservation company, providing land management, restoration services, sustainable agricultural development, renewable energy, and eco-asset development for projects throughout the state. Our work is focused on activating working lands, increasing food security and community engagement, and protecting natural resources to build a more resilient future for Hawai'i.

Since 2023, Pono Pacific has partnered with Par Hawaii to develop a consistent supply of locally grown biofuel feedstocks for renewable fuel production. These feedstocks can provide farmers with a viable new economic commodity while strengthening Hawai'i's agricultural economy. HB 1695 HD1 includes a calculation for low-emission renewable fuels, which is intended to spur economic activity in the agricultural sector, while not excluding out-of-state companies from participating. This will help Hawai'i farmers by providing an additional credit of $1 per gallon for low lifecycle emissions renewable fuels, which can be produced from locally grown renewable feedstocks.

PONO PACIFIC

Throughout 2024 and 2025, Pono Pacific partnered with two of Hawai‘i’s largest food producers, Mahi Pono and Aloun Farms, as well as Meadow Gold Dairies Hawaii, to advance oil crop feedstock cultivation by growing *Camelina sativa* (Camelina) at sites on Hawai‘i Island, Maui, Oahu and Kaua‘i. Additionally, Camelina variety trials were conducted in partnership with the Hawai‘i Agricultural Research Center (HARC). Pono Pacific recently entered into an agreement with HARC to continue trials of Camelina on Oahu through 2026 with the goal of improving both yield per acre and oil content through further research and development.

Camelina is particularly promising because it delivers environmental co-benefits and valuable co-products that support local food systems, including seed cake for animal feed and crop residue that can be used as soil amendments. To date, trial results have been encouraging, averaging approximately 1,200 pounds of seed per acre, and local farmers, ranchers, and feed producers have expressed strong interest in the crop’s potential.

Finding viable uses for agricultural lands that promote environmental sustainability while generating positive economic returns is a critical need for Hawai‘i. Locally grown biofuel feedstocks such as camelina can be grown in rotation with food crops or on currently fallow land, improving soil health and reducing erosion. Pono Pacific has also engaged local companies exploring the use of locally produced biochar and organic fertilizers to further enhance soil fertility and carbon retention.

Camelina requires less water and fertilizer than traditional row crops, making it well suited to Hawai‘i’s diverse landscapes. In addition to supplying low-carbon feedstock for renewable fuels, camelina produces nutritious meal that can be used as feed for cattle and chickens or processed into pellets for aquaculture feed, creating multiple revenue streams from a single crop. By creating a stable demand for these crops and their byproducts, the renewable fuels industry can help revitalize rural communities, create new jobs, and diversify farm income streams across the islands.

Par Hawaii has publicly committed to spending significant capital, approximately $100M, retrofitting its Kapolei refinery to produce liquid renewable fuels, including Sustainable Aviation Fuel (SAF). This renewable fuel production is scheduled to start soon – in the 1st quarter of 2026. Transitioning to SAF, derived from renewable sources like energy crops, presents a crucial step towards decarbonizing air travel. SAF can bring meaningful reductions in aviation carbon emissions, with lifecycle emissions up to 50 to 80% lower than conventional jet fuel. Investing in local SAF production is not just economically sound, it's an environmental imperative.

Hawai‘i needs to be competitive with other states that have already adopted tax credits for liquid renewable fuels and provide local production and consumption with the necessary

advantages to succeed, especially as the industry is just starting to get off the ground. Initially to be competitive, local SAF production will need government support.

Growing biofuel feedstocks locally will create new agricultural jobs, support food production through shared infrastructure, and avoid competition with food crops when oilseeds are used in rotation. Pono Pacific believes these feedstocks can deliver both high-quality renewable fuels and valuable agricultural byproducts that support Hawai'i's sustainability goals and its ranching, dairy, and aquaculture sectors. The production and distribution of liquid renewable fuels is about more than farming, it is about building a robust green energy infrastructure in Hawai'i. From biofuel refineries to logistics and supply chains, this industry will create high-quality jobs, attract investment, and strengthen our overall economy.

Renewable fuels currently cost more to produce than conventional alternatives. HB 1695 HD1 proposes targeted tax incentives to support local renewable fuel production and imports into Hawai'i. These incentives are not intended to be permanent; rather, they are a bridge to help the industry reach commercial scale and ultimately compete with traditional petroleum-based fuels. The proposed incentives represent a strategic investment in Hawai'i's future supporting our farmers, advancing clean energy innovation, and building a more sustainable aviation industry.

We urge you to pass this legislation with the requested amendment and unlock the full potential of locally produced liquid renewable fuels. Together, we can build a cleaner, more prosperous future for Hawai'i. Thank you for your time and consideration.

Mahalo,

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

PONO PACIFIC

Camelina FAQs

What are the water requirements for growing Camelina?

Pono Pacific recognizes that water use and management in Hawai'i have historically been sensitive and complex issues, and we remain mindful of that context in all aspects of our work. Camelina is not a water intensive plant, and in reality, camelina does not like 'wet feet' (too much water). A combination of 8-12 inches of rainfall and irrigation across its 80-day growing cycle is all that is required, with some producers on the Continent recommending even lower rates of 4-6". Germination and emergence, then pre-flowering, are the critical stages for irrigation. Camelina needs good soil moisture for a uniform stand establishment and even germination. Very limited watering, if any, is recommended after flowering due to lodging commonly occurring. This works out to approximately 2,715 gallons per acre per day – again, a combination of rainfall and irrigation. Here is a comparison to other common Hawai'i-grown crops, per information from the Hawai'i Department of Agriculture (AGRICULTURAL WATER USE AND DEVELOPMENT PLAN):

HDOA IRRIGATION WATER USE GUIDELINES (2004 AWUDP)

Crop	Water Use Rate (gals/acre/day)	Crop	Water Use Rate (gals/acre/day)
Alfalfa/Corn (grain)	7,700	Orchids	3,700
Aquaculture	145,000	Papaya	5,000
Dendrobium	4,000	Passion Fruit	10,000
Field Crops (grass & seed)	6,700	Pineapple	1,350
Foliage Plants	4,000 - 6,000	Protea	2,000-2,500
Forage Crops	7,400	Sugarcane (drip)	6,700
Guava	4,400	Sugarcane (furrow)	10,000
Leafy Vegetables (drip)	4,050	Taro (Asian)	4,000 - 8,000
Leafy Vegetables (sprinkler)	5,400	Taro (dryland)	5,400
Macadamia Nuts	4,400	Taro (wetland)	80,000 - 100,000
Nursery (potted plants)	6,000	Vegetables	6,700

Takeaway: Although the exact amount can vary significantly depending on several factors, Camelina's low water requirement, combined with its short cycle, makes it attractive for regions where water resources are limited.

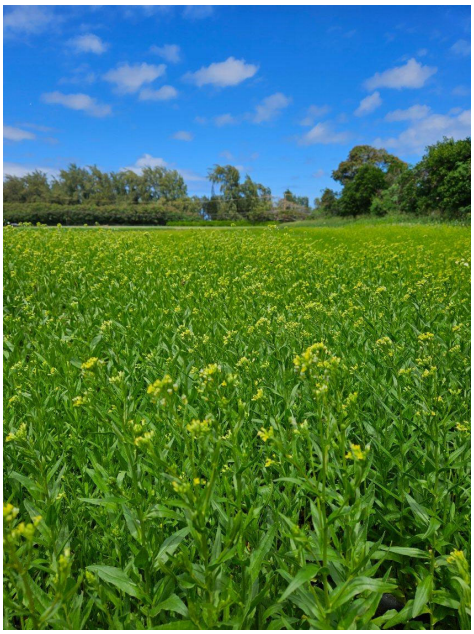
What agricultural lands will be used?

According to recent informational testimony to the Hawai‘i Senate from the Hawai‘i Farm Bureau and others, Hawai‘i farms are on the decline – down 10% from 2017 to 2022. Efforts are underway to expand Hawai‘i agriculture, expand Hawai‘i lands in production, and expand the availability of Hawai‘i-grown feed for our ranching communities. Our focus is on former sugarcane/pineapple lands with low opportunity cost, reactivating these lands for both renewable fuel feedstocks and food production, and at the same time mitigating fire hazards from unmanaged lands. There are tens of thousands of acres of these lands available on Kaua‘i, Maui County, Oahu and Hawai‘i Island. These lands are held by private entities such as Kamehameha Schools, Maui Land and Pineapple, Grove Farm, Gay & Robinson, as well as government agencies such as the DOA, ADC and DHHL. Although we are several years from commercial production, we are engaged in ongoing discussions with many of these landowners to enter into potential lease agreements.

We currently hope to scale the project up to 25,000 acres over the next 5 years focusing on privately held fallow lands previously in sugar and pineapple production, as well as rotating with food production on currently active lands.

PONO PACIFIC

Camelina flowering on Oahu



Camelina seed pods on Maui

Camelina field on Kauai

Camelina field on Kauai

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February 19, 2026

HEARING BEFORE THE
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

TESTIMONY ON HB 1695, HD1
RELATING TO RENEWABLE FUEL

Conference Room 325 & Videoconference
9:45 AM

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

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

The Hawaiʻi Farm Bureau supports HB 1695, HD1, which expands the provisions of the renewable fuels production tax credit.

Locally grown biofuel feedstocks can provide farmers with additional revenue streams, particularly when grown on marginal or underutilized lands. Many of these crops can function as cover crops, helping improve soil health, reduce erosion, and support sustainable land management practices while producing marketable outputs.

HFB also supports the use of agricultural residues and wastes as renewable fuel feedstocks, as well as the production of value-added byproducts such as animal and aquaculture feed. These integrated systems can strengthen both the agricultural and energy sectors while keeping economic activity within the State.

HB 1695, HD1 provides greater market certainty for renewable fuel production, which is critical for farmers considering whether to invest in new crops or production systems. HFB appreciates that the bill maintains safeguards and credit caps while creating opportunities for agricultural participation in Hawai'i's renewable fuels future.

Thank you for the opportunity to testify.

Comments before
February 19, 2026 House Committee on
Energy and Environmental Protection

OPPOSING
House Bills 1694, 1695 and 1986
Relating to "Clean Fuels" Subsidies

Mike Ewall, Esq.
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Aloha Honorable Committee members. Energy Justice Network is a national organization supporting grassroots groups working to transition their communities from polluting and harmful energy and waste management practices to clean energy and zero waste solutions. In Hawai'i, we've been working with residents, members and member groups since our support and involvement was first solicited in 2015.

Please oppose House Bills 1694, 1695, and 1986.

These bills would have the state violate the legal settlement in *Navahine F. v. Hawaii Department of Transportation*. This settlement requires that the State achieve a goal of zero greenhouse gas emissions across all transportation modes within the State, including ground transportation and sea and air interisland transportation no later than 2045. This is not possible if biofuels or waste-based fuels are part of the mix, as they are not carbon free.

Calling it "clean fuel" or "sustainable aviation fuel" (SAF) does not make it clean. There is not enough land and water to grow a significant amount of biofuels in-state. The biotech industry keeps testifying in favor of biofuels bills because they know genetically modified enzymes and crops will be involved, risking biosecurity if grown or processed in-state. It is clear that most of this "clean fuel" will be imported big ag monocrop (mostly GMO) biofuels from the Americas, and that much of what would come from in-state is from toxic waste-to-fuels schemes like Aloha Carbon's plan to try to gasify construction and demolition waste in Campbell Industrial Park on O'ahu... using wood that the Hawaii Natural Energy Institute documented to have 200 times as much arsenic as clean wood.

There are no green alternatives for intercontinental flights and these fall outside of the *Navahine F.* settlement scope and the scope of state laws the settlement aims to enforce. Inter-island flights can best be decarbonized by switching to a combination of electric ferries and electric sea-gliders which can be powered by clean electricity sources like wind and solar. There is no need to be building infrastructure for differently dirty fuels that will involve companies that later lobby to prevent the transition to clean options we can start adopting now.

Production will not be local: As was discussed in the 1/29/2025 Joint Hearing on SB 995 before the Senate Energy and Intergovernmental Affairs and Agriculture and Environment Committees, the Department of Agriculture testified to the fact that there simply is not sufficient land or water to have a significant biofuels production industry within the state. This means that most of the production will come from the continent, predominantly the Midwestern states, and from South America, defeating the goal of establishing biofuels as a home-grown industry.

Competition with food: The same Senate hearing exposed how growing crops for biofuels in Hawai'i would take up land and water needed for the state's own food security goals to have more food grown in-state.
Genetic engineering: The Biotechnology Industry Organization regularly submits testimony in favor of biofuels bills, yet fails to be transparent about their motivation. Clearly, they expect to have genetically engineered crops and/or enzymes used for the production of supposedly "sustainable" aviation fuels. This raises many

biosecurity concerns, as well as concerns over increased herbicide spraying, since most genetically modified food crops are modified to withstand increased herbicide use.

Toxic waste streams as feedstocks: At least two companies are pursuing goals of producing fuels in the state using contaminated waste streams like construction and demolition waste. This is terribly polluting and even if the toxic metals and dioxins/furans do not end up in the fuel, they'll end up in the air, water, and/or waste byproducts at the in-state production facilities being proposed. More on the toxics concerns below.

Finances: The rather costly fuels are not competitive and are inherently quite expensive. If they were truly clean, one could argue that the expense is worth it, but a state mandate would have to be stacked with multiple federal subsidies to make it remotely feasible. However, those federal subsidies are vanishing as we speak under the Trump administration and cannot be expected to carry the day.

Faulty Greenhouse Gas (GHG) accounting: Biofuels look like a climate solution only because of biases in carbon accounting systems and life cycle assessments. There is a long-standing controversary over whether biofuels production uses more energy than it produces. The incredible amount of fossil fuel resources, land, water, fertilizer, chemicals, and other production systems needed to replace fossil fuels is enough to raise the question over whether it even makes sense to replace fossil fuels with biofuels – fuels that, are still carbon based and will still release GHGs when burned.

The incentives would be based on assessing the fuels for their "lifecycle greenhouse gas emissions." There are many flaws and biases in greenhouse gas (GHG) accounting that cause plant-based (biomass/biofuels) and waste-based feedstocks to be assumed to be "carbon neutral," even though there is a credible scientific debate over this controversy going for over two decades. Some of the science shows biofuels such as corn-based ethanol to consume more fossil fuels than they displace. The very existence of a debate over this shows that the "net energy" of biofuels are close enough to 1:1 that there can even be a scientific dispute over it. If biofuels require about as much fossil fuel (to grow, process, and transport) as they displace, there is no point subsidizing them and building new infrastructure to support a system that is not really an improvement.

Sustainable Aviation Fuel does not exist: There is no clean or sustainable way to produce a burnable fuel from raw resources and turn it into air pollution when burned. It is inherently not sustainable or circular. There is one approach that comes close to being sustainable or circular, and that is the approach advanced by Feather Fuels and by Twelve Benefit Corporation, one of the companies testifying in favor of "clean fuels" bills. That involves using wind or solar electricity to pull carbon dioxide out of the air, and to also electrolyze water to obtain hydrogen, then use Fischer-Tropsch gas-to-liquids technology to turn the carbon dioxide and hydrogen into a burnable hydrocarbon fuel. This combination of very expensive and energy intensive technologies is rather experimental and has not been done at scale. It could be good to experiment with and prove up as a technology that could make sense in 20 years, but it makes no sense to use clean wind and solar energy on this approach, when wind and solar can decarbonize things much faster and more efficiently if used to replace the burning of oil, biofuels, trash, and trees in the state's electric grid, and then to eliminate oil and gas in transportation by electrifying that sector. More on this not being the right time below.

Toxicity concerns

Biofuels are impractical and unaffordable to produce in-state. The main efforts to make "sustainable" aviation fuel in the state involve waste-based fuels. There are plans to gasify construction and demolition debris to make burnable aviation fuels on O'ahu. This is part of an array of experimental incinerator-like technologies that aim to convert waste into fuels. These waste-to-fuels (WTF) technologies usually start with pyrolysis or gasification – technologies that, when the resulting gases are burned, are defined and regulated by EPA as municipal waste combustors (waste incinerators). Typically, these two-stage technologies will replace the second stage (burning the gases) with a liquefaction stage, to make liquid fuels to be burned elsewhere. This is known as Fischer-Tropsch gas-to-liquids technology, named after the two German scientists who developed the ability to make oil from coal by gasifying, then liquefying it.

These are toxic and dangerous technologies that are experimental and often fail both technically and economically. When fuels are burned off-site in land vehicles or for air travel, they are not subject to the sorts of air pollution controls that can be applied to a centralized facility with a single smokestack. Even when such a facility burns the gasified waste on-site with the full complement of air pollution control devices, waste incineration is still dirtier than burning coal for the climate as well as for most other air pollutants. This is even *with* all four air pollution control systems that waste incinerators should have (note that H-POWER's two older burners are missing half of these four control systems, though their third burner has all four).

Unlike coal, construction and demolition (C&D) waste is very heterogenous, which can be comprised of steel, concrete, brick, lumber, plaster, empty paint cans, asphalt, wire, shingles, and much more. Pyrolysis and gasification technologies do not work well on heterogenous fuels. They break down constantly and operate only in batches. These finicky technologies require very homogenous fuels. Even those trying to process scrap tires fail repeatedly, because tires are not homogenous enough for pyrolysis. Even the nation's top cheerleader for tire burning, a spokesperson for the Rubber Manufacturers Association, once stated that "scores of start-ups have tried and failed to make money from tire pyrolysis. The road is littered with the carnage of people who were trying to make this technology viable."

These technologies have been unable to operate at commercial scale, and typically are garage-scale pilot projects that go nowhere. This trend has led the nation's leading incinerator-promoting solid waste consulting outfit, GBB, to classify the technology as "high" risk due to "previous failures at scale, uncertain commercial potential; no operating experience with large-scale operations" (pyrolysis) and "limited operating experience at only small scale; subject to scale-up issues" (gasification).

Hawai'i has been targeted in recent years by quite a few fly-by-night companies aiming to cash in on state and federal subsidies to satisfy the desire for sustainable aviation fuels while making waste streams go "away." Companies like Aloha Carbon and Yummet prey upon uninformed public officials who don't have time to research the track record of this industry, the toxic hazards associated with it, or the better alternatives.

Regarding toxic hazards, please see this heavily-cited (92 footnotes) six-page overview I wrote on the toxic pollution issues associated with construction and demolition (C&D) waste incineration. While the paper focuses on direct incineration, many of the same principles apply, as the high temperature processes used in WTF technologies still release toxic metals while producing new toxic pollutants such as dioxins and furans, the most toxic chemicals known to science.

C&D waste contains many toxic ingredients. There are chlorine sources in wood treatment chemicals like pentachlorophenol, and in PVC plastics in C&D waste. Painted wood can contain lead and mercury, while

treated wood can contain other toxic metals, namely arsenic, chromium, and copper. Testimony on House Bill 976 of 2025 from the Hawaii Natural Energy Institute (on pages 43-44 of the testimony packet), affirms high levels of arsenic, chromium and lead in C&D waste, with arsenic concentrations 200 times higher than clean wood. Their research also shows high levels of hydrochloric acid, copper and zinc fron C&D waste, but doesn't point out a significant conclusion about this – that numerous published studies show that copper and zinc serve as catalysts for dioxin formation. Dioxins are the most toxic chemicals known to science and are formed in processes like those used to make these "sustainable" aviation fuels, where you have hydrocarbons, halogens like chlorine, and medium-high temperatures that are perfect for dioxin formation. These ultratoxic chemicals rapidly bioaccumulate and concentrate in meat and dairy products where 92% of human exposure comes from. Even if these emissions are blown out to sea, they concentrate and come back in the form of seafood.

Not the right time

Prioritizing Conservation and Efficiency

Transportation fuels should first be tackled by prioritizing a reduction in the need for unnecessary travel, then more efficient transportation. After prioritizing these, electrifying transportation is the best solution so that combustible fuels can be avoided entirely. Any system that relies on extraction of resources, burning them up, polluting the air, and having to dispose of wastes is not sustainable. For long-distance flights where electrification may not become possible, perhaps hydrogen has a role, but not until the electric grid is cleaned up and we have *extra* wind and solar available for truly green hydrogen production.

