

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

Thursday, March 5, 2026

2:00 p.m.

State Capitol, 308

HB1986, HD2
RELATING TO CLEAN FUEL STANDARD

House Committee on Finance

The Department of Transportation (DOT) supports H.B. 1986 H.D. 2, which requires the Department of Transportation to adopt rules governing a Clean Fuel Standard (CFS) for alternative fuels in Hawai'i.

A CFS is a market-based policy that requires fuel providers to reduce the lifecycle Carbon Intensity (CI) of transportation fuels used in the state. A CFS sets transportation fuel CI standards that become more stringent over time, incentivizing innovation and investment in lower carbon fuel options. Fuels with a CI above the standard for that year generate deficits, and fuels with a CI below the standard for that year generate credits. The expected outcomes of incentivizing the use of lower-carbon and renewable fuel alternatives are private investment and job creation in a cleaner fuel economy, decreased reliance on imported petroleum, reduced transportation emissions, and increased local energy security with greater diversity of low carbon fuels.

The DOT's Hawai'i Energy Security and Waste Reduction Plan, published in October 2025, identifies the Clean Fuel Standard as a foundational tool for reducing transportation-related emissions. The Plan states that "a clean fuel standard is predicted to decrease the carbon intensity of Hawai'i's transportation fuel pool and provide low-carbon and renewable alternatives that would reduce petroleum dependency" (Plan p. 73). Without the timely implementation of additional emission reduction strategies, including clean fuel policies, Hawai'i will not meet its statutory emissions reduction targets.

The DOT's Energy Security and Waste Reduction Plan has three pillars that act as check and balances to develop and prioritize the Plan's strategies: 1) affordability, 2) local energy security, and 3) emissions reduction. While the Plan identified a Clean Fuel Standard as a key strategy for reducing transportation-related emissions, the DOT wanted to understand the impacts of a CFS on affordability for residents. We are developing a Clean Fuel Standard Hawaii Feasibility Assessment, and share initial findings from page 2 of the Draft Initial Findings Report below:

- Hawai'i's fuel use is dominated by liquid fuels, with large CFS opt-in opportunities in aviation and marine. Annual consumption includes about 425 million gallons of gasoline (typically 10% ethanol), 45 million gallons of diesel (about 8% biodiesel blend), 725 million gallons of aviation fuel, and 55 million gallons of domestic marine fuel. EVs are about 20% of new vehicle sales.

- Supply options exist. Ethanol is fully imported, and biodiesel is locally produced. Renewable Diesel/Sustainable Aviation Fuel (RD/SAF) could grow through domestic production and imports. Electricity CI reduction hinges on grid decarbonization under the Renewable Portfolio Standard (RPS).
- Scenario modeling shows substantial CI reductions are achievable, with results sensitive to clean fuel availability.
 - Moderate Scenario: 29% by 2035, 35% by 2040, 50% by 2050.
 - Aggressive Scenario: 20% by 2035, 43% by 2040, 55% by 2050.
- Modeling results indicate that a CFS could increase gasoline and diesel prices by approximately 5 to 14 cents per gallon under the Moderate scenario and 5 to 20 cents per gallon under the Aggressive scenario through 2035, assuming full pass-through of compliance costs. These impacts are primarily driven by credit market conditions and the availability of fuels used for compliance.
- Compliance with a CFS would encourage a broader mix of low carbon transportation fuels, including increased use of electrification as well as opt-in fuels such as sustainable aviation fuel and alternative marine fuels.

After reviewing the draft initial findings above, and with affordability for residents as one of the three pillars of the Energy Security and Waste Reduction Plan, the DOT will further develop the Moderate scenario and to develop a third Conservative scenario with even greater emphasis on affordability for our rural, and communities that may not yet have the option of immediately switching to an electric vehicle or accessing a lower Carbon Intensity fuel.

The initial findings support the Carbon Intensity reduction targets included in the bill language—10% CI reduction by 2035 and 50% CI reduction by 2045, which Conservative, Moderate, and Aggressive scenarios could meet.

The DOT wants to clarify that for the foreseeable future, we do not plan to include alternative fuels used to displace gasoline and diesel in “heating, cooling, and temporary power generation” as a credit generator.

A Hawaii Clean Fuel Standard for the foreseeable future would be a tool to reduce the Carbon Intensity and emissions from transportation fuels only, which may include off-road usage. The DOT suggests a clarifying amendment to replace the language “...heating, cooling, and temporary power generation” with “temporary power generation and stationary combustion”.