No Such Thing as Transition Fuels

Burnable fuels are not a long-term option, as they are not clean or sustainable, no matter whether they're "biofuels" or waste-based. Any such move is in-between the present and the arrival of clean, non-burn options. Such fuels are often called "transition" fuels. However, the concept of a transition fuel is that we can go from A to B to C, as if B helps us get to C. However, transition fuels have different infrastructure and their own economic weight that causes them to stand in the way of a future transition to clean options.

By the time we finish transitioning the energy sectors that we have clean, non-burn solutions for, long-distance air travel will probably have viable solutions we can focus on to complete the job. However, investments in "differently bad" fuels are an economic investment dead-end, requiring another transition later, wasting time and money needed to do the proper transitions in other energy sectors. In fact, the notion of "transition" fuels is a false one, since it entails investing in infrastructure that could last for 30+ years. No company developing so-called "transition" infrastructure, and trying to amortize their investment, is going to step aside in 5-10 years when something cleaner comes along. They're going to fight to stop the transition to cleaner options to protect their investment. In this sense, it's dangerous to steer resources into false solutions such as waste-based burnable transportation fuels.

Prioritizing the Energy Sectors That Have Clean Alternatives

There are three sectors of energy consumption: electricity, transportation, and heating. Transportation can be broken down into land, sea, and air. Heating is broken down in federal energy reporting as industrial, residential, and commercial/institutional sectors of use.
Just as there are preferable non-burn solutions for every waste management need, there are clean non-burn solutions for nearly every energy sector, though long-distance commercial passenger aviation is not there yet.

Cleaning up these energy sectors should start with solutions we already have, without trying to solve the most unsolvable sector by replacing one type of burnable fuel (petroleum-based aviation fuel) with differently bad burnable fuels (crop-based biofuels) or even more hazardous types of burnable fuels (waste-based fuels).

Since the way to clean up the transportation and heating sectors is to electrify them so that they can run on wind and solar without burning anything, it's critical to clean up the electricity sector first, and faster, since electricity demand will grow as the other energy sectors are electrified. Electricity production is easiest to fully transition to non-burn technologies – mainly solar and wind with energy storage, which are becoming the cheapest options over time. The state's renewable portfolio standard (RPS) aims to transition the electricity sector to "renewable" sources by 2045, but still counts some combustion sources as renewable – the worst of them being solid fuel combustion (burning of trash and trees). SB 680 aimed to clean up the RPS starting by removing solid fuel combustion sources, which will speed up the implementation of solar, wind, and energy storage.

The heating sector is dominated by industrial heating, which is increasingly possible to electrify, while residential and commercial space heating and cooking needs are easily electrified. Electric stoves and heat pumps for space heating can be incentivized.

The transportation sector is easily electrified for land-based travel. International shipping is now possible with electric ships (see also here and here). The hardest sector to make non-burn is long-distance air travel, though inter-island air travel can now be electrified with sea gliders, as Hawaiian Airlines has been exploring.

While waiting for good non-burn solutions to powering long-distance air travel, let's focus where we have good alternatives:

1) end combustion in the electricity sector, which is mostly oil in Hawai'i, but also some burning of trash, trees, and biofuels; replace with conservation, efficiency, solar, wind, and energy storage.
2) electrify any heating needs... most use is industrial sector, but also help transition residential or commercial sectors where cooking and space heating is done with combustible fuels (mainly gas made from oil).
3) end combustion use for land-based vehicles by reducing vehicle use, having better (and fare-free) electrified public transit, and electrifying other land vehicles.
4) replace inter-island air travel with electric sea gliders, and electrify shipping, which is now possible.

The 2024 *Navahine F. vs. Hawaii Department of Transportation* settlement requires that the state come up with a plan to reach zero emissions in the transportation sector, which requires doing the same in the electricity sector. This bill would violate that requirement by advancing carbon-based fuels instead of investing in the transition needed in the electricity and (certain) transportation sectors to decarbonize properly and in the right order.

Attached is a resolution adopted by the Democratic Party of Hawaii in 2024 in support of an alternatives study, called for in SB 2369, which would look at non-burn alternatives for the transportation and other energy

sectors. Such a study would be more appropriate and in line with the state's greenhouse gas (GHG) reduction goals and legal requirements.

Also attached are our 8/31/2025 comments on HDOT's Draft Energy Security & Waste Reduction Plan which explain how greenhouse gas accounting for biofuels is gamed and unreliable, how the plan is insufficient in many ways, not to mention unaffordable, and how the plan will be ridiculously expensive and environmentally harmful if relying on burnable "alternative" or "sustainable" fuels.

Democratic Party of Hawai‘i Resolution Adopted May 18, 2024

2024-15: Urging the Hawai‘i State Energy Office to Study Non-Burn Alternatives to Combustible Fuels

Whereas, It is important to use Hawai‘i state taxpayer funds wisely to create the most good without speculative investments, unnecessary subsidies, or promotion of energy technologies or fuels that conflict with the state’s climate change goals, or the peoples’ constitutional right to a clean and healthful environment under Article XI, Section 9 of the Hawai‘i State Constitution; and

Whereas, Energy consumption sectors tracked by the U.S. Energy Information Administration are electricity, transportation, and industrial, commercial and residential heating; and

Whereas, Technology exists to meet the needs of the electricity sector using conservation, efficiency, solar, wind, and energy storage, which can be made as firm as needed with added storage capacity; and

Whereas, Residential and commercial cooking space and water heating needs are easily electrified with existing technology, including ground- and air-source heat pumps and hybrid electric water heaters; and

Whereas, Industrial heating needs are increasingly possible to meet through a combination of concentrated solar, electricity, and—if necessary—green hydrogen sources from wind and solar; and

Whereas, Land-based transportation, even heavy trucking, can now be fully electrified and powered on clean, non-burn, electricity sources; and

Whereas, Ocean-based transportation is now possible to fully electrify, including international cargo ships with batteries, and some with stationary wind masts; and

Whereas, Interisland air travel is possible with electric sea gliders, as Hawaiian Airlines is exploring, while intercontinental air travel is the one sector that is hardest to convert to clean energy, though Airbus aims to bring to market the world’s first hydrogen-powered commercial aircraft by 2035; and

Whereas, Combustible carbon-based fuels release greenhouse gasses as well as other harmful air pollutants, and the production of burnable fuels has many other environmental implications, including the use of land for fuel instead of food, water and soil depletion, spread of genetically modified organisms, and—if using waste streams to make fuel—toxic chemical releases and solid waste byproducts; and

Whereas, Technologies to turn waste into fuels are highly speculative, controversial and polluting, and typically fail to operate at a commercial scale, usually falling apart technically, economically, or both; and

Whereas, Climate impacts of biomass and waste-based biofuels can be close to or greater than those from fossil fuels, especially where trees are cleared to grow bioenergy crops; and

Whereas, Investing in “transition” fuels only builds up an economic interest that makes it harder, politically and economically, to move to the next step where burnable fuels are ultimately replaced; and

Whereas, It is wise to spend public funding first on clean, combustion-free solutions that already exist, focusing on energy sectors where those solutions are not yet fully implemented; therefore be it

Resolved, That the Democratic Party of Hawai‘i urges the Hawai‘i State Energy Office to conduct a study of the different energy consumption sectors to determine which can be most quickly and cost-effectively decarbonized through additional public investment in combustion-free alternatives; and be it

Ordered, That copies of this resolution shall be transmitted to the offices of the Governor and Lieutenant Governor of the State of Hawai‘i, the Hawai‘i Chief Energy Officer, and all members of the Hawai‘i State Legislature who Democrats.

Energy Justice Network

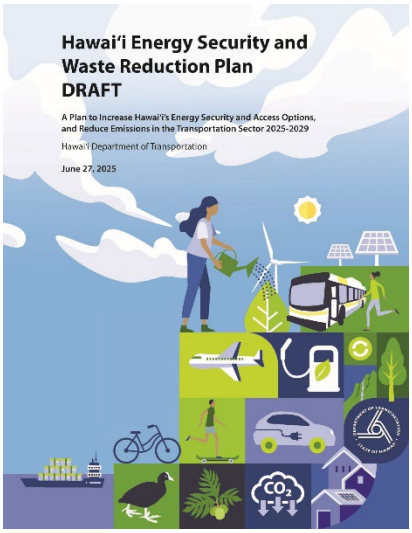
www.EnergyJustice.net

Kōkua nā ʻĀina

CLEAN ENERGY & ZERO WASTE

Comments on HDOT's Draft Energy Security & Waste Reduction Plan

8/31/2025



Aloha HDOT:

We submit these comment to express our concerns over the fiscal and environmental consequences of the Hawai‘i Department of Transportation (HDOT) Draft Energy Security & Waste Reduction Plan (hereinafter “ESWRP”). We urge HDOT staff, consultants and stakeholders, including members of the Hawai‘i Youth Transportation Council to read these comments in full, and to spend time digging into the references and footnotes, as there is much to understand about the wide range of false solutions being advanced by this draft plan.

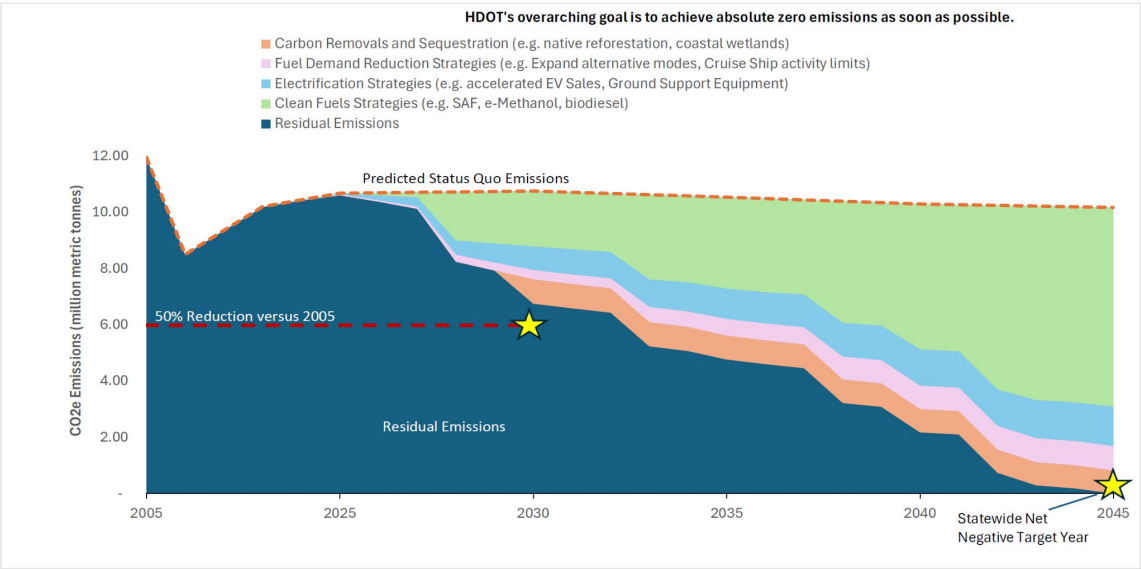
The plan’s objective is to meet the goal of zero greenhouse gas (GHG) emissions from the state’s “ground transportation and interisland sea and air transportation” systems by 2045, in accordance with state law (HRS § 225P-8)[1] and the *Navahine F. v. Hawai‘i Department of Transportation* court settlement.[2]

Sadly, the plan falls short of this goal and advocates for harmful false solutions and for a “double transition” approach that will be far more expensive than necessary by making two (or three?) major industrial transformations within 20 years instead of one, more thoughtful, transition.

An environmentally-friendly plan should rely on about 40% demand reduction and 60% electrification, which requires that the state’s electric grids’ capacities be expanded and that combustion-based generation be eliminated.

Instead, as the chart below shows, the plan relies about 70% on burnable “clean fuels” (in green) which are far from clean (some are even worse than the fossil fuels they’d replace), only 14% electrification (light blue), only 8% demand reduction (pink), and the remaining 8% is a shortfall (orange) that HDOT wants to make up with controversial “reductions” elsewhere, in violation of the legal settlement.[3] The plan’s text states that the shortfall is actually 10%, but the chart in Figure 3-1 shows it to be closer to 8%.[4]

Figure 3-1. Transportation 2045 Net-Negative Emissions Strategy



[1] https://law.justia.com/codes/hawaii/title-13/chapter-225p/section-225p-8/
[2] https://statecourtreport.org/sites/default/files/2024-07/first-circuit-court-of-hawai-i-joint-stipulation-and-order.pdf
[3] Hawai‘i Department of Transportation, “Draft Energy Security & Waste Reduction Plan,” (hereinafter “ESWRP”) June 27, 2025, p.27, Figure 3-1. https://hidot.hawaii.gov/wp-content/uploads/2025/06/Draft-ESWRP-6.27.25.pdf
[4] ESWRP, page 28 states: “The combined strategies are projected to achieve a 90 percent reduction of baseline emissions in 2045, with the remaining 10 percent reduction coming from hard-to-decarbonize sectors addressed by future carbon removal projects.”

Let's not plan to fail

To fulfill legal mandates, the plan must go all the way to zero greenhouse gas emissions by 2045. No plan can guarantee success, but it has to be designed so that it is possible. It's not adequate to start off the plan with this in the first paragraph:

> "A sustainable and just intermodal transportation system is one that is ***largely*** powered by clean and locally sourced power, including electricity fueled by renewable energy, ***low-carbon fuels***, and people walking or rolling" (emphasis added).

Furthermore, in the second paragraph of the substance of the plan, on page 14, it states that the plan "aims to lead the state to **net**-negative emissions **by 2045 and ultimately** zero emissions in the transportation sector **as soon as possible**" (emphasis added).

"Net" meant "not" (hence the need to meet shortfalls of the mandated zero emissions with reductions outside of the transportation sector), and the "ultimately" (implied to be *after* 2045) reaching zero emissions "as soon as possible," is an admission that this plan aims to push the zero emissions target past 2045, the year mandated in the state law and enforced in the settlement agreement.

Page 90 of the plan states:

> "…the reality that currently available SAF [sustainable aviation fuels] has significant remaining lifecycle GHG emissions. Because of these hurdles, despite HDOT's and stakeholders' expected best efforts to reduce GHG emissions, it is anticipated that **achievement of absolute zero GHG emissions will occur after 2045**" (emphasis added).

It is good to see the honesty, but HDOT is still required to have a plan that lands at zero by 2045. As discussed later, this means that sustainable aviation fuels (SAF) must go, as there is not adequate time or money to waste on false solutions that are not zero GHG emissions.

HDOT cannot start off with a plan that expects to miss its mark by 8-10%. Since the "clean" fuels and electricity that make up about another 84% of the plan are not zero GHG emissions sources, the draft plan would miss the mark by far more than 8-10%.

Air travel comprises over half of the GHG emissions this plan aims to reduce. The plan expects 62% of air travel emissions reductions to come from "traditional SAF" by 2045.[5] SAF is not zero emissions and could easily have greater emissions than the jet fuel currently used. Planning for "traditional" SAF to still be used by the 2045 goal is also not in line with the plan's intention to move from "near-term" biofuels options (synonymous with "traditional SAF") to long-term electrofuel options that supposedly have lower or zero GHGs.

[5] ESWRP, p.69, Table 3-3.

Avoid greenwashing language

"Clean fuels" and "sustainable aviation fuels" are inappropriate terms. To be more credible and objective, we recommend using "alternative fuels" or "alternative aviation fuels" so that the name itself is not pre-judging that the fuels are clean or sustainable when the plan (in appendix F) even addresses how most of these fuels have downsides that make them not so clean or sustainable.

Similarly, terms like "zero-carbon alternative fuels" (p.18 of the plan) should not be used since nearly every burnable fuel contains carbon and releases it when burned. Fuels that do not contain carbon have other GHG impacts associated with them such as nitrous oxides from burning ammonia, or the indirect effects of leaked hydrogen, which helps methane persist in the atmosphere. When people hear "zero carbon," it is typically understood to be synonymous with "zero GHG impacts."

All uses of the words, "clean," "sustainable," or "zero" should be searched and reviewed for objectivity. Similarly, assumptions that "renewable" means "clean" or "zero GHG emissions" must be reviewed, as it does not mean that when combustion-based systems are used. The state's Renewable Portfolio Standard (RPS) law counts as "renewable" the burning of "biomass" (trash, trees and other solid waste and crops), liquid biofuels, and biogas (toxic landfill gases and anaerobic digester gas), none of which are clean or zero-GHG emission, and some of which are worse than the fossil fuels they replace. Nearly half of the energy from the burning of trash comes from fossil fuel sources like plastics made from oil and gas. Even once the 100% renewable electricity by 2045 RPS goal is met, assumptions that this means electricity is GHG-free will be false unless these combustion sources are eliminated from the electric utility's portfolio.

As the opening of the 2023 Cerulogy report, "Scrutinising the future role of alternative fuels in delivering aviation decarbonisation" states:

> "Readers who are used to the discussion of alternative aviation fuels might have noticed that… we have studiously avoided using a term that has become standard in the industry in recent years – SAF, standing for Sustainable Aviation Fuel. Instead, we prefer to say 'alternative aviation fuel'…. The reason that we prefer not to use the term SAF is because sustainability is a characteristic of a fuel pathway that is at least somewhat subjective (i.e. it depends on which sustainability criteria are considered important), that may change over time (sustainability can be affected by variables outside the control of a fuel producer such as deforestation rates), and that is at least somewhat scale-dependent – one might feel differently about devoting a couple of farms to bioenergy cropping than devoting half of the agricultural area of Europe."[6]

The report goes on for two pages on this deliberate use of language, and we encourage HDOT to take it to heart as well.

[6] Malins, C., Scrutinising the future role of alternative fuels in delivering aviation decarbonisation: Part 3 – the pathway to decarbonised aviation," October 2023. https://www.aef.org.uk/uploads/2023/11/Cerulogy_Alternative-fuels-in-aviation_Part-3-decarbonisation_Oct2023-1.pdf#page=10

Discuss public health impacts in a balanced way

It is also important to provide balance and not selectively present only benefits and not harms when discussing energy sources that have both. Page 49 of the plan states: "Biodiesel also significantly lowers sulfur oxide (SOx) and particulate matter (PM) emissions, improving air quality for nearby residents." There is no mention in the body of the report that other pollutants increase, such as nitrogen oxides (NOx) that trigger asthma attacks and volatile organic compounds (VOCs) that can cause cancer. One must reach into Appendix F on page 150 of the PDF to find out that there could be increased NOx emissions from biodiesel "in some cases" – and no mention of other pollutants that could increase, or of the health consequences of exposure to them.

Putting only benefits up front and burying the harms deep in an appendix is a form of greenwashing and misleads readers. The entire document has only one mention of asthma, one mention of respiratory disease and two mentions of cardiovascular disease (in Appendix F on pages 150 and 152 about biodiesel and renewable diesel). Both of these sentences speak in terms of diseases that would be avoided when these biofuels are burned in place of fossil fuels. However, asthma can be aggravated by increases in NOx from biodiesel burning. While there is a slight admission of the possibility of NOx increasing, there is no corresponding statement that it could aggravate asthma… only that respiratory disease could be alleviated. There are zero mentions of cancer or other public health impacts associated with some of the solutions in the plan.

We expect one-sided discussion of topics from corporations advancing their interests, but not from a public agency that is charged with implementing a plan that should benefit the environment and public health.

"Transition" fuel approach is politically unrealistic and makes high costs more extreme

The plan's "transition" approach is that it aims to build up a biofuels industry that will lobby against the subsequent transition to electrofuels because private corporations do not want to finance and build 30+ year infrastructure just to tear it down in 10-15 years.

In recent years, there has been a phalanx of lobbyists pressing the state legislature to subsidize "clean fuels" and "sustainable aviation fuels." This includes airlines, the PAR oil refinery, biorefiners, electric utilities, agribusiness interests, the biotechnology industry trade association, fledgling startups aiming to turn waste streams into fuels, and some nonprofits who are aligned with these interests. Should they succeed and build out this industry to grow, import, and refine biofuels and waste-based fuels, which will take several years just to start up, it would make no sense for them to throw out these investments and tear down all of this infrastructure just to facilitate a transition to "electrofuels" in the latter portion of the 20-year plan period.

It can easily take 5-10 years to get a major new infrastructure project like a biorefinery financed and built. Financing typically involves a 10-20 year investment. The lifetime of the infrastructure can be 20-30 years. No business person will go along with tearing down their investment half-way through its operational life if they can avoid it.

Building up a biofuels industry with the intention to switch gears to an electrofuels industry means that all the economic interests invested in the biofuels buildout will use their profits and political power to lobby against the next transition.

Despite this glaring political problem, the plan aims to make two transitions, if not actually needing a third transition after 2045.

The plan would have state taxpayers subsidize building up "low-GHG" biofuels industries in the short term just to tear them down within 20 years to replace them with other burnable "synthetic" and "electrofuels" that are terribly inefficient and purport to be zero GHG, but are not.

As the table below, from the plan, demonstrates, between 2030 and 2045, the plan would build up, then aim to dismantle 35% of the biodiesel industry, 65% of the ethanol industry, and 72% of the renewable LNG industry – both the supply side, as well as the storage and transportation infrastructure using these fuels unless the same infrastructure can run on the electrofuels that replace them.

Table F-1. Projected Alternative Fuel Demand by Type, Year, and Sector

Fuel Type	Estimated Demand (2030)	Estimated Demand (2045)	Applicable Sectors
Biodiesel	20 million gallons	13 million gallons	Ground (heavy-duty)
Renewable Diesel	19 million gallons	52 million gallons	Ground and Marine
Ethanol	17 million gallons	6 million gallons	Ground (light-duty)
Renewable Gasoline	Not included	Not included	Ground (light-duty)
Renewable LNG	32 million therms	9 million therms	Marine
SAF	410 million gallons	600 million gallons	Aviation
eSAF	No demand in 2030	110 million gallons	Aviation
BECCS SAF	No demand in 2030	36 million gallons	Aviation
e-Methanol	No demand in 2030	58 million gallons	Marine
e-Ammonia	No demand in 2030	62 million kg	Marine
Green Hydrogen	No demand in 2030	1.6 million kg	Marine

Many examples throughout the plan spell out this intent to make at least two transitions:

Page 24: "Develop the infrastructure and supply chain for bio-/renewable diesel and renewable LNG in the short term, enabling intra- and inter-state vessels to transition to these low-carbon fuels, while planning for a long-term shift to alternative clean fuels such as green methanol, green ammonia, or green hydrogen to fully decarbonize marine operations."

Page 30: Fig 3-3:

2. **Cruise Vessel:** Non-home ported vessels transitioning to bio-LNG near term and e-fuels longer term
3. **Interisland Operation:** 100% biodiesel by 2030, transitioning to e-fuels by 2045.
4. **Inter-state Operation:** 70% bio-LNG by 2030, shifting to e-fuels by 2045.
5. **Assist Tugs :** 100% biodiesel by 2030, moving to zero emissions by 2045.

Page 49: "Clean marine fuels include biofuels (such as biodiesel or renewable diesel), methanol, ammonia, hydrogen, and bio- LNG, each of which has different technological requirements and operational impacts. Renewable biodiesel offers a drop-in solution for existing diesel engines with minimal modifications, making them an attractive early-stage emissions reduction strategy. In

contrast, LNG, methanol, ammonia, and hydrogen, require engine modifications or entirely new vessel builds, making them longer-term solutions."

Page 49: "For intra-state marine vessels, the recommended transition strategy starts with low-carbon drop-in fuels such as biodiesel and renewable diesel in the near term, with a goal of fully adopting these fuels across intra- state operations by 2030. Beyond 2030, the transition is expected to shift toward e-methanol and e-LNG, with ammonia adoption beginning in 2035 and green hydrogen introduced post-2040. These alternative fuels will require new vessel designs or engine modifications, making their adoption more complex and capital-intensive."

Page 52: "In the short term (by 2030), efforts should focus on biodiesel infrastructure, followed by LNG, e-methanol, and ammonia bunkering by 2035, and ultimately hydrogen infrastructure post-2040."

> "Given the higher costs of biodiesel, bio-LNG, e-methanol, ammonia, and hydrogen; financial incentives are critical to encourage adoption." (ESWRP, p.52)

The high costs of these fuels are admitted throughout the plan, more so in the appendices. Requiring two or more transitions will make an expensive plan far more expensive. Alternative aviation fuels being explored are projected to cost about 2-5 times as much as fossil jet fuel, and this approach of making two transitions within two decades will only magnify the costs to taxpayers and consumers.

Most of these "longer-term solutions" are not genuinely zero GHG emission in their burning or lifecycle, which could necessitate a third transition to full electrification with non-burn renewable electricity sources. It would make more sense to go directly to these solutions as soon as they can be made available, and to focus on what is possible on our way there, such as conservation and efficiency strategies, cleaning up and expanding the grid, and electrifying transportation where we can, as soon as we can.

Ensuring Proper GHG Accounting & Modeling

<u>Counting emissions from electricity generation</u>

It is unclear whether and how GHG emissions from the electricity sector will be counted. The plan seems to state it both ways. On one hand, it seems as if they'll be counted:

Page 80 states:

> "This GHG inventory boundary includes the following two sources of indirect emissions:
>
> - Emissions from EV electricity consumption until the electricity grid becomes 100 percent renewable
> - Upstream emissions from the production of alternative fuels
>
> The inclusion of emissions from electricity production transportation emissions is one deviation from the statewide DOH inventory approach. Because of the carbon-intensive electrical grid in Hawai'i, it would be disingenuous for this Plan to assume

zero GHG emissions from EVs. Therefore, electricity emissions from EVs and other electric non-road equipment are quantified in this Plan."

Page B-12 reinforces this: "the baseline emissions projection includes emissions from electricity generation needed to charge EVs. …electricity grid emissions from EVs and equipment were considered in assessing the impact of electrification on the HDOT emissions inventory."

As the first bullet above states, emissions will be counted from EV electricity *until* the electric grid becomes 100% renewable. This notion is repeated on page 84, where it states "Emissions from EV electricity consumption will be included in this Plan until the electricity grid becomes 100 percent renewable."

This assumes that "renewable" energy sources are not releasing GHGs. In fact, trash incineration (like the H-POWER incinerator on Oʻahu) releases 65% more GHGs per unit of electricity produced than a coal burning power plant, and nearly half of those emissions are from the burning of fossil fuel-derived plastics. Burning trees, as Mahipapa, LLC does on Kauaʻi, and as Hu Honua has been trying to do in Pepeekeo on Hawaiʻi Island for nearly two decades, releases 50% more GHGs per unit of energy than a coal power plant does. Biofuels and biogas combustion are also not without their own GHG emissions. **"Renewable" does not mean GHG-free. It is imperative that <u>all</u> GHGs are counted, including from "renewable" sources.**

Whether electricity emissions are counted at all seems to be contradicted on page 29, where it states, "EVs are assumed to have zero emissions in transportation," and on page B-11:

> **"Exclusions**
>
> This Plan is written with the assumption that, for purposes of tracking against net-negative and interim GHG reduction targets, transportation emissions are defined using a similar basis as the DOH GHG Inventory. In that inventory, transportation emissions are limited to the fuels consumed by ground vehicles, aircraft, and watercraft. The following briefly describes excluded sources:
>
> - **Upstream impacts of fuel production**, which are included in the Industrial Process and Product Use (IPPU) sector or **excluded entirely for fuels produced outside Hawaiʻi**.
> - Like fuels, **production of concrete, asphalt and steel** is covered under IPPU or **excluded for materials from outside Hawaiʻi**.
> - **Electricity generation**, which is a portion of the Energy sector" (emphasis added).

Is this last bullet really stating that electricity generation will not be counted, even for EVs, contradicting the prior statements in the plan?

The first bullet also contradicts a statement from page 80, which correctly indicates that upstream impacts of fuel production must be counted, even for the bulk of the biofuels that are imported. Page 80 states:

> "The other deviation is the inclusion of upstream emissions from the production of alternative fuels. Clean fuels and other alternative fuels vary widely on lifecycle GHG impacts, and **it is very important that this Plan not incentivize use of alternative fuels with high upstream emissions, assume all clean fuels result**

> **in zero anthropogenic emissions, or ignore any shift of GHG emissions from Hawai'i tailpipes to international fuel production and processing**. Therefore, similar to the approach with electricity, the reduction pathways in Chapter 3 include pro-rated reductions to account for the estimated lifecycle impacts of fuels. For example, a shift of a group of vehicles from petroleum diesel to biodiesel is not illustrated as a 100 percent reduction in emissions in this roadmap" (emphasis added).

Is the use of the term "anthropogenic" implying that "biogenic" emissions can be ignored?

Counting Refrigerants

Page 22 of the plan dismisses refrigerants as negligible:

> "HDOT acknowledges that there are other GHG pollutants such as hydrofluorocarbons and perfluorocarbons being emitted as a result of transportation such as leakage from vessel and vehicle air conditioning systems. However, these are outside the boundary of the emissions inventory and are also expected to be quite minimal compared to combustion emissions from aviation, marine, and ground transportation vehicles and equipment, and thus negligible."

This should be reconsidered in light of the following:

- Older mobile air conditioning systems may not be factory sealed.
- Unlike stationary units, they get jostled a lot, making leaks inevitable. This study on R134a emissions from vehicles may be useful.[7]
- Refrigerants historically have very high global warming potentials (GWP). R134a was the norm in systems and has a high GWP of 1,526 over 100 years (meaning that it is 1,526 times as potent as CO_2 over that time frame), and a GWP of 4,144 over 20-years, which is a more relevant time frame, and the time frame of this policy.
- Most passenger vehicles built in 2025 use R1234yf instead of R134a. R1234yf is an HFO with an ultra-low global warming potential (GWP100 is less than 1 in AR6), however larger vehicles and trucks have not all changed over. While the amount of R134a will be decreasing over the years, R1234yf produce trifluoroacetic acid (TFA), a single-chain PFAS, which is of greater concern than its GWP value.[8] R1234yf completely breaks down into TFA in 7-10 days' time, which means local concentrations of that "forever chemical" will increase. TFA is being regulated in the EU, but I think the U.S. does not yet recognize it as something to worry about.
- DIY vehicle air conditioner recharging is an activity that should be regulated. Discharging a can of R134a into a leaky system will just cause that R134a to be emitted. Since systems don't necessarily need a whole can, people are likely to throw away partial cans, resulting in contents being expelled into the atmosphere. One way of lowering the environmental impact is to require cans of refrigerant to be filled with "reclaimed," not "virgin," refrigerant. In Washington State, they have banned the use of all small containers (or DIY) of automotive refrigerants. They did that because the R134a in the cans always left over a little bit, and the collective impact of those heels was significant.

[7] https://pubmed.ncbi.nlm.nih.gov/11878368/
[8] https://naturalrefrigerants.com/experts-sound-the-alarm-about-rising-tfa-levels/

- New York and California have programs relating to refrigerant recovery and recycling.[9,10] In New York, Part 494 bans the use of small containers of automotive refrigerant containing virgin substances effective January 1, 2027.
- In New York State's 2021 HFC emissions inventory, 15.9% of HFC emissions were from transportation HVAC (which does not include transportation refrigeration). This is more than residential HVAC emissions (10.9%) and commercial HVAC (13.3%), although less than commercial refrigeration (26.8%) and the general category for foams and propellants (29.8%). If Hawaii hasn't done an HFC inventory, the plan should not assume that transportation HVAC emissions are negligible.
- California had a program that charged a $10 deposit on the DIY cans, but I see that program has been discontinued, in favor of another one, which pays up to 90% of the cost of professional automotive AC repair, for income-eligible residents.

Policies that shift more residents away from DIY cans and toward getting professional help with their automotive AC systems would have long-term benefits. Most shops have a piece of equipment that automatically recovers refrigerant from vehicles, cleans the refrigerant, tests the system for leaks, and recharges the refrigerant (and oil) to precisely the right amount. This is the best practice for long-term vehicle maintenance with environmental benefits for everyone else.

Global warming potentials (GWP)

Page 22 states:

> "Using global warming potentials (GWP), emissions from these gases are converted to CO2e in this report. Only CO2e values are presented, as they account for all three GHGs in a standardized measure, with CO2 comprising the largest share of emissions from the included source categories. All GHG emissions are reported in metric tons."

GWPs are published by the International Panel on Climate Change (IPCC) through large "Assessment Reports" that come out about every seven years. The most recent data is from IPCC's Sixth Assessment Report (AR6), which was released in 2021. The plan provides GWPs for 20-year and 100-year time frames, where 20-year GWPs are more appropriate if we're to avoid climate change tipping points.

Is this plan using AR6 20-year GWP values? Will GWPs be updated as the Seventh Assessment Report (AR7) comes out in 2029 and when future reports come out?

The GREET Model: Underestimating Climate Impacts of Biofuels

Page 57 states that "emission factors for these fuels are sourced from the GREET Well-to-Wheel (WTW) Calculator (2022 version)."

"GREET" is the Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model, a life-cycle analysis tool that calculates the direct greenhouse gas emissions from the production and use of various transportation fuels, such as ethanol and biodiesel.

[9] https://dec.ny.gov/sites/default/files/2023-12/part494expressterms2023public.pdf
[10] https://ww2.arb.ca.gov/resources/fact-sheets/small-containers-automotive-refrigerant-consumer-requirements

While mentioned only once in the plan, the use of the GREET model is pivotal, as it is proposed to be used as the measuring tool with which different burnable fuels will be considered to be reducing GHG emissions from the transportation sector.

A deciding factor in whether many biofuels are better or worse for the climate than the fossil fuels they replace is indirect land use change (ILUC). Through GREET, ILUC estimates for crop-based fuels are provided by the Global Trade Analysis Project BIO (GTAP-BIO) model which estimates the area of land converted during biofuel production.[11]

Leading climate and biofuels experts have written up a scathing and thorough critique of the GTAP model and how it vastly understates the impact of biofuels on climate change by downplaying ILUC. Authors include Yale professor Steven Berry, who has served as a consultant for the California Air Resources Board relating to ILUC from biofuels, and Princeton Senior Research Scholar Timothy Searchinger, who authored some of the landmark critiques of biogenic carbon neutrality assumptions. They write that "GTAP lacks a credible economic foundation" and "is particularly unable to credibly evaluate land use changes."[12]

In GTAP, "estimated ILUC carbon losses from a gallon of corn ethanol and soybean biodiesel are extremely low, meaning there is little carbon cost for diverting even vast areas of prime farmland to biofuel production."[13]

"Of thousands of economic parameters, only a small number claim to have any direct, empirical basis. Of these, few of the cited empirical studies make any use of credible techniques for distinguishing correlation from causation and, most fundamentally, supply from demand."[14]

"We also review how additional, empirically unsupported decisions added to the model since the first version used for CARB have further reduced the estimated ILUC. As an example, the model makes a pure assumption, without any supporting economic analysis, that most new cropping area will be supplied not by expansion of cropland but by cropping existing cropland more frequently. This assumption also contradicts actual experience in the U.S."[15]

ILUC, according to these authors, results in emissions that are roughly 3 to 4.5 times the emissions of the fossil fuels that the ethanol or biodiesel is replacing. However, only 10% of these average emissions are accounted for in GTAP's ILUC estimate used by CARB, and the version used in GREET is even lower. The authors point out that GTAP, as used in GREET, would claim that all the cropland in Iowa can be diverted to biofuel production – or to any other use – with almost no effect on global land use elsewhere and almost no resulting climate consequences.[16]

The models incorrectly assume that converting pasture to cropland will not lead to deforestation to replace the pasture.[17]

Regarding some of the simplistic assumptions made in the model, they write: "This choice is understandable as a research strategy, but it does not produce a model that can be treated

[11] https://www.epa.gov/system/files/documents/2022-03/biofuel-ghg-model-workshop-gtap-bio-model-2022-03-01.pdf
[12] Berry, S., Searchinger, T., & Yang, A., "Evaluating the Economic Basis for GTAP and Its Use for Modeling Biofuel Land Use," Yale Tobin Center for Economic Policy, March 19, 2024. https://www.energyjustice.net/fuels/gtap.pdf
[13] *Id.* at 1.
[14] *Id.* at 2.
[15] *Id.* at 3.
[16] *Id.*
[17] *Id.* at 7.

seriously as a policy tool."[18] They later point out that GTAP "appear[s] to be picking parameters to fit a narrative."[19]

Their conclusions include the following:

> "To summarize, the structure of the economics of the model produces physically impossible results. Even if the economics were reliable, the imposed adjustment factor generates an inconsistent result and lower ILUC."[20]

> "GTAP is generating results that project the lost carbon from land to generate additional crops for biofuels is only a very small fraction of the average carbon lost to produce these crops in the past. Only with these large reductions in ILUC can a model even project greenhouse gas reductions from these biofuels relative to using fossil shows. By contrast, as shown in Table 1, using this average carbon loss would indicate that crop-based biofuels do not come close to reducing greenhouse gas emissions from transportation over 30 years."[21]

<u>The ACERT Model</u>

Page 70 of the plan has a sidebar called "Lifecyle Emissions Analysis" (same title as the one mentioning GREET on page 57) that states:

> "This emission inventory considers the use of sustainable aviation fuel as a clean fuel. To determine the emission reduction potential of SAF, an emission reduction factor was established by comparing the emission factor SAF to that of kerosene jet fuel (KJF). For example, KJF has a baseline emission reduction factor of 0 percent and SAF has an emission reduction factor between 65 and 80 percent. Conservatively, SAF was assumed to start at 65% reduction in 2028 and scale up reduction by 5% every five years through 2045. Note that these are some of the preliminary reduction factors assumed for this version of the report and they will be further refined in the final version."

We ask that HDOT please respond to us to let us know what model was used to come up with these assumptions.

Elsewhere on the same page is mention of the "Airport Carbon And Emission Reduction Tool (ACERT)" which is an apparent misnaming of the "Airport Carbon and Emissions Reporting Tool."[22] The ACERT model's assumption on GHG emissions from biomass for electricity is 26 times lower per kilowatthour than EPA and Energy Information Administration (EIA) data shows. It also assumes that trash incinerator GHG emissions per tonne are 56 times lower and that wood/plant burning emissions per tonne are 108 times lower than EPA and EIA data show. How can we trust this airport industry tool on other metrics when they're so far off on every input data value we spot checked so far?

[18] *Id.* at 11.
[19] *Id.* at 13.
[20] *Id.* at 17.
[21] *Id.* at 21.
[22] https://store.aci.aero/form/acert/

In addition, ACERT uses outdated GWPs from 2014 (AR5)[23] when 2021 (AR6)[24] is available, and uses the 100-year instead of 20-year GWPs, which is inappropriate considering the policy time frame (2045) being 20 years away and the fact that global warming tipping points (already showing up) aren't about to wait for 100 years. They also choose the more optimistic figures with no climate-carbon feedback which allows them to pluck out the 28 number for methane instead of 34, and 265 instead of 298 for nitrous oxide (N_2O). In fact, if they used the latest science (which was out for two years before the ACERT tool's latest release in 2023), the GWP for methane would be 80-82 (over 20 years), not 28 or 34 (over 100 years).

Finally, some of ACERT's data sources and emissions factors are listed as "Wikipedia," or simply as "Internet." The foundation for GHG accounting in Hawai'i state policy should have a more solid foundation than tools like GREET and ACERT, which are not confidence inspiring!

Making public policy based on deeply flawed models is problematic and results in exaggerated claims of emissions reductions that are illusory, making agencies and politicians look good while we're still cooking the planet and violating legal mandates.

Why burnable fuels are false solutions

All burnable fuels have significant pollution issues, including climate impacts. It is critical to move on from burning things.

The plan includes 10 kinds of burnable fuels. Actually, 11 are listed, but renewable gasoline is not included while all 10 other kinds are part of the plan.

The dominant near-term alternative fuels are corn-based ethanol and soy-based biodiesel that would have to be imported, as Hawai'i has insufficient land and water to produce much in-state.