The DOT anticipates the need to establish three to five new positions. We propose funding these positions through salary savings from all four DOT modes, ensuring efficient use of existing resources.

Thank you for the opportunity to provide testimony in support.

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

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ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARK

**Testimony of
LEAH LARAMEE
Climate Change Coordinator on behalf of
Climate Change Mitigation and Adaptation Commission
Co-Chair Ryan K. P. Kanaka'ole**

**Before the House Committee on
FINANCE**

**Thursday, March 5, 2026
2:00 PM
State Capitol, Conference Room 308**

**In consideration of
HOUSE BILL 1986, HOUSE DRAFT 2
RELATING TO A CLEAN FUEL STANDARD**

House Bill 1986, House Draft 2 proposes to require the Department of Transportation to adopt rules by 1/1/2028 governing a clean fuel standard for alternative fuels in the State. **The Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) supports this measure.**

The Commission consists of a multi-jurisdictional effort between 20 departments, committees, and counties with the purpose of promoting ambitious, climate-neutral, culturally responsive strategies for climate change adaptation and mitigation.

A State initiated clean fuel standard is recommended by the State's climate plans including the Climate Action Pathways (2025), Energy Security and Waste Reduction Plan (2025) and the Hawai'i Pathways to Decarbonization (2023). It is a necessary tool to support transition to cleaner transportation.

Clean fuel standards provide multiple socioeconomic benefits as well. States that have clean fuel standards policies have reported numerous benefits including cleaner air, reduced carbon pollution, greater investment and research into clean fuels, and economic development and job growth.¹ California, Washington, Oregon and New Mexico have already adopted clean fuel

¹ <https://rmi.org/clean-fuel-standards-the-market-based-policy-for-states-looking-to-clean-up-transportation/>

standards which will help position Hawai'i to be a successful early adopter. Mahalo for the opportunity to comment on this measure.



March 5, 2026

**COMMENTS TO
HB 1986 HD2
RELATING TO A CLEAN FUEL STANDARD**

House Committee on Finance
The Honorable Chris Todd, Chair
The Honorable Jenna Takenouchi, Vice Chair

Thursday, March 5, 2026, 2:00 p.m.

VIA VIDEOCONFERENCE
Conference Room 308
State Capitol
415 South Beretania Street

Chair Todd, Vice Chair Takenouchi, and Members of the Committee,

Island Energy Services, LLC (“IES”) offers the following **comments on HB 1986 HD2**, which proposes the implementation of a Clean Fuel Standard (CFS) for Hawai’i.

IES supports a CFS concept to provide market forces to encourage lowering the carbon intensity of fuels used in the state. Program flexibility is a key factor in its potential success. By allowing producers to choose how they reduce emissions, whether using renewable fuels or the acquisition of credits—it empowers the market to drive innovation. The program's technology neutral stance further encourages the introduction of new and diverse renewable fuels to the market.

However, we encourage caution when comparing how CFS programs in other States have performed. We believe Hawaii’s demand profile presents challenges as there are large differences between the Hawaii market and the other State markets where CFS measures have been adopted.

See the comparison between Hawaii's and California's petroleum demand below:

<u>Demand Profile, %</u>	<u>LPG</u>	<u>Gasoline</u>	<u>Jet Fuel</u>	<u>Road Dsl</u>	<u>Other Dsl.</u>	<u>Utility Fuel</u>	<u>Other</u>
Hawaii	3%	23%	40%	2%	3%	29%	3%
California	2%	48%	14%	15%	0.4%	< 1%	17%

California's LCFS program has over 60% of its petroleum demand listed as obligated fuels; gasoline and road diesel. Jet fuel can opt in and all marine fuel is mandated to use renewable sources. In California, and other states using CFS programs, the credit burden is spread out over the bulk of the state's demand profile in gasoline and road diesel.

Hawaii is much different with only 25% of its petroleum demand being transportation fuels (gasoline and road diesel). In order to have an impact on carbon emissions, the credit forces on gasoline and road diesel will need to be extreme.

Given the requirements outlined in the Navahine v. Hawaii Department of Transportation settlement to address climate concerns in the transportation sector, IES believes that utility fuels and marine fuels should be included as obligated fuels to spread out the credit burden to be more manageable. Including utility fuels and marine diesels increase Hawaii's obligated fuels to close to 60% of the state's petroleum demand matching California's obligated fuel amount, giving the program a better chance to succeed.