The U.S. Environmental Protection Agency's website (since before the current administration) states the following:

> "Biofuel production and use has drawbacks as well, including land and water resource requirements, air and ground water pollution. Depending on the feedstock and production process, biofuels can emit even more GHGs than some fossil fuels on an energy-equivalent basis."[25]

There are three major congressionally-mandated reports on biofuels as it relates to the federal Renewable Fuels Standard, the last of which is over 1,000 pages long, backing up these concerns in great detail. We encourage HDOT to at least review the 19-page Compilation of Key Findings (Chapter 17) in "Biofuels and the Environment: Third Triennial Report to Congress," starting on page 856 of the PDF file.[26]

[23] https://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf#page=56
[24] https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport.pdf#page=1034
[25] https://www.epa.gov/risk/biofuels-and-environment
[26] https://assessments.epa.gov/biofuels/document/&deid=363940

Counting all the carbon

In addition to the underestimated GHG impacts resulting from indirect land use change (ILUC), there is a tendency to assume that GHG emissions from burning biofuels is simply zero because it's "carbon neutral."

Nearly all of the proposed fuels will still release CO_2 when burned. Assumptions about biogenic carbon neutrality has been repeatedly debunked by climate scientists for over 15 years. It would be good for HDOT to get familiar with these critiques, especially with regard to fuels that involve trees, municipal waste, and construction and demolition waste, where the large time lag between harvesting trees for wood and paper, and the recapture of that CO_2 by newly growing trees, is so long that there is no real "carbon neutrality" in a meaningful time frame.

"Biogenic" CO_2 comes from the burning of paper, food scraps, yard waste, wood, leather, and other materials that ultimately grew from soil. Biogenic carbon dioxide emissions are real CO_2 molecules that warm the atmosphere just like any CO_2 molecule released from the burning of plastics and other materials made from fossil fuels.

A majority of the CO_2 emissions from trash incinerators like H-POWER get erased in most GHG reporting due to outdated assumptions that "biogenic" carbon should not be counted. It is important to recognize that even if HDOT will not look at the science challenging biogenic carbon neutrality assumptions, the fossil fraction of trash-derived fuel must be recognized as fossil, even though the state Renewable Portfolio Standard law brands it "renewable."

The carbon neutrality assumption comes from the notion that this carbon should not be counted because trees and plants regrow, and that this carbon is simply recirculating in the biosphere, as opposed to being "new" carbon in the biosphere that was extracted from underground in the form of coal, oil, or gas.

However, carbon (CO_2 or methane) in the air causes global warming, while carbon in a plant or tree does not. We cannot simply pretend that carbon in a tree is the same as carbon in the air. Carbon in a plant or tree does not warm the climate until burned (or slowly decayed).

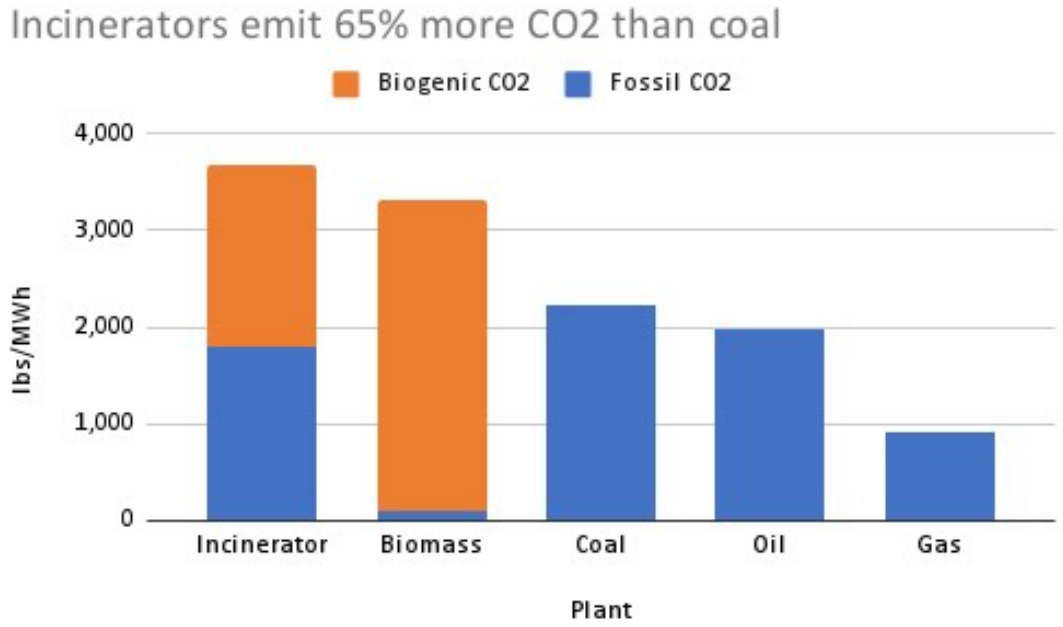
This biomass carbon neutrality notion has been debunked by climate scientists since at least 2009. There are two main reasons: double counting, and the time lag problem.

Carbon absorbed by growing plants is already factored into global climate models. The reason why it became a practice not to count carbon emissions in certain sectors was, *when looking at all sectors together*, to avoid double counting when assuming carbon is released when trees are cut down, then counting it again if those trees are burned. However, when looking just at one sector, such as vehicle emissions, it is improper to subtract biogenic carbon as if it has not already been accounted for elsewhere. This becomes an accounting problem.[27]

Should HDOT subtract GHG emissions because of plants and trees that already grew? [This would be the double counting error.] …or to subtract emissions from plants and trees that they presume will grow later? [This would be speculative, and there is not always a guarantee of trees or crops being replanted, as the Hu Honua court case demonstrated. And then there is the time lag problem…]

[27] Searchinger, T. D., Hamburg, S. P., Melillo, J., Chameides, W., Havlik, P., Kammen, D. M., et al. (2009). "Fixing a Critical Climate Accounting Error," *Science*, 326(5952), 527-528. https://doi.org/10.1126/science.1178797

Burning trees for electrical power releases 50% more CO_2 per unit of energy than burning coal. Burning trash for power releases 65% more CO_2 per unit of energy than burning coal. The following data is from EPA's Greenhouse Gas Reporting Program:



Growing trees do not instantly reabsorb this extra pulse of carbon. As the Manomet Center for Conservation Sciences documented when studying the issue for the Commonwealth of Massachusetts, it takes newly growing trees around 40-70 years to take up enough carbon to make it equivalent to burning coal.[28] This is not carbon neutrality, but just absorbing that extra CO_2 so that it's as bad as coal burning after several decades. Carbon neutrality would take centuries and is never quite reached, even if trees were replanted and not cut down in that time frame (or burned up in wildfires on a warming planet).

In trying to avoid critical global warming tipping points, we do not have several decades to wait for trees to suck up extra carbon released by burning trash or trees. This carbon must be counted, not discounted as if there's a free pass to release that CO_2 because a slow carbon cycle will eventually suck it back up.

Ironically, it is better for the climate to burn coal and plant trees than to burn trees and plant trees. We are not recommending either. However, this CO_2-only metric shows the absurdity of allowing biogenic carbon to be offset in this manner.

Burning trash and planting trees (which incinerator corporations are not doing, anyway) often allows the incinerator industry to subtract their emissions. However, if a gas-burning power plant planted trees, that rightfully would not count against their emissions.

[28] Thomas Walker, et. al., "Biomass Sustainability and Carbon Policy Study," Manomet Center for Conservation Sciences Report to the Commonwealth of Massachusetts Department of Energy Resources, June 2010 (Report NCI-2010-03). https://www.mass.gov/doc/manometbiomassreportfullhirezpdf/download Executive Summary available at: https://www.manomet.org/wp-content/uploads/2018/03/Manomet_Biomass_Report_ExecutiveSummary_June2010.pdf

For further background on biogenic carbon accounting, see these footnotes cited here.[29,30,31,32] We ask that these footnoted references, in full, be considered part of our comments by reference and are to be made part of the decision-making docket.

Feedstocks

A wide variety of feedstocks exist to make burnable fuels. Every one of them has its own significant problems, many of them rivalling fossil fuels, and all of them just "differently bad." This includes liquefying and/or gasifying or otherwise cleaning, converting or processing municipal solid waste,[33] sewage sludge,[34] construction and demolition waste,[35] animal wastes,[36] trees,[37] purpose-grown crops,[38] crop wastes,[39] vegetable oils,[40] anaerobic digester gas,[41] landfill gas,[42] algae,[43] and even "thin air" and water with electrofuels that involve direct air capture[44] and "green" hydrogen.[45]

Much has been written on these topics, and we cannot reasonably provide a full exploration of them all in these comments, but please include all of these footnoted reports and the sources within them as part of our comments, as there is much to read and know about each. Please also review our 6-page comments on Senate Bill 1120 here: https://www.capitol.hawaii.gov/sessions/session2025/Testimony/HCR70_HD1_TESTIMONY_TRN_04-01-25_.PDF#page=9

On biofuels generally, please review the excellent reports by Biofuelwatch at: https://www.biofuelwatch.org.uk/category/reports/general-overview/ and https://www.biofuelwatch.org.uk/category/reports/biofuels-liquid/

Also, the reports by Aviation Environment Federation: https://www.aef.org.uk/category/reports-briefings/

Most critically, on aviation fuel, please read this report in full: https://www.aef.org.uk/uploads/2023/11/Cerulogy_Alternative-fuels-in-aviation_Part-3-decarbonisation_Oct2023-1.pdf

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[29] Biomass Incineration and Climate. https://energyjustice.net/biomass/climate
[30] Energy Justice Network comments on EPA WARM Model. https://downloads.regulations.gov/EPA-HQ-OLEM-2023-0451-0112/attachment_1.pdf
[31] Partnership for Policy Integrity comments on EPA WARM Model. https://downloads.regulations.gov/EPA-HQ-OLEM-2023-0451-0112/attachment_7.pdf
[32] Landfill Gas https://energyjustice.net/lfg/ and the articles and links referenced at the top and under "related links," specifically this report: https://www.sierraclub.org/sites/www.sierraclub.org/files/landfill-gas-report.pdf
[33] http://www.energyjustice.net/incineration, on waste pyrolysis, see pages 3-7 and the reports footnoted within these recent comments: https://www.energyjustice.net/ny/Sullivan2025RFPComments.pdf
[34] https://sewagesludgeactionnetwork.com; http://www.ejnet.org/sludge
[35] https://energyjustice.net/waste/cd/; https://energyjustice.net/incineration/cd.pdf
[36] https://energyjustice.net/poultrylitter/
[37] https://energyjustice.net/biomass/; https://energyjustice.net/biomass/woodybiomass.pdf; https://energyjustice.net/hi/huhonua.pdf
[38] https://energyjustice.net/ethanol/ethanol-factsheet.pdf; https://energyjustice.net/biodiesel/biodiesel-factsheet.pdf
[39] https://energyjustice.net/ethanol/cellulosic/factsheet_cellulosic.pdf (covers cellulosic ethanol generally)
[40] https://www.biofuelwatch.org.uk/2025/fat-grab-report/
[41] http://www.energyjustice.net/digesters; https://zwia.org/composting-and-anaerobic-digestion-policy/; https://www.foodandwaterwatch.org/wp-content/uploads/2024/01/RB_2401_LCFS_Methane.pdf; https://foodandwaterwatch.org/wp-content/uploads/2021/04/ib_1611_manure-digesters-web.pdf; https://www.foodandwaterwatch.org/2024/01/09/the-big-oil-and-big-ag-ponzi-scheme-factory-farm-biogas/
[42] http://www.energyjustice.net/lfg
[43] https://www.biofuelwatch.org.uk/docs/Microalgae-Biofuels-Myths-and-Risks-FINAL.pdf; https://www.biofuelwatch.org.uk/category/reports/biofuels-liquid/cellulosic-algal-biofuels/; https://www.thenation.com/article/environment/exxon-algae-biofuels/; https://web.archive.org/web/20230323143637/https://www.greentechmedia.com/articles/read/lessons-from-the-great-algae-biofuel-bubble; https://www.canarymedia.com/articles/climatetech-finance/stop-trying-to-make-algae-biofuels-happen
[44] https://www.foodandwaterwatch.org/wp-content/uploads/2023/01/FSW_2212_DirectAirCapture.pdf
[45] https://www.energyjustice.net/hydrogen/

As these articles and reports document, in addition to climate change impacts, there are also many other harmful impacts that will come in the form of toxic releases, genetically modified crops and microorganisms, water and soil depletion, chemical use, land use, food insecurity, and – since most of this cannot be produced in-state – a heavy reliance on importing these fuels even while aiming to be energy independent and secure.

Relating to Hawai‘i having sufficient land or water to grow biofuels vs. the need to import most of them, as well as concerns relating to whether taxpayers or airline customers should foot the bill for subsidizing these biofuels, we encourage all to watch the 35-minute hearing on Senate Bill 995 of 2025, pertaining to "Sustainable Aviation Fuel Import Tax Credit; Renewable Fuels Production Tax Credit."[46] Senator DeCoite calls up staff from the state Department of Agriculture who make it clear that there is not sufficient land or water available for this purpose. Other testimonies during this hearing are quite eye opening. You can view it here: https://www.youtube.com/live/eLQmyLuHOu8?feature=shared&t=283

As page 51 of the plan admits, most of the envisioned fuels do not exist and are not low-GHG at this point where they do exist:

> "While Hawai‘i is committed to transitioning marine operations to low- or zero-carbon fuels such as green hydrogen, methanol, and advanced biofuels, many of these alternatives are not yet commercially viable, lack supporting infrastructure in the state, or currently carry high lifecycle carbon intensities due to existing production methods."

This reality is not likely to change for biofuels, though electrofuels (horribly expensive and inefficient at this time) will get cleaner over time as the electric grid gradually shifts to clean, renewable sources.

Food vs. Fuel; Imports

Page 2 of the plan states "we must decrease our dependence on imported energy and food." The plan also acknowledges the problem on page F-7 where it states: "But if virgin oils such as palm or soybean oil are used extensively, it can create tension with food supply and raise concerns about deforestation and agricultural expansion."

This is a great reason not to grow biofuels in-state.

Hawai‘i is dependent on importing about 80-90% of its energy and 80-90% of its food. Using precious land to grow fuel for vehicles necessarily means making the state even more food insecure. As the Department of Agriculture testimony showed on SB 995 of 2025, there is next to no land or water available to grow fuels in the state, requiring that nearly all reliance on biofuels will mean shipping it in from the continent. The answer is not to grow or import biofuels, but to electrify with local (non-burn) renewable energy production.

Biotechnology

The biotechnology industry's trade association routinely testifies in favor of biofuels bills in the state legislature. Their testimonies never state why they are so supportive of biofuels, but it is obvious to anyone who knows enough about the industry. The main biofuels currently in

[46] https://www.capitol.hawaii.gov/session/measure_indiv.aspx?billtype=SB&billnumber=995&year=2025

production are corn-based ethanol and soy-based biodiesel. As of 2024, 94% of corn grown in the U.S. is grown with genetically modified organisms (GMOs) and 96% of the soy is GMO.[47] This is primarily to withstand higher doses of herbicides, which leads to more herbicide spraying, mainly with Bayer (formerly Monsanto) product, Roundup (glyphosate), which is the subject of many lawsuits now that it is shown that it's not as safe as table salt, and indeed causes cancer. These herbicides have also been tied to harming amphibians, including deformities in frogs born with extra legs and such. There are other food and biofuel crops and trees that industry has been working to make GMO varieties of for many years, which could also be on the horizon for biofuel production in Hawai'i. Read more on the impacts of ethanol and biodiesel production in our factsheets linked in footnote 38.

As living organisms, GMO crops don't always stay where they are planted. There is a history of them contaminating nearby farms of organic farmers, for example. Since the GMO crops are patented intellectual property, there is a brutal history of Monsanto suing farmers whose farms were contaminated with their seed, as if the farmer was stealing the company's property.

Far more disturbing, however, is the biotech industry's other main motivation for supporting biofuels bills. They have long been experimenting with genetic modification of bacteria, algae and enzymes. Algae biofuels have been explored extensively, and have been a huge failure, whether genetically modified or not. Please review the reports in footnote 43 for details. Enzymes have been a part of efforts to make cellulosic ethanol viable… an industry that aims to convert everything from corn husks to pizza boxes to trash into liquid fuels. This industry has also been riddled with failed attempts for 2-3 decades. Genetically modifying bacteria is also linked to biofuels production. Given how impossible it is to contain microbes, and how quickly they can reproduce, having unnatural versions of microbes out in the wild could have unintended and disastrous consequences.[48]

A European company has developed a GMO variety of Klepbsiella planticola (KP), one of the most common bacteria on the planet, designing it to make alcohol out of plant matter. The idea was to make use of wheat straw, stalks and leaves. A researcher at University of Oregon tested it to see if it could survive in the wild, and found that it readily killed the plant in his experiment while the non-GMO variety did not.[49] If microbes like this were to be able to survive in the wild, the ecological consequences could be unthinkable.

Waste-based fuels

Some companies are pushing to use gasification or pyrolysis technologies to make burnable fuels from trash, construction and demolition (C&D) debris, and other waste streams. This is toxic and polluting, quite expensive, and has not worked at commercial scale. Please see our comments on the Maui Aloha Aina Project that seeks to turn trash into fuels to barge to O'ahu.[50] As we discuss in our testimonies on "clean fuels" bills,[51] the toxic hazards associated with pyrolysis or gasification of C&D waste are serious, especially where wood treated with copper, chromium and

[47] https://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-united-states; https://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-united-states/recent-trends-in-ge-adoption
[48] Szyjka, S. et al. (2017). Evaluation of phenotype stability and ecological risk of a genetically engineered alga un open pond production. Algal Research, 24. http://www.sciencedirect.com/science/article/pii/S2211926417300024
[49] https://www.sciencedirect.com/science/article/abs/pii/S0929139398001292 (bypass paywall here); See also: https://www.gmwatch.org/en/latest-listing/1-news-items/8951-full-story-of-the-dr-elaine-ingham-controversy-over-klebsiella-p; https://www.saynotogmos.org/klebsiella.html; https://web.archive.org/web/20071219095433/http://www.purefood.org/ge/klebsiella.cfm
[50] The project is described here: https://files.hawaii.gov/dbedt/erp/Doc_Library/2025-06-23-MA-DEA-Maui-Aloha-Aina-Project.pdf and our comments on this Environmental Assessment are here: https://www.energyjustice.net/hi/MauiWTFcomments.pdf
[51] https://www.capitol.hawaii.gov/sessions/session2025/Testimony/HCR70_HD1_TESTIMONY_TRN_04-01-25_.PDF#page=9

arsenic is present. For example, Aloha Carbon's plan to try to gasify C&D waste in Campbell Industrial Park on O'ahu would inevitably involve handling treated wood which the Hawaii Natural Energy Institute documented to have 200 times as much arsenic as clean wood.[52]

Green Hydrogen

Half of the ten fuel pathways involve "green hydrogen" (SAF, eSAF, e-Methanol, e-Ammonia, and green hydrogen itself). Hydrogen is typically extracted from fossil gas, but can come from other hydrocarbons. Green hydrogen involves electrolyzing water to split it with renewable energy into hydrogen and oxygen, which recombine when used in a fuel cell or burned.

Green hydrogen production is very inefficient, and will never be truly "green" until there is excess wind or solar on the grid. Until then, wasting 50-80% of the clean wind or solar energy in the process of splitting water and using the hydrogen fuel makes no sense because it would be better to use that clean energy to displace oil directly on the grid instead of displacing a much smaller amount of oil in a vehicle.

The plan ought to be careful not to over-claim, such as stating that there is no associated carbon emissions from production of green hydrogen if made from renewable sources. After all, burning trash, trees, and other sorts of biomass, biofuels or biogas are all renewable, and all have significant carbon emissions.

There are many other issues with hydrogen. Please review the top articles linked from our https://www.energyjustice.net/hydrogen page for good overviews. Also, newer evidence shows that hydrogen can be an indirect greenhouse gas when it inevitably leaks (it's tiny and hard to contain and can embrittle steel pipe).[53]

Long-distance aviation and some industrial heating applications are the only sectors that may need green hydrogen, and both are outside of the scope of this settlement. Prematurely allowing "green" hydrogen in the plan just means more oil burning to make up for the electricity wasted making hydrogen.

Electrofuels

Direct air capture is another inefficient and wasteful scheme some aim to combine with other energy-wasting ideas (green hydrogen) to make "sustainable aviation fuel" which is specifically promoted in the settlement. Like green hydrogen, it makes no sense to use before the electric grid is 100% powered by non-combustion renewable energy sources and has extra wind and solar to spare. Doing so would release about as much or more CO_2 than it would capture, either directly by using oil-fired power, or indirectly by using up renewables that could be displacing oil-fired power.

[52] See pages 2-3 in their testimony here: https://www.capitol.hawaii.gov/sessions/session2025/Testimony/HB976_TESTIMONY_EEP_01-28-25_.PDF#page=42

[53] https://www.canarymedia.com/articles/enn/scientists-warn-a-poorly-managed-hydrogen-rush-could-make-climate-change-worse; https://www.dnv.com/article/is-hydrogen-a-greenhouse-gas--243214/; https://www.cleanegroup.org/initiatives/hydrogen/areas-of-concern/

Leaky pipelines

Transportation of hydrogen and methane in existing, leaky gas pipelines risks ongoing GHG releases and should not be allowed.

Electrify

In order to get away from burning things, we need to electrify the transportation sector, and ensure there are zero greenhouse gases from the electricity sector. (The transportation sector cannot become zero emission if it relies on an electricity sector that is still powered, in part, by GHG-emitting combustion sources.) Currently, the state's combustion sources of electricity generation are 66% from oil-burning, plus another 4% from "renewable" burning of trash, trees, and biofuels... all of which need to be eliminated to reach a zero GHG emissions target.

It is not enough to rely on the state's Renewable Portfolio Standard, which requires 100% "renewable" electricity by 2045, since this law includes the burning of "biomass" (trash, trees and other solid waste and crops), liquid biofuels, and biogas (toxic landfill gases and anaerobic digester gas). These fuels have carbon emissions worse than fossil fuels. Several corporations are aiming to expand use of these "bio" fuels, which will undermine the state's climate goals. The state's Renewable Portfolio Standard (RPS) law must be fixed to remove combustion so that these fuels no longer qualify.

It is possible to electrify ground transportation, and sea and air interisland transportation, while decarbonizing the electricity sector, in a clean way that focuses on conservation, efficiency, solar, wind, and energy storage. This can be done reliably, more cheaply, and with fewer environmental impacts than the false solutions in the draft plan.

HECO is 64.2% oil generation and 3.3% waste/biofuels as of 2024. Clean (non-combustion) renewable electricity must displace this 67.5% combustion power before wasting energy on "green hydrogen" or electrofuels for planes. Otherwise, you're keeping the grid dirtier and contributing to more GHGs.

HDOT's plan should focus on ensuring an adequate supply of clean electricity by speeding up the process of cleaning up the electric grid while expanding clean renewable generation.

As the chart on the next page demonstrates, it's far more efficient to displace coal or gas power on the grid (oil would be in between those two) than to use clean energy to make hydrogen or jet fuel.[54]

[54] See page 24 in https://www.aef.org.uk/uploads/2023/11/Cerulogy_Alternative-fuels-in-aviation_Part-3-decarbonisation_Oct2023-1.pdf

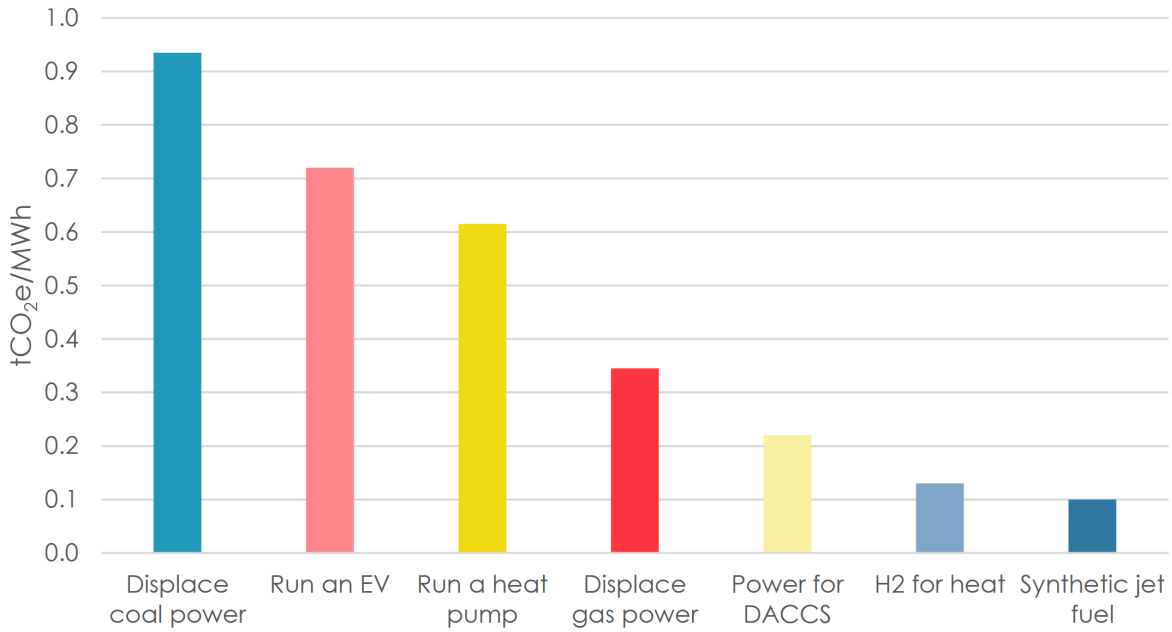

Figure 4 **Emission avoidance with 1 MWh of zero carbon electricity in example applications**

Clearly, cars and small trucks can be electrified. Heavy trucking, planes and boats are the areas that are less common. However, aside from long-distance air travel, all the rest can be electrified today, and the technology exists.

The plan says, on page 24, that "EVs may not meet the operational needs for some heavy-duty truck applications." This is outdated information. There are now EV trash trucks and long-haul trucks long enough to do any land distance in Hawai'i. The longest likely heavy truck trip possible in the state would probably be a trash truck going as much as 130 miles for the longest routes to the West Hawaii Sanitary Landfill from the east side of Hawaii Island. EV semi trucks have ranges of 150-500 miles as of this 2023 article.[55] Specific to trash trucks, Waste Today Magazone writes: "Designed for commercial and residential refuse collection, the Model 520EV can handle up to 1,100 trash bins on a single charge."[56]

Avoiding Fraud / Double-Counting

There are plenty of ways to game the system, and not enough safeguards in place. With a state mandate for 100% "renewable" electricity by 2045 and a concurring mandate for zero GHG emissions from the transportation sector by 2045, it could be attractive to allow the same "renewable" electricity (which could be burning trash or trees or could be real renewables like wind and solar) to serve both at the same time. However, this is generally considered double-counting and some states and regional grids have protections against that sort of fraud. HDOT ought to work with the PUC and legislature to ensure that there is no double counting of electrons

[55] https://www.eesi.org/papers/view/fact-sheet-the-future-of-the-trucking-industry-electric-semi-trucks-2023
[56] https://www.wastetodaymagazine.com/news/peterbilt-delivers-ev-trucks-to-waste-connections-of-new-york/

or emissions attributes when developing any parallel mandate that will inevitably draw on renewable electricity to some degree.[57]

Reduce demand

Demand reduction in both the electricity and transportation sectors must be a priority to help make it reasonable for both sectors to be clean and renewable by 2045. Conservation and efficiency strategies to reduce electricity waste would reduce the amount of new clean renewable energy generation capacity and storage that needs to be added to the grid in order to have enough excess clean electricity to power vehicles.

The Elephant in the Air; Stay within the Scope

According to the pie chart on page 15 of the plan, 53% of the greenhouse gases from the state's transportation sector are from air travel. How much of that 53% is from flights to other U.S. states? HDOT is only required by HRS § 225P-8 and the *Navahine F.* settlement agreement to address interisland air transportation (but not military aviation, nor flights to and from Hawaii).

On page B-11, it states "[p]er the settlement agreement, international marine and aviation activities are not included in the calculations and strategies identified in this Plan, which is also consistent with the DOH GHG Inventory." Note that it's not just international aviation, but interstate aviation is also excluded. The only marine or air travel that is in the scope is that which is within the state. This is not the time to broaden the scope, making a hard task even harder. Get this right, then once 2045 rolls around, perhaps there will be better options for long-distance air travel. Long-distance container shipping already has electrification piloted, but that's not for HDOT to worry about yet!

<u>Solving local air travel</u>

Interisland air travel can be electrified through a combination of electric-powered ferries and seagliders, as the Hawaiian Seaglider Initiative is exploring with the major airlines.[58]

Granted, seagliders are fairly new, but they now exist and are being tested out. The Regent Seaglider[59] seats 12 people so far, which is 12-15 times fewer than the planes typically used. Hawaiian Airlines uses a Boeing 717 (128 passengers) and Southwest uses a Boeing 737 MAX8 (175 passengers).

To make this possible without congestion, there can be more departure and landing points. HDOT should be working to plan out infrastructure for this as part of this plan.

Also, since many of the flights are surely for tourists, there are many who may not be in such a rush and might opt for a ferry between islands, which would be slower, but likely cheaper. It would allow for whale and dolphin watching and will reduce the numbers who have to be in planes. Prior controversies over the Super Ferry can hopefully be avoided. After all, plenty of cruise ships and

[57] See discussion of double-counting here: https://www.aef.org.uk/2025/08/05/double-counting-risks-in-saf-global-supply-chain/
[58] https://www.hawaiiseaglider.org/april-press-release
[59] https://www.regentcraft.com/seagliders/viceroy; see also https://www.youtube.com/watch?v=ggK0vIqiSV4, https://www.youtube.com/watch?v=QVMeSbgdOL0, and https://www.youtube.com/watch?v=s-GP_0Cud98

cargo ships already go between the islands. Some passenger ships shouldn't make a major difference.

Page 58 contains the plan's only mention of Electric Aircraft, which is a case study of a 3-passenger electric plane for "travel across the island of Maui." This may make sense for emergency medical transportation if electrifying a helicopter doesn't make more sense, but "enable faster and more frequent travel across the island of Maui" should not be a goal as it's simply increasing transportation use, and to what end? Let people drive an EV or take an electric bus. Electric aircraft are needed to get between islands, and the current electric options (sea gliders) can do 12 passengers, four times more than this case study. Why is that not featured in the plan instead?

Dangerous "Carbon Removal" Schemes

Instead of trying to reach zero GHG emissions, as legally required, the plan assumes HDOT will fall short by 8-10%, and aims to make up for this with projects that purport to reduce emissions elsewhere.

Plans to burn trees and other organic material (biochar, BECCS) are also harmful and toxic, and carbon capture and storage technologies do not capture 100% of their CO2 emissions. Biochar (mentioned on page C-3) is an incineration technology (pyrolysis) that is toxic and problematic.[60]

Plans to filter seawater with membranes to remove CO2 would impact any other sea life that is caught up in the process.

"Enhanced rock weathering" would risk spreading metals into the environment while disturbing natural features.

Injecting CO2 into concrete can leak out over time.

Recycling plastic waste into roads (mentioned on page 33) is adding many toxic chemicals to asphalt, making it far more toxic than asphalt already is with the introduction of additives (catalysts, stabilizers, color pigments), PFAS and more.[61]

While not directly mentioned, several sections "pave" the way for Honolulu's plan to recycle toxic H-POWER trash incinerator ash into roads, which would spread toxic chemicals throughout our environment. While there is great controversy in O'ahu over the building of a new (double-lined) landfill over the aquifer, the City and County of Honolulu is pursuing plans to take the same waste (the toxic ash from the H-POWER trash incinerator) and build roads with it over the island. These would be linear unlined landfills, exposing people and the environment to dioxins and toxic metals in the ash. However, this will likely be framed as a strategy for "low carbon concrete."[62] In New York state, the state with the most trash incinerators (ten of them), the toxic chemical content of their incinerator ash is high enough that if placed on the land, it would meet the soil cleanup standards and would be required to be cleaned up.[63]

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[60] https://energyjustice.net/incineration/biochar.pdf; https://www.biofuelwatch.org.uk/wp-content/uploads/Biochar-briefing-2024.pdf; https://www.biofuelwatch.org.uk/category/reports/biochar/

[61] https://pmc.ncbi.nlm.nih.gov/articles/PMC12347778/

[62] For info on incinerator ash testing, safety and "recycling," see https://www.capitol.hawaii.gov/sessions/session2025/Testimony/SB438_HD2_TESTIMONY_JHA_04-02-25_.PDF#page=45 or pages 9-12 here starting half-way through page 9: https://www.energyjustice.net/ny/Sullivan2025RFPComments.pdf

[63] https://www.energyjustice.net/incineration/ashvssoilcleanup.pdf

The last 8% is a violation of state law and the legal settlement, as it represents GHG emissions that will continue, but are to be compensated by supposed reductions elsewhere.

Policy solutions / Legal authority

Page 3 states: “Establish a market-based mechanism to incentivize the use of clean marine fuels and discourage the use of fossil fuels.” In policy-making, avoid “market-based mechanisms” like carbon fees since they are not guaranteed to be strong enough or specific enough to meet a target. HDOT will not get to zero with policies like “discourage” rather than “ban.”

Page 36 states: “If every new vehicle sold in Hawai‘i was an EV starting in 2030, some gasoline vehicles could remain on the road in 2045.” If the legal authority exists to actually meet the goal of zero, then make this goal mandatory. Also, if it’s close enough to zero, will there really be gas stations left to service the rare people left with gasoline vehicles?

Page 3: “Increase the use of electric vehicles (EVs) statewide by expanding public charging infrastructure, converting transit vehicles to electric, and providing financial incentives for EV adoption.” Can the state set emissions standards? Can it ban sales of gasoline or diesel vehicles?

Page 56 discusses curtailing cruise ships. Will this run into interstate Commerce Clause challenges, or does the state really have the power to mandate it? It would be unrealistic to rely on cruise companies to voluntarily curtail their business.

There are discussions on pages 59 and F-16 on why the state cannot mandate SAF. If that’s the case, then what indirect ways can the state get people out of planes and into the seagliders and ferries that can be fully electrified? Build it, and making it cheaper, more flexible, and attractive and they will come?

There are several areas in the plan that seem to have been written as if Trump is not president and as if the “One Big Beautiful Bill” had not passed. This includes page 35 where it says that “current federal regulations will spur increasing sales of EVs,” and page 41 where it talks about “securing federal grants” for electric fleets, page 84 where it says HDOT has applied for and received a Clean Materials Grant (is this secured or vulnerable to Trump admin cuts?). Page B-12 also talks about EPA CAFE standards. Were these not recently gutted?

Public Involvement

Page 61 mentions that “HDOT will lead a statewide coalition of airlines, fuel producers, farmers, NGOs, and government agencies to build a shared roadmap for producing, importing, and using sustainable aviation fuel (SAF) in Hawai‘i.” This is mostly the fox in charge of the henhouse. Before involving all of these economic interests, how about revisiting whether SAF makes sense and whether HDOT plans to tackle interstate air travel, even though it’s beyond the scope of the state law and settlement agreement?

There must be more knowledgeable people with critical views involved in the inner circle as this work continues. The small circle of agency staff, industry interests, plaintiffs and youth have clearly not been sufficient to prevent this draft plan from being a laundry list of false solutions.

Page 61 states that in September 2025, a “first coalition meeting” will be held. Will these meetings be open to the public? Please answer this in time for us to participate.

Page 77 states “This strategy represents HDOT’s chosen approach to implement the strategies in this Plan. It is already underway with HDOT engaging key stakeholders to consult on this Plan prior to its release, and regularly communicating and collaborating with Earthjustice, Our Children’s Trust, and Hawai‘i Youth Transportation Council.” Please regularly communicate with us as well. Being on the outside trying to look in has not been productive or collaborative.

Page 91 states: “HDOT plans to update the plan annually for the first 5 years after the issuance of the first plan. This will allow for additional analysis as needed, integration of new technologies as they become available, and will reflect progress made by HDOT.”

It’s good to see this. How do we become an integral part of the process rather than a once-per-year opportunity to comment on something already drafted?

Errata

- Page 16: “four general aviation airports” should say five?
- Fig 3-4: “overacrching” and “aagressive”
- Pages 8 & 70: “Airport Carbon And Emission Reduction Tool” should be “Airport Carbon **a**nd Emission**s Reporting** Tool”
- Page F-13: “the climate benefit of renewable LNG hinge” - need ‘s’ on benefit or hinge

Conclusion

There are many ideas in the HDOT plan that are decent and just need to be scaled up, especially every method to electrify transportation. Public transportation needs to be ramped up a lot, and be fare-free. Trash, recycling and composting collection should be one hauler going to all homes for curbside collection so that we don't have people doing separate trips to transfer stations in the neighbor islands. Efforts to grow more food (not fuel!) on the islands will increase food security while reducing shipping. Let’s make this all happen… the right way, in the right order, without more combustion, please!

Mahalo nui loa,

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Par Hawaii

February 19, 2026

TESTIMONY ON HB 1695 HD1
RELATING TO RENEWABLE FUEL

House Committee on Energy & Environmental Protection
Representative Nicole E. Lowen, Chair
Representative Amy A. Perruso, Vice Chair

Thursday, February 19, 2026 at 9:45 a.m.
State Capitol, Conference Room 325

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

Thank you for the opportunity to provide testimony in **SUPPORT** of HB 1695 HD1, Relating to Renewable Fuel.

My name is Eric Wright and I serve as President of Par Hawaii. Par Hawaii is the largest local supplier of fuels, including various grades of utility fuels, as well as diesel, jet fuel, gasoline and propane.

This measure amends the existing renewable fuels production tax credit statute to provide clear incentives for in-state production of renewable fuel while preserving administrative continuity.

As Hawai‘i’s local producer of transportation fuels, we have invested over $90 million to develop the State’s largest renewable fuels manufacturing facility at our Kapolei refinery, expected to be completed in Q1 of 2026 and to produce approximately 61 million gallons per year of renewable diesel, sustainable aviation fuel, renewable naphtha, and liquefied petroleum gases from renewable feedstocks for Hawai‘i consumers. Strengthening the existing renewable fuels production tax credit will help ensure this investment delivers the greatest possible environmental and economic benefits to Hawai‘i, including lower lifecycle greenhouse gas emissions, support for local agriculture, and retention of skilled refinery jobs in a transitioning clean energy economy.

HB 1695 HD1 is an important tool to advance the State’s net-zero by 2045 goals. By refining the current credit framework, this measure can accelerate implementation and send a clear signal that Hawai‘i is committed to scaling near-term, cost-effective emissions reductions in the transportation sector.

However, the cost to produce these fuels remains significantly higher than the cost of imported crude oil, and financial incentives are required to initiate and sustain production at scale. State tax incentives are essential to accelerating the transition for utilities and for air, ground, and marine transportation into renewable fuels deployment and market adoption.

Par Hawaii

Manufacturers on the U.S. West Coast have successfully brought renewable fuels to market, but only with the support of substantial state-level financial subsidies. Without comparable incentives for renewable fuel production in Hawai‘i, these renewable fuels are likely to be produced locally but shipped to other markets, including the West Coast. With the incentives proposed in HB 1695 HD1, we can help bridge the cost gap with fossil fuels, pass savings on to customers, and build durable demand for these renewable fuels in Hawai‘i.

Over time, the need for incentives should decline as demand increases and economies of scale are realized. We are collaborating with Alaska Airlines and Hawaiian Airlines, Pono Pacific Land Management, several of our utility and transportation customers, and the Hawai‘i Renewable Fuels Coalition and its stakeholders to advance this transition.

Just as thoughtful incentives helped launch the solar and film industries in Hawai‘i, similar support is now needed to advance local renewable fuel production. Hawai‘i has steadily increased its renewable energy portfolio, and incentivizing the growth of local renewable fuel production is critical to accelerating our decarbonization goals.