We thank the House Finance 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



House Committee on Finance
Representative Chris Todd, Chair
Representative Jenna Takenouchi, Vice-Chair

March 5, 2026
2:00 p.m.
Conference Room 308

Thank you for the opportunity to submit testimony in **strong support** of HB 1986_HD2. My name is Cristina Cornejo and I am the Sr. Public Affairs Manager for Neste, the world's leading producer of sustainable aviation fuel and renewable diesel.

A Clean Fuel Standard (CFS) for Hawaii is an essential policy that will enable the state to meet its decarbonization goals, while reducing air and water pollution from the use of fossil fuels in our transportation system. Similar CFS programs have been implemented in California, Oregon, Washington, and Canada. Most recently, New Mexico enacted a CFS in March 2024 that will begin later this year. In addition, there are currently more than 10 additional states considering CFS policies, due to their effectiveness.

HB 1986_HD2 is NOT a mandate, nor is it a tax credit, but rather it is an incentive program designed to promote the decarbonization of all transportation fuels. CFS policies drive the adoption of lower-carbon transportation technologies, resulting in advanced competition and a diversity of fuel options for consumers. As an example, consumers in California have gone from 2 fuel types (gasoline and diesel) to more than 7 fuel types (gasoline, diesel, renewable diesel, electric, ethanol, biodiesel, hydrogen, and renewable compressed natural gas). This policy also drives substantial new investments in electric vehicle charging and hydrogen infrastructure at no cost to taxpayers.

One crucial element of a CFS is that it is a technology neutral policy that allows consumers to decide what fuels work best for them and their businesses. All transportation fuels can partake in a clean fuels market, and the policy is flexible enough to allow for new technologies that will come online in the future.

Another key component of HB 1986_HD2 is that it utilizes an independent third-party, science-based evaluation for all transportation fuels. The policy uses the GREET model, which was created by Argonne National Laboratory and is the worldwide standard methodology to calculate the carbon intensity of a given fuel. This model assesses fuel on a well-to-wheel basis and considers the full life cycle of a fuel to determine its carbon intensity (CI) score. This ensures that all fuels are scored on an equal playing field, and the winners are those fuels with the lowest possible carbon intensity score. It incentivizes cleaner fuels while letting technologies compete.



In conclusion, a clean fuel standard is the most effective policy in reducing carbon emissions from the transportation sector by incentivizing the production and availability of lower carbon fuels. The State of Hawaii deserves access to cleaner fuels and protection of its treasured natural resources. HB 1986_HD2 is a significant piece of the decarbonization puzzle and we at Neste are proud to support this pivotal policy.

Cristina Cornejo, Sr. Public Affairs Manager, Neste

Phone: (361) 701-9922

Email: cristina.cornejo@neste.com

Neste Background

Neste (NESTE, Nasdaq Helsinki) creates solutions for mitigating climate change and accelerating a shift to a circular economy. The company is the world's leading producer of sustainable aviation fuel (SAF) and renewable diesel, enabling its customers to reduce their greenhouse gas emissions. Neste refines waste, residues and other renewable raw materials to high-quality renewable fuels at its refineries located on three continents. The company's annual renewable fuels production capacity will be increased to 6.8 million tons in 2027.

Neste has high standards for sustainability, and the company has consistently been recognized by several leading sustainability indices.



MARCH 5, 2026

HOUSE BILL 1986 HD2

CURRENT REFERRAL: FIN

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Director

Corey Rosenlee,
Director

Amy Zhao,
*Policy and Partnerships
Strategist*

POSITION: SUPPORT

Imua Alliance supports HB 1986 HD2, relating to a clean fuel standard, which requires the Department of Transportation to adopt rules by 1/1/2028 governing a clean fuel standard for alternative fuels in the state..

Imua Alliance is a Hawai'i-based organization dedicated to ending all forms of exploitation, including the interconnected emergencies of climate change and sexual violence. According to research conducted by Michael B. Gerrard from Columbia Law School, modern-day slavery tends to increase after natural disasters or conflicts where large numbers of people are displaced from their homes. In the decades to come, says Gerrard, climate change will very likely lead to a significant increase in the number of people who are displaced and, thus vulnerable, to gender abuse.