HB 1695 HD1 is a deliberate, targeted strategy that aligns with the State’s emission reduction commitments.

Thank you for allowing Par Hawaii the opportunity to submit testimony in support.

Hawai'i Renewable Fuels Coalition

February 19, 2026

TESTIMONY IN SUPPORT OF HB 1695 HD1 RELATING TO RENEWABLE FUEL

Aloha Chair Nicole Lowen, Vice Chair Amy Perruso, and Members of the House Committee on Energy & Environmental Protection,

My name is Nahelani Parsons, and I am the Executive Director of the Hawai‘i Renewable Fuels Coalition (HRFC). On behalf of our coalition members across the energy, agriculture, labor, and transportation sectors, I offer our **strong support for HB1695 HD1 with proposed amendments**, which expands and strengthens the Renewable Fuels Production Tax Credit (RFPTC), a critical tool in our state's clean energy future.

The HRFC is a diverse alliance of stakeholders working to achieve Hawai‘i’s renewable energy goals. Our founding members include:

- **Hawaiian/Alaska Airlines**: Leaders in adopting Sustainable Aviation Fuel (SAF) to decarbonize the aviation sector.
- **Pono Pacific**: Hawai‘i’s largest natural resource conservation company, advancing oil crop feedstock cultivation to support renewable fuel production.
- **Par Hawai‘i**: The state’s largest energy supplier, investing over $100 million in renewable fuel production technology to strengthen energy security and sustainability.

In addition to these partners, HRFC collaborates with:

Pacific Biodiesel, a local producer of biodiesel. The Hawai‘i Farm Bureau, representing 1,800 farm families statewide, to support renewable feedstock cultivation and enhance food and energy security. Ranchers, dairy farmers, and conservationists, such as Meadow Gold and Haleakalā Ranch, contributing to Hawai‘i’s resilience and self-sufficiency. Airlines for America, which advocates for SAF adoption nationwide to reduce aviation emissions.

Hawai‘i Renewable Fuels Coalition members:

Airlines for America	Alaska Airlines	Haleakala Ranch
Hawaii Farm Bureau	Hawaii Fuelling Facilities Corp	Hawaiian Airlines
HECO	ITOCHU Corporation	Japan Airlines
Kuilima Farm	Meadow Gold Hawaii	Pacific Biodiesel
Par Hawaii	Pono Pacific	United Steelworkers

HB1695 HD1: A Strategic Climate and Economic Bill

This measure advances Hawai‘i’s response to the Navahine v. HDOT climate settlement by providing the financial mechanism needed to support production of renewable fuels such as sustainable aviation fuel (SAF) and renewable diesel. With the transportation sector contributing nearly half of Hawai‘i’s greenhouse gas emissions, and with aviation fuel consumption exceeding 700 million gallons annually, this bill provides a realistic and scalable pathway to decarbonize transportation while building local economic resilience.

Why This Matters to Hawai‘i

- Hawai‘i will always need to import some fuel. But with HB1695 HD1, we can produce more locally, reduce dependence on volatile global oil markets, and keep energy dollars circulating in our economy.
- SAF and renewable diesel are “drop-in” fuels, requiring no new infrastructure or modifications, making them one of the most impactful near-term tools to reduce emissions from aviation. A tax credit enacted this year would show a measurable reduction in GHG emissions almost immediately.
- This bill is fiscally responsible. While it increases the per-BTU credit to match market realities, it maintains strict environmental standards and includes credit caps to ensure fairness and scalability. These updates are designed to be transitional, helping renewable fuel markets scale, drive costs down over time, and reduce long-term reliance on incentives. This approach mirrors successful clean energy policies that used early investment to unlock competition and affordability.

Support for Local Agriculture & Workforce

HB1695 HD1 encourages use of energy crops like **camelina (related to canola)**, which:

- Grow on underutilized fallow lands (not displacing food crops),
- Require low water and inputs, and
- Serve as cover crops that restore soil health and reduce fire risk.

The bill supports farmers by providing market certainty through the tax credit, similar to how investment in breadfruit (‘ulu) enabled a thriving local industry after a decade of commitment. The credit must come first; farmers need to see the system working before dedicating acreage.

- **Job Creation and Equity.** This bill promotes good, local jobs across rural communities, renewable fuel refining, logistics, and agriculture. It supports union labor and skilled trades transitioning into the clean energy economy, helping ensure a just transition for Hawai‘i’s workforce.
- **Targeted tax credits unlock market growth and drive costs down.** These incentives are designed to be transitional, helping the market scale, drive costs down over time, and reduce the need for incentives in the future. The Renewable Fuel Production Tax Credit helps bridge early cost gaps, enabling producers, refiners, and distributors to scale production. As volumes grow and supply chains mature, per-unit fuel costs decline over time.
- **Market certainty supports Hawai‘i’s farmers and landowners.** A stable, long-term tax credit provides the certainty needed to support expanded cultivation of rotational oilseed crops and other renewable feedstocks, allowing farmers to plan, invest, and participate in a growing local market.
- **State incentives are a necessary public-private investment in our future.** While individual producers may claim the credit, the benefits extend statewide across agriculture, energy, logistics, and labor, with program caps ensuring broad participation as the market grows. Without them, investment, agricultural opportunity, and jobs will continue to flow to states with stronger incentives, leaving Hawai‘i dependent on imported fuels. HB1695 HD1 sends a clear and durable signal to farmers, producers, and investors alike by reinforcing policy certainty and enabling coordinated public–private investment across the full value chain, from farms and feedstock development to refining and distribution, advancing Hawai‘i’s climate, energy security, and economic development goals.

HRFC strongly supports HB1695 HD1 as a transformative, fiscally responsible, and urgently needed policy. It aligns with our 2045 clean energy mandate, complies with the Navahine climate settlement, and opens the door for a vibrant local bioeconomy, rooted in energy security, food resilience, and community equity. We respectfully urge your committee to pass HB1695 HD1. Mahalo for your leadership and commitment to Hawai‘i’s renewable future.

Nahelani Parsons,

Executive Director, Hawai‘i Renewable Fuels Coalition

Proposed amendments to HB1695 HD1 Relating to Renewable Fuel

In order to define the transportation emissions thresholds that are currently blank in the bill:

Amend page 11, rows 3 to 8, to read:

"Feedstock transportation emissions threshold" means the carbon intensity contribution associated with the oceangoing transportation of the feedstock from the feedstock producer to the renewable fuel producer is less than 0.48 kilograms per million British thermal units ~~grams per megajoule~~ as determined by the lifecycle greenhouse gas emissions analysis.

Amend page 12, rows 9 to 14, to read:

"Product transportation emissions threshold" means the carbon intensity contribution associated with the oceangoing transportation of the finished fuel from the renewable fuel producer to the final distribution storage facility is less than 0.48 kilograms per million British thermal units ~~grams per megajoule~~ as determined by the lifecycle greenhouse gas emissions analysis.

In order to clarify HSEO's role in validating the greenhouse gas emissions data provided by the producer:

Amend page 8, rows 18 to 21 to read:

(3) Provide the taxpayer with a determination of whether the lifecycle greenhouse gas emissions for each type of qualified fuel produced ~~is lower than that of fossil fuels~~ meets the lifecycle greenhouse gas reduction threshold, product transportation emissions threshold, and feedstock transportation emissions threshold.

TESTIMONY OF TINA YAMAKI, MANAGING DIRECTOR
HAWAII TRANSPORATION ASSOCIATON
FEBRUARY 19, 2026
HB 1695 HD1 RELATING TO RENEWABLE FUEL.

Aloha Chair Lowen and members of the House Committee on Energy & Environmental Protection I am Tina Yamaki, Managing Director of the Hawaii Transportation Association and I appreciate this opportunity to testify.

The Hawaii Transportation Association (HTA) was founded in 1938 and incorporated in 1963, and is a private, non-profit trade organization dedicated to the service and assistance to the commercial ground transportation industry in the State of Hawaii. Our members include family owned small and medium sized businesses, independent owner operators, and national motor carriers range from delivery services to passenger carriers - as well as allied industry partners.

HTA Hawaii is in support of HB 1695 HD1. This bill expands the provisions of the renewable fuels production tax credit; applies to taxable years beginning after December 31, 2025; and is effective 7/1/3000.

This measure is a strategically sound investment in energy resilience, economic diversification, and climate policy execution.

Hawai‘i remains the most petroleum-dependent state in the nation, with the majority of transportation fuels imported across long supply chains vulnerable to disruption, price volatility, and geopolitical risk. Expanding the renewable fuel production tax credit directly advances our In-State fuel production capacity while reducing exposure to global oil market shocks and maintaining a greater supply chain resilience during emergencies.

Liquid renewable fuels like renewable diesel, biodiesel, sustainable aviation fuel (SAF), and renewable natural gas (RNG) are particularly critical because they can decarbonize sectors that cannot readily electrify, including aviation, marine transport, heavy-duty trucking, and backup generation.

We also want to point out that Hawai‘i’s clean energy strategy cannot rely on electrification alone. Renewable fuels serve as a complementary decarbonization pathway by reducing lifecycle greenhouse gas emissions in hard-to-electrify applications, supporting firm and dispatchable energy resources as well as enabling low-carbon transition options without immediate fleet turnover. The tax credit accelerates deployment of drop-in fuels that work with existing engines and infrastructure, lowering transition friction and cost.

By expanding the renewable fuel production tax credit, the Legislature strengthens Hawai‘i’s capacity to produce its own low-carbon fuels, support local industry, and reduce long-term vulnerability to fossil fuel price shocks.

Mahalo for this opportunity to testify.

P.O. Box 30166 ● Honolulu, HI 96820 | (808) 833-6628 | tina@htahawaii.org

PACIFIC BIODIESEL TECHNOLOGIES

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February 18, 2026

TESTIMONY ON HB 1695 HD1, RELATING TO RENEWABLE FUEL

SUPPORT

Representative Nicole E. Lowen, Chair
Representative Amy Perruso, Vice Chair
Committee on Energy & Environmental Protection
Hearing: Feb. 19, 2026, 9:45am, Conf Room 325

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

HB1695 HD1 acknowledges the Navahine lawsuit and the climate action settlement promulgated by our very concerned youth. Pacific Biodiesel **supports** **HB 1695 HD1**, which updates the Renewable Fuel Production Tax Credit previously established by the State Legislature and supports a very real, sustainable ongoing solution.

Biodiesel is an energy-dense domestically manufactured renewable fuel source that provides local family-wage earning jobs, promotes energy security in Hawai`i, supports USA national security and benefits the local circular economy. Biodiesel has one of lowest carbon footprints of any fuel, reducing greenhouse gas emissions by 86% compared to fossil diesel.

A recent USC study on the Lifecycle Assessment of an electric bus compared with a biodiesel bus in Hawai`i showed a substantial reduction in environmental impact. Biodiesel demonstrated:
48% less energy used
89% less water consumed
41% fewer GHG emissions
7% lower total cost of ownership

https://incose.onlinelibrary.wiley.com/doi/10.1002/iis2.70102

This production tax credit will support continued expansion of biodiesel production for our state – more urgent now than ever. It also assures the continued expansion of our local biodiesel crop production which addresses both fuel and food security for Hawai`i.

Pacific Biodiesel is acutely aware of the important role our biodiesel production plays in supporting military readiness and energy resilience in our state. Given Hawai'i's strategic location, our biodiesel ensures a reliable, readily available local supply of biofuel at key Department of Defense locations in Hawai`i and the Indo-Pacific region to help protect United States national security and military preparedness and further reduce reliance on imported crude oil, especially from dangerous sources like Russia-backed Libya.

State support has helped Pacific Biodiesel, now in our 30th year, exceed our original 2012 nameplate capacity of 5.5 million gallon per year. Current biodiesel production in Hawai`i is 6 million gallons annually. Biodiesel produced from Hawai`i-sourced feedstock can feasibly scale to 16 million gallons annually by 2040 – *this total vertical integration to locally grow and produce biodiesel epitomizes energy security!*

As Hawai`i embraces electric vehicles, it is important to recognize that a large portion of our transportation infrastructure must be given the choice to go renewable by using locally produced biofuel in order not to burden local businesses as well as citizens with the unjust added cost of buying new vehicles. Biodiesel can bring immediate greenhouse gas emission reductions for the hard-to-electrify sectors such as large trucks, buses, and boats where new electric vehicle technology is extremely expensive, not widely available and lacks the same payload as diesel engines.

For power generation, biodiesel is a critical component of our State's renewable energy portfolio.

Biodiesel is a 100% renewable fuel that provides a firm renewable source for power generation that is a reliable backup to intermittent renewables like solar and wind that fluctuate in availability. In our electric utilities, fast-start diesel engines — increasingly fueled with clean biodiesel — are enabling higher penetration of intermittent PV and wind assets while maintaining grid stability.

We produce our biodegradable, non-toxic fuel with used cooking oil recycled from Hawai`i's restaurants, keeping that potentially hazardous waste out of local landfills. In addition, our carbon negative regenerative farming operation can also locally produce biodiesel from virgin oils, like sunflower and canola oils. Our model also contributes culinary oils and high-protein meal for livestock feed to the local food system. Pacific Biodiesel's "ag and energy" model today is demonstrating a "net carbon negative" renewable fuel system that's a beneficial circular economy model for Hawaii.

There is no silver bullet for a 100% zero emission future. The further we move towards our goal of 100% renewable, the more critical liquid biofuel sources will become in our State renewable energy portfolio of sustainable solutions. We must continue to support the expansion of local production now to meet our needs later.

Our biggest concern with HB 1695 HD1 at this point is the "Single producer cap" outlined on page 9. We ask that the cap be changed from 75% to 50% to allow for more potential local producers to access this state support. The production tax credit in HB 1695 HD1 gives Pacific Biodiesel the support to increase our investment in local expansion, and with this important change, we would hope to not be overshadowed by larger, out-of-state biodiesel producers.

Mahalo,

Bob King
Founder and President
Pacific Biodiesel

TESTIMONY **ON HOUSE BILL NO 1695, HD1** RELATING TO
RENEWABLE FUELS
Position: **Support**

To Representative Nicole Lowen, Chair; Representative Amy Perruso, Vice Chair; and Members of the Committee on Energy & Environmental Protection:

Simonpietri Enterprises LLC (SEL) **SUPPORTS** the intention of this measure.

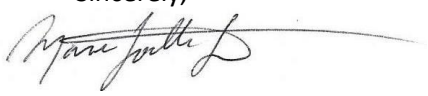
SEL is an O'ahu-based small business developing innovative ways to recycle some of Hawai'i's most challenging wastes into renewable fuels and other beneficial recycled-material products for use in Hawai`i. For the better of the last 6 years, we have been designing the Aloha Carbon integrated plant in Campbell Industrial Park to divert over 2000 tons per day of construction & demolition (C&D) debris from landfilling to be converted into renewable natural gas starting with a small manufacturing plant – the Aloha Sustainable Materials Recycling and Fertilizer Facility (Aloha SMRFF) – which will serve as the pilot plant for Aloha Carbon.

The Aloha SMRFF will divert over 200 tons per day of construction & demolition (C&D) waste from landfilling along with invasive and pest infested biomass and remanufacture that waste to displace over 10,000 tons per year of imported fossil fuels, fertilizers, and building materials for Hawai'i. This facility is the first step to demonstrating our Aloha Carbon manufacturing process to manufacture pipeline-quality renewable fuel from solid wastes – 100% of which are generated in Honolulu. Even with modest fuel and fertilizer production, we anticipate this initial project to have sizable benefits that will support the state's emission reduction and energy resilience goals, while creating other economic opportunities.

The cost to develop energy infrastructure projects in Hawai'i is a limiting factor for many companies especially when considering the efforts invested in project development and engineering to mature our innovations from concept to pilot scale. The implementation of a renewable fuel tax credit incentivizes and helps smaller businesses, like ours, developing these types of projects to contribute their innovative solutions with greater success.

We appreciate the opportunity to testify on this measure, and urge your support for this bill.

Sincerely,



Marie-Joelle Simonpietri
President

About Simonpietri Enterprises LLC

Simonpietri Enterprises is a Kailua, Hawaii-based woman- and veteran-owned small business with ten employees, focused on technical innovation and first-of-kind project development of emerging clean and renewable technologies. Since founding in 2006, we have helped dozens of small and large industrial companies in Hawaii, the continental U.S., Australia, and Canada improve the environmental

and economic sustainability of their operations through technical and business advice in renewable energy conversion, waste reduction and re-use, and greenhouse gas lifecycle impact reduction. Simonpietri Enterprises' founder and employees have participated in the strategy, planning, design, financing, development, construction, and energy efficiency/greenhouse gas reduction/sustainability renovation for over $400 million in new renewable and first-of-kind sustainable fuel projects over the past 15 years. Since launching the Aloha Carbon waste-to-fuel technical development process in August 2020, Simonpietri Enterprises is now developing renewable fuel production facilities in its own right, starting with the Aloha Sustainable Materials Recycling and Fertilizer Facility (SMRFF) in Kapolei, Hawaii to divert wastes generated in Honolulu from landfilling and transform it to renewable fuel, organic fertilizer, and recycled-material building products.

Environmental Caucus of The Democratic Party of Hawai‘i

Wednesday, February 18, 2026

To: House Committee on Energy and Environmental Protection
Rep. Nicole E. Lowen, Chair
Rep. Amy A. Perruso, Vice Chair
Re: HB 1695 HD 1 re Renewable Fuel Tax Credit
Hearing: Thursday, February 19, 2026, 9:45 am, Conference Room 325 & Video
Position: **OPPOSITION**

Aloha, Chair Lowen, Vice Chair Perruso, and Members of the Committee on EEP!

The Environmental Caucus of the Democratic Party of Hawai‘i comprises some 6,680 members in all four counties of the State. We are active and aware of political developments and strongly support environmental protection, particularly in these very troubled times.

HB 1695 HD 1 proposes to provide tax credits to entities that would create “renewable fuels” from biomass and from **construction and demolition waste** that would be burned. The Caucus respectfully **OPPOSES** this bill for multiple reasons. First, there is simply not enough land and water in the State to sustain the local production of biofuels. We would have to import those biofuels. Moreover, such production, even if within the State, would compete with local food production, and local food production is an extremely important value in itself.

Furthermore, growing large quantities of biomass would likely involve genetic engineering and herbicide spraying, which are highly problematic. And, as they are burned, biofuels results in serious air pollution, and use of biofuels is very costly. Even as a “transition fuel.” Burnable fuels are neither clean nor sustainable, and therefore they are not a viable “transition fuel.” Construction and demolition waste cause much of the dirtiest air pollution. For example, wood used in construction has 200 times as much arsenic as natural wood.

We also believe that burning biomass is in violation of the State’s responsibilities under the settlement agreement in the *Navahine F. v. Department of Transportation* case.

Accordingly, for all these multiple reasons, we request that you please defer HB 1695. Thank you very much for the opportunity to testify.

Respectfully,

Alan B. Burdick, Co-Chair burdick808@gmail.com
Mike Ewall, Co-Chair Mike@energyjustice.net
Melodie Aduja, Co-Chair *Emerita* legislativepriorities@gmail.com

P.O. Box 37158, Honolulu, Hawai`i 96837-0158
Phone: 927-0709 henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
Rep. Nicole E. Lowen, Chair
Rep. Amy A. Perruso, Vice Chair

Thursday, February 19, 2026
9:45 a.m.
Conference Room 325

HB 1695 SUPPORT WITH AMENDMENT

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

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for 56 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Gutting HB 1695 (Renewable Fuel) and replacing it with HB 1694 (Sustainable Aviation Fuel) makes sense as the title of the former is broader. The original HB 1694 can then be held.

HB 1694 is superior to HB 1695 since it allows for public disclosure. The weakness that must be fixed is (a) how the public learns about the filing to file a 92F, and (b) how the

public comments on the filing. It should be noted that forcing the filing of a 92F for public information is a way for government to monitor who is requesting the information.

AMENDMENT: The Department of Transportation shall post on its website the up-to-date status on each application.