Transportation is Hawai'i's largest source of climate pollution and the state's own planning identifies clean fuels as a near-term necessity alongside electrification. In its Energy Security and Waste Reduction Plan (October 2025), the Hawai'i Department of Transportation identifies implementing a Clean Fuel Standard (also known as a CFS) as an immediate administrative strategy to "incentivize the production and distribution of cleaner fuels," and states it is "poised to start a CFS feasibility study" to evaluate affordability impacts, especially for disadvantaged and rural communities. The plan further underscores why urgency is warranted: Hawai'i's 2022 inventory shows roughly 50% of statewide emissions come from transportation, with domestic aviation driving a very large share of transportation emissions.

A clean fuel standard reduces the average lifecycle carbon intensity of transportation fuels over time, while allowing compliance through a flexible credit market. Fuels cleaner than the benchmark generate credits; fuels above it generate deficits, creating a durable, technology-neutral incentive for low-carbon alternatives (renewable diesel, biofuels with verified

lifecycle benefits, electricity, hydrogen, and sustainable aviation and marine fuels, as applicable). HIDOT's Plan specifically notes Hawai'i must avoid incentivizing "alternative fuels with high upstream emissions," reinforcing the need for lifecycle accounting and guardrails.

This policy model is proven and scalable. The Washington State Department of Ecology reports that in the first year of Washington's Clean Fuel Standard, carbon intensity fell 1.3%—more than double the 0.5% statutory requirement—and program participants generated 1,946,406 credits (each equal to 1 metric ton CO₂e avoided). Washington's program targets a 45% reduction below a 2017 baseline by 2038. California's program—administered by the California Air Resources Board—and Oregon's Clean Fuels Program show similar market-based approaches can drive investment and cleaner fuel supply over time.

In addition to reducing emissions, a clean fuel standard can serve as a revenue-generating tool that supports Hawai'i's broader transportation and climate goals. In states with existing programs, credit market activity and compliance mechanisms have generated substantial economic value that can be reinvested locally. For example, Washington State reports that its clean fuel standard generated nearly 2 million credits in its first year alone, representing measurable emissions reductions and significant private-sector investment in clean fuels.

A Hawai'i Clean Fuel Standard could similarly generate revenue through fees, penalties, or credit auction mechanisms, with proceeds dedicated to priorities such as public transit, zero-emission vehicle infrastructure, sustainable aviation and marine fuels, rural energy resilience, and rebates or protections for households facing higher transportation costs. When designed thoughtfully, a CFS can reduce pollution while also strengthening energy security and funding equitable climate solutions.

To ensure a Clean Fuel Standard delivers real climate, health, and equity benefits for Hawai'i, implementation details will matter. According to HIDOT's 2025 Energy Security and Waste Reduction Plan, Hawai'i must be careful not to promote "alternative fuels with high upstream emissions" and should design policies that reflect the state's unique geography, import dependence, and neighbor-island realities. Strong sustainability safeguards, public reporting on credits and emissions reductions, and attention to affordability will be essential to maintaining public trust and maximizing the effectiveness of a CFS.

With aloha,

Kris Coffield

President, Imua Alliance



House Committee on Finance

March 5, 2026

HB 1986, Relating to a Clean Fuel Standard

Position: Support

The Low Carbon Fuels Coalition is a non-profit trade association that represents the entire value chain of clean fuels industry. Our members include some of the leading companies and organizations that produce, supply and/or represent liquid, gaseous and electric fuels for all transportation sectors including on-road, aviation and marine, as well as large users of these fuels.

The Coalition can attest to the effectiveness of existing similar programs in California, Oregon and Washington, and therefore, supports HB 1986 in Hawaii. Real-world data shows that not only do these programs support greenhouse gas and pollution reductions and promote economic development through private investments, but do so without driving fuel prices.

The data shows no correlation between retail gasoline prices and credit prices, even while the existing programs have exceeded their carbon intensity targets due to the market-based policy design.

Based on the demonstrated success in other states, the Coalition is in strong support of HB 1986.

TESTIMONY ON HOUSE BILL NO 1986, HD2 RELATING TO
A CLEAN FUELS STANDARD

Position: **Support**

To Representative Chris Todd, Chair; Representative Jenna Takenouchi, Vice Chair; and Members of the Committee on Transportation

Simonpietri Enterprises LLC (SEL) is in **SUPPORT** the intent to create Clean Fuels Standard for the state of Hawai'i.