Biofuel tax credits are needed for both electricity and air transportation. At present, the only way of reducing aviation greenhouse gas emissions is by relying on sustainable, low life cycle impacts across all sectors. Lowering the cost of the fuels requires research.

Biofuels Are Needed to Reach 100% Renewable Energy

An **energy drought** on a small island grid is a period when available renewable resources cannot reliably meet demand, usually because the weather-driven output is low for an extended time, creating a shortfall relative to demand. Wind and solar systems may be able to generate only 10-20% of their normal output.

Small island grids have limited geographical spread, so weather is highly correlated and there is much less “spatial smoothing” of wind and solar variability than on continental systems. That means a cloudy, still week or a stalled weather pattern can depress renewable output across the whole system at once, making energy droughts deeper and more frequent on a per-MW basis. Chemical batteries are effective for handling part of the load forup to four hours. Installing liythium batteries to address energy droughts is prohibitively expensive. During an energy drought, the system operator must lean heavily on firm generation (biofuels, fossil fuels, geothermal, hydroelectric).

Hawai`i Natural Energy Institute (HNEI) Annual Report filed with the 2026 Legislature (December 2025): "Previous analysis showed that Oʻahu extended will require considerable thermal capacity on the grid to ensure reliability during periods of low renewable resource generation."

"The findings of this analysis indicate that on Oʻahu, even with a very high penetration of variable renewable energy and storage, there will be a minimum firm capacity need of 600-750 MW to ensure resource adequacy. In this future clean energy system with high variable renewables, these firm resources would run sparingly but when they do run, it could be for multiple consecutive days at a time. Today, this firm resource is provided by the existing Hawaiian Electric (HECO) oil plants but these plants."[1]

Biofuels Are the Most Likely Future Source of Firm Renewable Energy for Oahu

[1] https://www.hawaii.edu/govrel/docs/reports/2026/hrs304a-1891_2026_hnei_annual-report.pdf

Bioenergy fuels vary widely in their environmental impact, depending on feedstock, land-use change, and production methods.

“Bioenergy” is not a single climate-impact category, and lifecycle outcomes range from genuinely low-impact fuels (especially true wastes) to options that can be net climate-harmful when they drive land-use change or create long “carbon debts.” The spectrum from waste-derived fuels to forest biomass reflects real differences in carbon intensity, fossil fuel inputs, and land-use effects.

The variation in these sustainability outcomes stems from eight critical factors: feedstock origin—whether agricultural residues, purpose-grown crops, or forest biomass; land-use changes, both direct and indirect (LUC/ILUC); displacement of indigenous communities and endangered species; agricultural inputs such as nitrogen fertilizers and diesel fuel; toxic emissions; life-cycle greenhouse gas totals; methodologies for crediting co-products in life-cycle analysis; and the legitimacy of alleged carbon offsets.

Very low impact options

Biodiesel produced from used cooking oil (UCO) and waste grease represents the cleanest biofuel pathway. Sharp reductions in lifecycle greenhouse gas emissions are possible. The environmental benefit stems from the absence of new agricultural production—no land use change, fertilizer application, or farming energy inputs. In Hawaii, Pacific Biodiesel has operated since 1995, recycling restaurant grease from the tourism industry, with current production exceeding 5.5 million gallons annually,

Low-impact rotational crops

Non-food rotational crops like sunflowers and Camelina sativa are generally considered low-impact because they can be grown in rotation with food crops, often improving soil quality and reducing the need for additional land-conversion. When processed via relatively simple transesterification (biodiesel) rather than high-energy refining, their lifecycle emissions are lower than fossil diesel, especially if nitrogen-fertilizer use and tillage are managed carefully. Benefits can disappear under high fertilizer intensity.

Rotational oilseeds provide benefits when integrated into existing crop rotations rather than displacing food production.

High fossil-fuel-use pathways

Ethanol from maize or sugarcane, especially when produced at large scale, often involves high fossil-fuel inputs for fertilizer, cultivation, and distillation, which can erode net greenhouse gas savings. Studies indicate that 3-5 units of fossil fuel can be converted to 4 units of ethanol. Indirect land-use change (e.g., displacing food crops to other regions) can

also increase emissions, such that some ethanol systems approach or exceed the lifecycle emissions of conventional gasoline.

Super-high-GHG options

Bioenergy derived from clearing primary forests, even when paired with dubious “carbon offset” schemes, is among the highest-GHG-emitting options because it releases large stocks of stored carbon and destroys long-term carbon sinks. When harvested for biomass or biofuels, the time horizon for regrowth and offsetting emissions spans decades to centuries, effectively accelerating near-term climate warming.

Mahalo

Henry Curtis

Executive Director

RNG COALITION

LATE

February 19, 2026

House Committee on Energy and Environment
Hawai‘i State Legislature

RNG Coalition testimony in Support of HB 1695

Dear Chair Lowen and Members of the Committee:

The COALITION strongly supports HB 1695, which expands and modernizes Hawai‘i’s Renewable Fuels Production Tax Credit to better support low-carbon fuels, including renewable natural gas and sustainable aviation fuel.

The RNG COALITION is the national trade association representing the renewable natural gas (RNG) industry . Our members capture and upgrade methane from organic waste streams, including landfills, wastewater treatment facilities, and agricultural waste into renewable natural gas, a critical feedstock for sustainable aviation fuel production.

HB 1695 appropriately recognizes that renewable fuels, particularly those with very low lifecycle emissions, remain more expensive to produce than fossil fuels, despite their substantial public benefits. By increasing the per-unit credit value and explicitly supporting sustainable aviation fuel and renewable natural gas, this bill helps bridge the cost gap and unlock private investment in local production capacity.

Renewable natural gas is uniquely positioned to deliver near-term emissions reductions using existing pipelines, fueling infrastructure, and vehicle fleets. It can be used directly as a transportation fuel or serve as a feedstock for clean hydrogen, renewable electricity, or sustainable aviation fuel, making it a flexible tool for Hawai‘i’s decarbonization strategy.

In addition to emissions reductions, renewable fuel production supports local agriculture, waste management, and adds local jobs. These projects strengthen energy security by reducing dependence on imported fossil fuels while keeping investment dollars circulating within the local economy.

HB 1695 is a targeted, performance-based policy that complements broader transportation decarbonization efforts and helps ensure Hawai‘i remains competitive as other states expand incentives for low-carbon fuels. The RNG Coalition respectfully urges the Committee to support HB 1695.

Sincerely,

1017 L ST. SACRAMENTO
CA 95814

Influencing the Future of Energy

916.588.3033
RNGCOALITION.COM

Yanni Psareas
Manager of State Government Affairs
RNG COALITION
yanni@rngcoalition.com

February 19, 2026

LATE

KAPOLEI CHAMBER of COMMERCE
Working for West Oahu

House Committee on Energy and Environmental Protection
Representative Nicole Lowen, Chair
Representative Amy A. Perruso, Vice Chair

Thursday, February 19, 2026, 9:45 a.m.
Conference Room #325 and via videoconference

RE: HB 1695 HD1 – Related to Renewable Fuel

Dear Chair Lowen, Vice Chair Perruso and Members of the Committee,

My name is Kiran Polk, and I am the Executive Director & CEO of the Kapolei Chamber of Commerce. The Kapolei Chamber of Commerce is an advocate for businesses in the Kapolei region including Waipahu, Kapolei, ʻEwa Beach, Nānakūli, Waiʻanae and Mākaha. We work on behalf of our members and the broader business community to improve the regional and State economic climate and to help West Oʻahu businesses thrive.

The **Kapolei Chamber of Commerce supports HB 1695 HD1**, which strengthens Hawaiʻi's renewable fuels production tax credit and supports the continued development of renewable fuel options, including sustainable aviation fuel. From a business and economic perspective, this measure helps reinforce Hawaiʻi's **energy security**, supports **private investment**, and strengthens the State's **transportation and aviation sectors**, which are essential to both residents and visitors.

In West Oʻahu, this measure has direct economic relevance. Significant private investment is already underway in **fuel production and refinery infrastructure** within our region, supporting **high-skill jobs**, **workforce transition**, and the continued use of existing industrial facilities. Policies that help support early-stage market development can encourage investment, retain local jobs, and ensure Hawaiʻi remains competitive as fuel markets evolve.

This measure also reflects growing **collaboration across Hawaiʻi's energy producers, airlines, and transportation stakeholders**. Coordination between fuel producers and major air carriers underscores the importance of aligning supply, demand, and infrastructure to support reliable aviation service while strengthening Hawaiʻi's overall economic resilience. These partnerships demonstrate how **industry-led solutions**, supported by thoughtful public policy, can help advance shared economic goals.

The Chamber recognizes that transitioning fuel markets takes time, scale, and coordination. Supporting policies that encourage **market readiness and investment certainty** can help attract capital, stabilize supply chains, and support long-term planning for businesses operating in Hawaiʻi's unique island environment.

For these reasons, the **Kapolei Chamber of Commerce respectfully urges your support of HB 1695 HD1**. Mahalo for the opportunity to provide testimony and for your continued leadership on issues that support Hawaiʻi's economy, workforce, and long-term resilience.

Best,

Kiran Polk
Executive Director & CEO

1001 Kamokila Boulevard, Campbell Building Suite 250, Kapolei, Hawaii 96707

HB-1695-HD-1
Submitted on: 2/16/2026 1:06:12 PM
Testimony for EEP on 2/19/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Georgia L Hoopes	Individual	Oppose	Written Testimony Only

Comments:

Aloha Committee Members!

There is not enough land or water in the state to produce biofuels domestically. Precious land and water should be used for local food production, not fuel. Biofuels will be imported from North and South America where they are grown in monoculture plantations of genetically modified crops, often directly or indirectly deforesting areas.

They all make pollution when burned, meaning that they are a short-term solution because state law requires zero greenhouse gas emissions by 2045.

Switching in less than 20 years from fossil fuels to biofuels, then again to supposedly carbon-free "electrofuels" will massively increase energy costs instead of simply phasing in one transition by electrifying and transitioning to conservation, efficiency, solar, wind, and energy storage.

Waste-based fuels, such as the plans to liquefy trash in Maui or construction and demolition waste in O‘ahu have many toxic chemicals involved, and will result in toxic ash and toxic air emissions. These experimental pyrolysis and gasification technologies have been a failure throughout the country and cannot operate commercially, but could suck up public subsidies before the failures become obvious.

Mahalo!

Georgia Hoopes, Kalaheo

HB-1695-HD-1
Submitted on: 2/16/2026 3:56:37 PM
Testimony for EEP on 2/19/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ken Stover	Individual	Oppose	Written Testimony Only

Comments:

oppose

HB-1695-HD-1
Submitted on: 2/17/2026 10:31:27 AM
Testimony for EEP on 2/19/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Patricia L. Gardner	Individual	Support	Written Testimony Only

Comments:

SB 2369 would make the state commission the first-ever report on how Hawai‘i can transition to clean, renewable energy without burning things. All of the existing plans involve dressing up biofuels and waste-based fuels as green, even though they're just different harmful compared to fossil fuels and can actually be worse in many ways. Some existing plans also promote nuclear power or liquified natural gas (a fossil fuel). We need a genuine path forward that doesn't rely on dressing up dirty fuels as green and sustainable.

Sincerely,

Patricia L Gardner

HB-1695-HD-1
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Testimony for EEP on 2/19/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Tina Even	Individual	Oppose	Written Testimony Only

Comments:

I oppose this bill.

Tina Marie Even

HOUSE OF REPRESENTATIVES
THE THIRTY-THIRD LEGISLATURE
REGULAR SESSION OF 2026

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HEARING

DATE: February 3, 2026
TIME: 10:30 AM
PLACE: VIA VIDEOCONFERENCE
Conference Room 430

Public commentor: Ted Metrose (independent)

HB1695 – Amends and substantially expands the Renewable Fuel Production Tax Credits (RFPTC) for renewable fuels including sustainable aviation fuel which are produced either within or from outside the State.

Companion Senate Bill: SB2403, identical upon initial introduction
Complementary (or competing) bill: HB1694 provides an additional $20 million dollar tax credit exclusively for distributors/sellers of SAF which has been produced either within or outside the State.

Highlights

1. Expands the current Renewable Fuel Production Tax Credits (RFPTC) from $20 million dollars per year for all renewable fuels, by an additional $10 million dollars for just for SAF to $30 million dollars per year in total.
2. Substantially raises value of single producer cap tax credit from $3.5 million dollars per year to $22.5 million per year (75% of $30 million dollars per year)
3. Raises the renewable fuel tax credit for all qualified renewable fuels from approximate $0.32 per gallon to a maximum of $1.56 per gallon.
4. Raises the renewable fuel tax credit for just qualified SAF an additional $1/gallon above that of other renewable fuels, from approximately $0.32/gal to a maximum of $2.56/gal.
5. Provides a sliding scale to encourage the production and sale of renewable fuels which are more effective at reducing GHG emissions, ranging from 50% to 100%.

6. Provides for 10 year credit period, starting on July 1,2026
7. If/when claims exceeds the (initial) $30 million-dollar annual program cap, tax credits are allocated to producer-distributors based on the amount of renewable fuel sold in State, which is likely to exclude smaller produced
8. Unaltered from the current version, the RFPTC proposed by HB1695 allows for a refundable tax credit (direct State payment) of 70% of the value of tax credit claimed after income tax liabilities have been satisfied.

Position: **Opposed.**

Opposition Summary

HB1695 is too complicated particularly with respect to its determination and allocation of supplemental tax credits for SAF, which is distinguished from other renewable fuels. Although intended to be complimentary, the $10 million dollar expansion proposed for SAF by HB1695 has been rendered unnecessary by the introduction of HB1694 which (independent of the RFPTC) provides a 20 million tax credit exclusively for the distribution/sale of SAF. The disparate availability and type of tax credits extended for SAF which is produced within the State versus those intended for SAF which is imported into the State, cannot be justified based on the representation of locally grown feedstocks and such preferential treatment is an affront commerce clause of the constitution.

Opposition

Although considerably scaled back from similar measures that were proposed in 2025, HB1695 and the companion Senate Bill 2403 (SB2403) are the most robust and costly renewable fuel tax credit bills that have been proposed in the 2026 legislative session. HB1695 proposes to raise the existing renewable fuel tax credit of approximately $0.32/gal to $1.56/gal for most qualified biofuels and about 8 times higher than it had been to $2.56/gal for sustainable aviation fuel (SAF).

HB1695 (along with other renewable fuel bills) proposes to expand the renewable fuel production tax credit for renewable fuels principally for Par Hawaii Refining and its new Japanese partners (Mitsubishi and ENEOS). In addition to substantially raising the $/gal value of the tax credit, HB1695 increases the program cap and clears the runway (and appears to be designed) for future expansion. During the 2024 legislative session Par Hawaii submitted testimony which conveyed that unless financial incentives (tax credits of $1-$2/gal) are provided, approximately 60 million

gallons renewable fuels "*will be produced and delivered to other markets including the West Coast.*"

The ultimatum is real and the risk is on-going because Par Hawaii Refining and its partners can readily produce renewable fuels in the Hawaii FTZ and then ship the renewable fuel out-of-state, to the West Coast without incurring any GE tax liability or significant incremental cost burdens. The proposed measure (HB1695) is responsive to that risk and generally accommodates Par Hawaii's (opening) demand for additional financial incentives (in the form of stackable and refundable tax credits) to ensure that Par Hawaii Refining (and other producers) will not only manufacture renewable fuels in Hawaii but also sell the renewable fuel in Hawaii.

Unfortunately, robust State tax credits for renewable fuels produced by Par Hawaii Refining and its new joint venture partners Mitsubishi and ENEOS will do relatively little to advance Hawaii's renewable energy goals principally because so much renewable fuel is needed. Particularly given the State's other priorities, an initial grant of $30 million dollars per year in refundable State tax credit so that Par Hawaii Refining and other Hawaii producers can compete with the West Coast is far too expensive. Moreover the $/gallon value of the refundable tax credits that have been proposed make the tax credit approach cost prohibitive (impossible) to scale up as part of a larger and longer-term solution. HB1695 gives Par Hawaii Refining a foot-in-door pathway to reaching its goal of extending the renewable fuel production credit to at least $80,000,000 dollars per year and even that level of financial support is unlikely to be enough to prevent outflows.

For all renewable fuels that meet the low life cycle emissions criteria, the proposed bill (HB1695/SB2403) will provide:

$ 0.56/ gallon base tax credit (approx. equal to $0.35 per 76,000 BTU, which on its own is nearly 2 times more than the current tax credit of $0.20 per 76,000 BTU)
$ 1.00/ gallon for any renewable fuel meeting the (ill-defined) low life cycle emissions criteria
$ 1.56/ gallon combined tax credit for all qualified renewable fuels (not limited to transportation and could be used for energy/power)

The $/gal value of the proposed tax credit for renewable fuel is quite robust but will have little effect.

According to DBEDT's published energy data, Hawaii utilities have paid an average of $2.85/gallon for utility fuel over a recent 4-year period (2021-2024). Consequently, the State would be effectively subsiding more than 50% of the cost of conventional

utility diesel fuel, constrained only by the initial $20 million dollar cap renewable utility fuel which is sure to be fully expended (claimed Par Hawaii Refining and others). At $1.56/gal the production of just 13 million gallons of qualifying renewable diesel fuel would entirely consume the $ 20 million dollar tax credit. While a tax credit of roughly 55% (on per gallon basis) is more than generous (particularly when applied on top of federal incentives), the proposed $20 million dollars in annual public subsidies will have little impact because HECO alone reported that between (2019-2023) it used an average 454 million gallons of fossil fuels per year.

HECO Fuel Use 5-Yr Ave (2019 -2023)			
Fuel Type	BBLS	MM Gals	Pct
Low Sulfur Fuel Oil	7,544,529	316.9	69.0%
High Sulfur Fuel Oil	731,101	30.7	6.7%
Diesel	2,150,637	90.3	19.7%
Biodiesel	120,816	5.1	1.1%
Naphtha	384,258	16.1	3.5%
All Fuel Use	10,931,341	459.1	100%

Optimistically assuming (for illustration purposes) that the entire 20-million-dollar tax credit for renewable fuel producers was entirely passed on to the utilities and used to purchase 13 million gallons of renewable biofuels, it would only reduce HECO's fuel costs by 3% (13/454). Theoretically utility rate payers would benefit from the savings passed on to HECO for renewable fuel purchased from in-state producers, but it will be at the taxpayer's expense. (Is that really a better or more equitable means of paying for renewable utility fuel?)

Obviously, the complete pass through of the savings afforded by tax credits from producers to renewable fuel customers (like HECO and KIUC) is a big and unrealistic assumption. In fact, utility rate-payers are likely to realize only a very small portion of the savings paid for by taxpayers, if any, because (other than good will) there is no financial incentive or requirement for renewable fuel producers to pass through any portion of tax credit savings on to its customers, particularly those like HECO which are obligated to buy renewable fuels.

Similarly, again hypothetically even if the first $20 million in renewable fuel tax credits was limited (by regulation) to fuels produces for on-island transportation (cars and trucks), only about 3% of the approximate 455 MM gals/yr of road diesel and gasoline

consumed during the same period (2019-2023) would be covered (paid for by public funds). With the need for renewable fuels being so great, even generous tax credits ($1.56 -2.56/gal) with a ten-year life, do not go very far. Consequently, (and as previously conveyed by Par Hawaii Refining) the program cap will soon have to be increased to at least 80 million dollars per year and routinely increased, to keep renewable fuels from gravitating to more lucrative markets on the West Coast.