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. We are currently in the process of designing a small manufacturing plant – the Aloha Sustainable Materials Recycling and Fertilizer Facility (Aloha SMRFF) - in Campbell Industrial Park to divert over 200 tons per day of construction & demolition (C&D) waste from landfilling along with invasive and pest infested biomass, and other types of locally generated wastes to be converted into fuel and other value-added products.

A Clean Fuels Standards will incentivize the production of cleaner forms of fuel that will help Hawai'i achieve its climate goals and energy demands in the coming years. Simultaneously, a measure like this would help stimulate other innovative solutions and job creation across a variety of sectors including energy, construction, agriculture and more. We feel this measure not only incentivizes innovation and production, but encourages better management of waste and environmental stewardship which align with our mission as company and we would like to see it advance.

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.



House Committee on Finance

Rep. Chris Todd, Chair

Rep. Jenna Takenouchi, Vice Chair

March 5, 2026

2:00 pm

Conference Room 308

Pump Cleaner Fuels Hawai‘i is grateful for the opportunity to express strong support for HB1986 to implement a HI Clean Fuel Standard (CFS). The CFS is a strong, reliable, and proven policy mechanism that addresses fuel emissions while enhancing energy security, resilience, and economic prosperity. HB1986 represents a pragmatic, actionable plan to decouple emissions from economic growth and feasibly transition Hawai‘i to a renewable economy.

Hawai‘i’s dependence on the transportation sector underscores the critical importance of prioritizing the industry’s economic output and long-term resilience. With current reliance on imports to supply fuels, a CFS will reduce Hawai‘i’s vulnerability to supply chain disruptions, geopolitical uncertainty, and volatile global fuel prices. By slowly requiring reductions in the lifecycle emissions of transportation fuels over time, HB1986 offers a flexible approach that allows market participants to utilize the most cost-effective strategies to address greenhouse gas emissions.

Clean Fuel Standard–like programs in California, Washington, Oregon, and throughout Canada have created markets where consumers are protected, economic growth is strong, and emissions are declining year over year. States with these policies have benefited from the deployment of electric charging infrastructure, private investment, job creation and protection, and significant public health benefits through reduced air pollution. Hawai‘i has the opportunity to replicate these benefits through the passage and implementation of this program.

HB1986 aligns with Hawai‘i’s climate and economic goals and utilizes a private market approach rather than a mandate or a tax. For these reasons, I respectfully urge the Committee to pass HB1986.

Sincerely,

Liat Carlyle



March 4, 2026

**TESTIMONY ON HB 1986 HD2
RELATING TO A CLEAN FUEL STANDARD**

House Committee on Finance
Representative Chris Todd, Chair
Representative Jenna Takenouchi, Vice Chair

Thursday, March 5, 2026 at 2:00 p.m.
State Capitol, Conference Room 308

Aloha Chair Todd, Vice Chair Takenouchi, and members of the Committee,

Thank you for this opportunity to submit written testimony offering **comments** on HB 1986 HD2, Relating to a Clean Fuel Standard.

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.

HB 1986 HD2 would require the Hawaii State Energy Office (HSEO) to adopt rules governing a clean fuel standard for gasoline and diesel in the State. The bill would be similar to policies in West Coast jurisdictions, including California, Washington, and Oregon.

We recognize the importance of charting a clean energy future for Hawaii. As the local producer of fuels for Hawaii's consumers, we have committed to being a part of this future by investing over \$100 million to develop Hawaii's largest liquid renewable fuels manufacturing facility at our Kapolei refinery.

Par Hawaii currently employs more than 630 employees statewide, including those at our Kapolei refinery who are spearheading the production of renewable fuels. It is important that a clean fuel standard not create unintended consequences that result in job losses in Hawaii. Therefore, we recommend the bill be amended to add a provision that the Department of Transportation adopt rules to ensure that local production of fuels are not disadvantaged relative to imported fuels.

We also note the following with regard to a clean fuel standard for Hawaii:

1. Implementing and administering a clean fuel standard (CFS) is a significant undertaking. It is important that a broad range of stakeholders are consulted to avoid unintended consequences of this legislation. For example, a rise in gas



prices could disproportionately impact working families and small businesses, increase transportation and goods costs, and place additional financial strain on rural and neighbor island communities with limited alternatives.

2. Hawaii's energy landscape is significantly different than that of mainland states. We have much higher demands for aviation fuel and liquid fuels for power generation. It is important that a Hawaii CFS take into account the unique needs of our state.
3. The cost to produce renewable fuels for transportation is well above that of fossil fuels. While there are federal programs in place to partially bridge the gap, state level incentives are also required to make renewable fuels competitive with fossil fuels. We believe that a clean fuel standard should be paired with an expansion of the Hawaii renewable fuels production tax credit (HRS 235-110.32). This is particularly important because it can take years for the CFS credit market to develop to the point where it serves as an effective long-term incentive for renewable fuels.

We believe it is possible to produce significant amounts of renewable fuel here in Hawaii, and in a way that supports the local agriculture sector. Par Hawaii has partnered with Pono Pacific, a land management and conservation company, to develop locally grown, oil-yielding crops that will contribute to Hawaii's clean energy future.

In summary, we believe it is important to proceed cautiously and thoughtfully on a Hawaii CFS. We look forward to participating in this dialogue.

Thank you for allowing Par Hawaii the opportunity to present these comments for the Committee's consideration.



Hawaii House of Representatives | Committee on Finance
HB 1986 | Relating to a Clean Fuel Standard

This comment is intended to recommend the use of the Carbon-14 testing method to determine the share of biogenic carbon content of feedstocks, fuels and emissions under a potential Clean Fuel Standard in Hawaii. Biogenic content measurements following methods such as ASTM D6866 Method B currently provide critical value to existing state, federal and international clean fuel standard programs.

Included here you will find:

Recommendations for Hawaii’s HB1986	1
What is Biogenic Testing (Carbon-14)?	6
ASTM D6866 Method B - The Most Reliable Method	7
About Beta Analytic	8
ISO/IEC 17025:2017 laboratory	9
Required tracer-free facility for Carbon-14	9
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Recommendations for Hawaii’s HB1986

Our recommendation is that Hawaii’s HB1986 should include direct biogenic content testing (Carbon-14) requirements following the ASTM D6866 Method B standard for any fuels or feedstocks seeking recognition of renewable (biogenic) content. Routine direct biogenic testing requirements are the only reliable method of incentivizing the use of biomass-derived content while guaranteeing compliance, and currently play a critical role in prominent similar programs.

Introduce Routine Biogenic Testing Requirements

Our first recommendation is that a potential Hawaii Clean Fuel Standard should introduce routine biogenic testing requirements in line with those in place for the US RFS, California’s LCFS, Oregon’s CFP and Washington’s CFS. Introducing routine testing would also be in line with best practices established by Canada’s CFR and the EU’s RED.

Routine direct test results are currently used to verify biogenic content under the US EPA's [Renewable Fuel Standard \(RFS\)](#), California's [Low Carbon Fuel Standard \(LCFS\)](#), Oregon's [Clean Fuels Program](#), Washington's [Clean Fuel Standard \(CFS\)](#), New Mexico's [Clean Transportation Fuel Program \(CTFP\)](#), Canada's [Clean Fuel Regulations \(CFR\)](#) and the EU's [Renewable Energy Directive \(RED\)](#). All of these programs, except the EU RED specifically require the Carbon-14 standard ASTM D6866, while the EU RED accepts ASTM D6866 or its European equivalents. ASTM D6866 is also required for prominent third-party verification programs, most notably the Roundtable on Sustainable Biomaterials (RSB).¹ Testing requirements allow clean fuel programs to exclusively incentivize the renewable portion of fuels. This is especially important given the recent history of attempted fraud in existing transportation fuel decarbonization programs.

A potential Clean Fuel Standard should require direct biogenic testing for any fuels produced from co-processing, municipal solid waste (MSW) biogas & renewable natural gas (RNG) and any other fuels for which the final biogenic content is unknown. Current requirements of routine direct testing following ASTM D6866 under similar prominent programs include (please see specific rules hyperlinked):