Tax Credits for the Production and in-state sale of SAF

Largely because there is no regulatory mandate for SAF and because airlines are unwilling to pay more for renewable jet fuel, to further incentivize the production and use of SAF in Hawaii, HB1695 (and SB2403) propose to raise the overall program cap from $20 million to $30 million per year and grant an additional $1.00 per gallon tax credit bringing the total State tax credit for SAF to about $ 2.56/ gal as shown below:

$ 0.56/ gallon base tax credit (approximately equal to the proposed $0.35 per 76,000 BTU)
$ 1.00/ gallon for any renewable fuel meeting the (ill defined) low life cycle emissions criteria
$ 1.00/ gallon for sustainable aviation fuel
$ 2.56/ gallon combined tax credit for qualified sustainable aviation fuel (SAF)

Obviously with the extra $1/gal tax that has been proposed specifically for SAF, the tax credit is even more robust. In total the proposed $2.56/gal tax credit for SAF is 8 times higher than the current renewable fuel tax credit ($0.20 per 76,000 BTU) which depends on which biofuel equates to about $0.32 cents per gallon. And for additional perspective at $2.56/gal and depending upon market conditions (dictated by the price of crude oil) the value of just the proposed state tax credits (independent of federal credits) can exceed the cost/price of conventional jet fuel. While the higher per gallon tax credit improves the profitability margins of the renewable fuel producer, it means less renewable fuel will/can be subsidized and therefore kept in and sold in Hawaii.

Again, assuming, for the purposes of illustrating, the special allowance for jet fuel would make $30 million dollars in public subsidies available under the program cap, and it would mean that at full utilization at most 11.8 million gallons of SAF could be produced with the benefit of the proposed tax credit. Par Hawaii Refining has indicated (and provided testimony) that its new $ 90 million-dollar renewable production facility in the Campbell Industrial Park will be able to produce 36 million gallons of SAF in the first full year of operation. That means more than twice as much of the SAF will be shipped out of state to the West Coast in search of higher valuations than will be sold in Hawaii.

Of course, next year or perhaps even later in this legislative session the program cap (which incidentally is allocated based on the number of credits claimed) can be expanded from $30,000,000 to say $50,000,000 next year and $80,000,000 the year after that, as had been proposed in prior legislative sessions.

Again, because the demand for renewable jet fuel is so high, the tax credit (which will be initially limited to $ 30 million dollars per year), will not really encourage or allow much SAF to come to market in Hawaii, based on the overall size of the jet fuel market. Other bills and studies have cited the State's jet fuel consumption baseline of 700+ million gallons per and on that basis, there is tremendous need for SAF. In 2025 Alaska and Hawaiian Airlines submitted joint testimony on HB976 which stated: "*Hawai'i's aviation industry consumes over 600 million gallons of jet fuel annually,..*" However, (until the disparity is resolved) the amount of SAF needed by the State may be conservatively estimated using DOTAX's taxable basis of 282.7 million gallons of aviation fuel per year, based on published data and reports for CY2021- CY2024. Presumably, as a minimum at least the amount of aviation fuel that has been historically taxed in Hawaii would have to be displaced by SAF (and/or offset) by 2045.

If the proposed $30,000,000 dollar tax credit was entirely dedicated to the producers of alternative jet fuel (Par Hawaii and partners) it would only cover or displace 4.2% (11.8/283) of the conventional jet fuel, sold (and taxed) by Hawaii.
If legislature wanted to account for the jet fuel which is not taxed, (exempted or not otherwise accounted for by DOTAX) but is still uplifted from Hawaii, then the amount or more precisely the percent of renewable fuels that could be encouraged to enter the Hawaii market through tax incentives would drop rather dramatically. The amount or percentage of renewable jet fuel subsidized by tax credits would be lower (by more than half), if alternative/industry estimates of over 600 million gallons of conventional jet fuel per year are valid and targeted for reduction/elimination, despite the State's inability to levy taxes on higher volumes.

Obviously if the $30 million dollar tax credit was spread out over energy, on-land transportation and for travel by air and sea, the proposed public subsidy will cover (pay for) for less than 1% of renewable fuels required by the State. Note: The presumptive demand for renewable fuels (and projected shortfall in supply) could be substantially reduced, if the State's ambitions for transportation fuels were more strictly in alignment with and limited to those specified by HRS 225P-8. Particularly since there is no guarantee of cost savings or economic benefits returned to taxpayers (other than renewable fuel producers), how much more in <u>refundable</u> tax credits (subsidies) can the State realistically afford to bring renewable fuels to

Hawaii? As inferred/explained above, even if the current tax credit cap of $ 20 million was raised by a factor of 20X to $400 million dollars per year, the State would remain terribly short on renewable fuels and would remain at risk of losing them to higher bidders on the west coast.

Agriculture Uplift Unlikely

Of particular relevance to the EEP and AGR committees, State subsidies principally for Par Hawaii Refining to produce and sell renewable fuels cannot possibly lead the State to a "major economic benefit by creating a market for locally grown oil seed crops" as previously touted in Par Pacific's press release of April 27,2023 (below).

Par Pacific Announces Significant Investment in Hawaii Renewable Fuels Production | Par Pacific

After representing that its 90-million-dollar investment in renewable fuels (and partnership with Pono Pacific) would "rejuvenate Hawaii's agricultural sectors" Par Hawaii Refining, has more recently acknowledged that importation of feedstocks and renewable fuels will be required and capitalized on the opportunity, by selling a 36.5% stake in its recently formed joint venture, Hawaii Renewables, for $100 million dollars in 2025.

Par Pacific partners with Mitsubishi Corp. and ENEOS Corp. for Renewable Fuels - Par Hawaii

Par Pacific's July 21, 2025, news release about its new joint venture (Hawaii Renewables) with Mitsubishi and ENOES in 2025 made it perfectly clear that the vast majority of the feedstocks for its renewable fuel production facility in will be sourced from outside Hawaii and not grown locally.

As reflected by the press release, Par Pacific's Japanese partners are expected and are anxious to assist Par Hawaii Refining with cost-effective procurement and supply of renewable feedstocks from out-of-state. Moreover, as part of Hawaii Renewables joint venture, ENEOS and Mitsubishi (along with Par) will be able to import renewable fuels from out-of-state and legitimately claim the State tax credit on renewable fuels which are sold within State.

Foreign/Outside Access to Hawaii's Renewable Fuel Tax Production Credit (RFPTC)

There is no requirement to use feedstocks from Hawaii to qualify for the State's renewable fuel production credit. Similarly, and just as importantly close inspection of HRS 235-110.32 reveals there is also no obligation that the renewable fuel production facility actually be located in Hawaii. This is not an accident or a mistake. To avoid violating the dormant (interstate) and foreign commerce clause of the constitution, the State cannot limit or specify the location of the production facility as a criterion for qualifying for the State tax credit. Accordingly, the State's renewable fuel production tax credit (RFPTC) allows for renewable fuels which are produced elsewhere and subtly states that a taxpayer applying for the credit must provide:

> "5) The number and location of all renewable fuel production facilities within and outside of the State; and …"

Aside from currently requiring renewable fuels meet some widely accepted GHG reduction standards the primary or unique criteria for qualifying for Hawaii's refundable tax credit is that the renewable fuel be sold in the State of Hawaii. The key qualifying criteria is most clearly established (and revealed) in the definition section of HRS 235-110.32 which states: *"Renewable fuels" means fuels produced from renewable feedstocks; provided that the fuel: (1) Is* ***sold*** [not necessarily produced] *as a fuel in the State; and (2)...*

Note: In recognition that renewable fuel production tax credits cannot be limited to those grown or produced in Hawaii, in 2024 the AG submitted testimony under SB3360 which stated: *A tax credit may violate the Dormant Commerce Clause if it is "facially discriminatory, discriminatory in effect, or discriminatory in purpose.*"

Warning: The new/additional GHG reduction criteria that have been proposed for renewable feedstock and product transport may be a clever but inappropriate attempt to discourage competition from production facilities which are located outside the State, when it should be allowed and encouraged.

Even if a small portion of the renewable oilseed based feedstocks are grown in Hawaii, there is no mechanism under HRS 235-110.32 (or as it might be amended) that would or could guarantee that any portion of the income tax credit would be directed to Hawaii's farmers, unless the farm was owned by the renewable fuel producer, and fully integrated like Pacific Biodiesel Technologies, LLC.

Consequently, aside from Pacific Biodiesel, the vast majority of a substantially expanded renewable fuel (production) tax credit will be destined for Houston and Tokyo - not Hawaii's farmers. Based on the amount of money paid to buy into the joint venture, Mitsubishi and ENEOS see the profit potential in providing renewable fuels (and feedstocks) for Hawaii because so much renewable fuel will be needed to meet the State's mandates and GHG reduction goals. Obviously refundable tax credits (of $30 to $ 80+ million dollars per year for 20+ years) from the State of Hawaii (with the possibility of further expansion) significantly enhance that opportunity.

Refundable tax credits are clearly an economic benefit (and potential windfall) for the joint venture, Hawaii Renewables, and potentially other companies who follow suit. But they are not free and could be quite costly if not firmly capped. As proposed, tax credits for renewable fuels will just ensure that Hawaii residents will pay twice for renewable fuels - once as taxpayers and again when purchasing the renewable fuels for their cars, plane rides and their electricity. Again, there is no mechanism or assurance that any portion of the tax subsidies (given to producers through the RFPTC) will trickle down to Hawaii residents or visitors, who will be forced to use and pay for renewable fuels as part of the energy transition.

<u>Hawaii is unable to produce enough renewable feedstocks for SAF (or biofuels for power plants)</u>

The refundable tax credit will not provide a stimulative effect for Hawaii agriculture industry because the tax credits will likely be used by biofuel producers (as intended) to offset income taxes, and/or simply retained by those companies and used/reinvested elsewhere. Local production of oilseed bearing crops and trees (no matter how heavily subsidized by the State), simply cannot make a significant impact (dent) on the amount of renewable fuel needed by the State. The demand for renewable fuels is just too high and there is too little land to support the production of renewable feedstocks. Several studies, some of them commissioned by the legislature have already reached that conclusion.

The Hawaii Natural Energy Institute (HNEI)already essentially completed a long-term study which concluded at most even if every available bit of land was rededicated to grow oil seed crops or trees. Based on a pre-Covid 2019 baseline of 700 million gallons of jet fuel consumed by commercial airlines, the HNEI report concluded that no more than 10% (70 million gallons) of the feedstock required for SAF could be produced locally. A key summary of HNEI multi-year study and its findings are excerpted below.

Hawai'i Natural Energy Institute Research Highlights

Alternative Fuels

Sustainable Aviation Fuel Production

(November 2024)

In 2019, commercial aviation in Hawai'i used nearly **700 million gallons** of jet fuel, all of it is derived from petroleum. In 2023, as the state recovered from the combined effects of the pandemic and the Lāhainā wildfire, jet fuel consumption is approaching 2019 levels (…).

BACKGROUND: This project was initiated in October 2015 and is now continuing into its 10th year.

The analysis focused on sites capable of **rain-fed** production to avoid using irrigated lands that could support food production. Oil seed crops, woody crops, and herbaceous crops were all considered; ..... The EcoCrop model provides an estimate of each energy crops' productivity across the agricultural landscape.

Aggregated yield of biobased feedstock and conversion efficiency from feedstock to final energy product were used as the basis for SAF technical potential estimates under four scenarios:

- Scenario 1 - agricultural zoning, slope less than 20%, land capability class 1 to 6
- Scenario 2 - agricultural zoning, slope less than 20%, land capability class 1 to 6, excluding land serviced by irrigation systems,
- Scenario 3 - agricultural zoning, slope less than 20%, land capability class 1 to 6, excluding land serviced by irrigation systems and land currently in agricultural use, and
- Scenario 4 - agricultural zoning, slope less than 20%, land capability class 1 to 6, excluding **land serviced by irrigation systems** and **land currently in agricultural use** other than pasture.

Scenario 4 considers the **dual use** of land to support energy crops and pasture by including pasture lands identified in the UH Hilo Baseline report (*). This results in maximum [SAF feedstock production] estimates of **~70 million gallons per year**.

(end of excerpt)

HDOT's view of the Navahine settlement raises the demand for renewable fuels (SAF)

In response to questions and comments on the State's Energy Security and Waste Reduction plan (ESWRP) aka GHG transportation reduction plan, HDOT stated:

> *The Navahine Settlement Terms and Conditions require that HDOT address the emissions from Air "interisland transportation", and "domestic travel" which includes flights originating in Hawai'i with destinations in the US Mainland. This is also consistent with the quantification of aircraft emissions in the Department of Health Statewide GHG inventory.*

However as largely reflected by comments from Navahine plaintifs on the ESWRP, (attached at the end), personally I do not believe the Navahine settlement would or could have obligated the State to address interstate transportation, because the State has little legal authority to tax, regulate or even incentivize interstate transportation to buy and use SAF. It is imperative that the State conduct a legal assessment of its obligations under Navahine settlement because the demand for SAF and the amount of tax credits that would be needed to reduce GHG emissions from fuels consumed during interstate flight and voyages will be heavily impacted by that determination. Based on HDOT assessment the demand for SAF in 2030 could reach 410 million gallons and at $1.50 per gallon would cost the State well over 600 million dollars per year, if the State attempted to incentivize the use of SAF only by issuing refundable tax credits.

Given the tremendous cost that will be imposed and appreciating the legislature's concern over State's affordability, it is critical to distinguish goals and aspirations from legal mandates (particularly since the DOJ has been challenging Hawaii and other states).

The need for renewable fuels and the financial incentives proposed by HB1695 to promote their production extends beyond transportation sector to utility fuels.

Unfortunately, (even with incentives) Hawaii does not have the capacity (land or water) to produce enough renewable feedstock to suffice the State's demand for SAF or biofuels for power generation. Many of the State power plants which currently produce electricity by burning fossil fuels are planning to switch to renewable fuels. According to HSEO's recently released Alternative Fuels and Energy Transition Study, the State would require a 72% increase in the use of "agriculture" land for

biofuels to suffice just 5% of the State energy needs for power generation (alone). HSEO's study on alternative fuels for power plants (not transportation fuels) is hyperlinked and key excerpts are produced below.

Alternative Fuel, Repowering, and Energy Transition Study JANUARY 2025

> Hawaii currently has 120,632 acres of land in use for crops.
>
> To contrast with respect to total Hawai'i electricity consumption and land use, Hawai'i consumes 10,819 gigawatt hours (GWh) of gross electricity per year.[87]
>
> Therefore, to replace just 5% of total energy consumption with biodiesel would require 86,691 acres of new crop land.

$$0.05 \cdot 10{,}819\,[GWh] \cdot 1{,}000\left[\frac{MWh}{GWh}\right] \cdot \frac{1}{6.24}\left[\frac{acre-year}{MWh}\right] = \mathbf{86{,}691}\,[\boldsymbol{acres}] \quad (3)$$

> The new acreage required solely for bioenergy through palm oil production would result in a 72% increase in crop land.

$$\frac{86{,}691\,[acres]}{120{,}632[acres]} = \mathbf{72\%}\ \boldsymbol{increase\ in\ crop\ land} \quad (4)$$

(end of excerpt)

Given the challenges that Hawaii has had increasing the local production of food it should be obvious this level of increase for biofuel crops or trees is not achievable, even if Hawaii had 19 years to do it.

As indicated above and according to the study, this (conservative) analysis was based on the optimistic production of (600 gal of unrefined vegetable oil per acre) from the highest yielding renewable feedstocks - palm oil trees. Optimistically assuming, just as the HSEO study did, that 600 gallon of oilseed feedstock can be produced from an acre of land planted with palm oil trees, would mean that 100,000 acres of land would have to be placed in service to provide enough feedstocks just for the 60 million gallons of renewable fuel that will be produced annually by Par Hawaii Refining (now Hawaii Renewables). That is more than 80% of land that is currently dedicated to food crops (and flowers). A rededication of that much pastureland, in Hawaii over a span of 4 -5 years or even 20 years is completely unrealistic.

In recognition of the local supply limitations and according to testimony provided in 2025, Par Hawaii Refining and Pono Pacific have instead set their sights are on securing only 20 to 25% from feedstocks sourced from Hawaii. However, based on HSEO report, this also is a fantasy because it would take 20 -25,000 acres of land. The prospect of utilizing Hawaii land to produce a meaningful amount of renewable feedstocks, is more than a pipedream, it is a deliberate attempt by Par Hawaii Refining and Pono Pacific to secure legislative support for tax credits potentially worth more than $1.5 billion dollars over 20 years. The legislature should be particularly cautious in any further endorsement of additional tax credits for Par Hawaii Refining because the company does not a good tax history with State.

Hawaii Sues State's Largest Oil Refiner For Alleged Unpaid Taxes - Honolulu Civil Beat

Now, with the joint venture announcement (and special allowance for imports revealed) it is abundantly clear that suppliers of renewable feedstocks and producers of renewable fuels from out-of-state will benefit from the State's energy transition and renewable fuel tax credits made available to them far more than Hawaii's local farmers. As result of the changes proposed by HB1694, smaller startups and innovators will be left out as well because individual company limit of $3.5 million has been raised to $22.5 million and the revised allocation of the credits gives a clear preference to the largest renewable fuel producers, including those that are located out of State.

Biofuels for power plants (energy) and transportation fuels will have to be imported

HSEO's study of alternative fuels for (just) for power plants provided a clear reality check and stated: "recognizing the overall scale limitations of local feedstock production will not offset the need for imported fuel."

Add in the demand from transportation fuels, it becomes painfully obvious that State will have to import hundreds of millions of gallons renewable biofuels just to meet its energy and statewide transportation goals (HRS 225P-8). And that is without even factoring in the additional demand for renewable fuels that will be required if the State elects (or more specifically HDOT sustains its assertion) that the State is obligated to eliminate GHG emissions from interstate travel because of the Navahine settlement.

In addition to further subsidizing Par Hawaii Refining (and Par Pacific who has already partially cashed in on its investment in renewable fuels), if the past two legislative sessions are any indication, potentially an additional $100 million dollars per year in

tax credits will be requested and as result of the joint venture, 36.5% of the public's funds earmarked for renewable fuels in Hawaii will be directed to Mitsubishi and ENEOS (Japan). As currently written because the RFPTC is (now) refundable (and no change to this particular section of the tax credit has been proposed under HB1695/SB2403) it would allow the Hawaii Renewables joint venture to readily eliminate/satisfy its Hawaii income tax liability and then (because value of the tax credits will greatly exceed the tax liability) - take 70% cash payout - which might in a few short years represent a $70 million dollar cut out of Hawaii's public funds - annually.

Along with Par Hawaii, additional income tax credits may further incentivize Mitsubishi and ENEOS to import renewable feedstock and finish biofuels and sell them in Hawaii and (as suggested in the press release) potentially throughout the Pacific using Hawaii as distribution hub. While that outcome may be viewed positively, it does nothing for the State's agriculture industry, which had been one of the primary justifications for adopting the tax credits in the first place. You may recall mandates and tax credits for ethanol production were supposed to save/support Hawaii's sugar industry. Despite its limited benefit and infeasibility of scaling, some legislators may (after consideration of the alternatives) still see merit in expanding the refundable tax credit, to ensure that renewable fuels that are produced by Par Hawaii Refining/ Hawaii Renewables will be sold and used in Hawaii.

Particularly if the expansion proposed by HB1695 is embraced, to protect that State's interests the State legislature should make the tax credits non-refundable as suggested by DOTAX last year and should attach a satisfactory tax history requirement similar to that established by the IRS for claim of on the 45Z clean fuels tax credits.

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August 29, 2025

VIA EMAIL:

Laura Kaakua
Hawai‘i Department of Transportation
HDOTClimateCulture@Hawaii.gov

RE: Energy Security & Waste Reduction Plan Public Comment

Dear Ms. Kaakua:

On behalf of the thirteen youth plaintiffs in the *Navahine F. et al. v. Hawai‘i Dep’t of Transp. et al.*, 1CCV-22-0000631 litigation, Our Children’s Trust and Earthjustice submit the following comments on the Draft Energy Security and Waste Reduction Plan (2025) (the “Plan”). We appreciate the Hawai‘i Department of Transportation’s (“HDOT’s”) significant leadership and work on the Plan over the last several months to comply with the settlement agreement in *Navahine F.* (“*Navahine Settlement*”) to protect the constitutional rights of youth and future generations in Hawai‘i. The *Navahine Settlement* requires zero emissions no later than 2045 in ground, marine and inter-island aviation and recognizes that decarbonizing transportation is not a choice, but a scientific necessity to protect the constitutional rights of children and future generations in Hawai‘i. *Navahine Settlement* ¶¶ 1, 5(c).