- The US RFS currently [requires](#) routine direct testing following ASTM D6866 for fuels produced from co-processing, municipal solid waste (MSW), [biogas and renewable natural gas \(RNG\)](#).²
- California's LCFS [requires](#) routine direct testing for fuels produced from co-processing and recommends for fuels produced from MSW.³
- Oregon's CFP [requires](#) routine direct testing following the protocols of the US RFS third-party engineering reviews.⁴
- Washington's CFS [requires](#) routine direct testing following the protocols of the US RFS third-party engineering reviews.⁵
- New Mexico's CTFP [requires](#) routine direct testing following the protocols of the US RFS third-party engineering reviews.⁶
- Canada's CFR [requires](#) routine direct testing for any fuels produced from co-processing and their co-products.⁷
- British Columbia's LCFS [requires](#) monthly testing for any fuels produced from co-processing and quarterly testing for their co-products, as well as to verify biogenic feedstocks.⁸
- The EU's RED [requires](#) routine direct testing for any fuels produced from co-processing or biogas and renewable natural gas (RNG).⁹

¹ 2023. "RSB Standard for Advanced Fuels." *Roundtable on Sustainable Biomaterials (RSB)*

² 2023. "40 CFR Parts 80 and 1090– Renewable Fuel Standard (RFS) Program: Standards for 2023–2025 and Other Changes." *EPA*

³ 2020. "Reporting Co-Processing and Renewable Gasoline Emissions Under MRR." *California Air Resources Board*

⁴ 2023. "Oregon Clean Fuels Program." *Oregon Department of Environmental Quality*

⁵ 2022. "Chapter 173-424 WAC: Clean Fuels Program Rule." *Washington State Legislature*

⁶ 2026. "Clean Transportation Fuel Program Rules." *New Mexico Environment Department*

⁷ 2022. "Clean Fuel Regulations: Quantification Method for Co-Processing in Refineries." *Environment and Climate Change Canada*

⁸ 2025. "Low Carbon Fuel Regulation: Co-Processing Methodology" *British Columbia Ministry of Energy and Climate Solutions*

⁹ 2023. "Renewable energy- method for calculating the share of renewables in the case of co-processing." *European Commission*

Always Require Calculations to be Verified by Direct Testing

It is not in the best interest of Hawaii's decarbonization to allow any mass balance calculations to be used for reporting biogenic content under this program. If a potential program does allow any mass balance calculations, it is critically important to require these calculations to be verified by routine direct testing. We stress the importance of reviewing other programs' experiences with these calculation-based approaches to understand the risk they would introduce to the program.

Producers and industry lobbying groups favour calculation-based approaches such as mass balance because they enable facilities to make claims solely based on material inputs in production. These calculations allow producers to assume that all of their biomass inputs end up in their facilities' outputs, despite it being well understood in the industry that the input of renewable feedstocks is not the same as the output because performance varies and renewable feedstocks don't produce the same quantity of material as their fossil counterparts.¹⁰ By basing their calculations solely on production inputs rather than outputs these methods systematically over-report the renewable share of fuels.

Calculation-based approaches also use a system of free allocation, meaning they do not have to guarantee that there is any renewable content in a given fuel. Producers prefer this because if 10% of their feedstocks are biogenic they can claim that 10% of their products are biogenic, even if that's not the case because biobased can go in different amounts to different products in the co-process. Even further, book and claim also allows them to claim that 10% of their products are 100% biogenic and the rest are 0%, even if all of the products should be 10% biogenic based on calculations (and would likely C14 test below that).¹¹

These calculations' reliance on free allocation creates the potential for double counting of renewable content, leaving low carbon fuel programs susceptible to a high risk of greenwashing and fraud. For example, this threat is highlighted by the recent mass balance fraud challenges faced by the ISCC regarding fraudulent biodiesel submissions from China which "caused a dramatic fall in biodiesel prices in European markets" in July 2023.¹² In response to this situation, the EU quickly updated the RED's co-processing rules to uniformly require direct testing, including verifying the calculations of producers choosing to use calculation-based approaches.¹³

The importance of limiting the role of mass balance for reporting the biogenic content of fuels is articulated very well by a [recent judgement](#) of the Advocate General of the EU Court of Justice (CJEU) on the roles of mass balance and C-14 for reporting biogenic content in co-processing. The official opinion found that mass balance calculations are not intended to quantify the share of biogenic contained in a

¹⁰ 2006. "Determining the modern carbon content of biobased products using radiocarbon analysis." *Bioresource Technology*, 97(16), 2084-2090.

¹¹ 2024. "The Mass Balance Approach." *International Sustainability & Carbon Certification*

¹² 2023. "ISCC Press Release July 27, 2023." *International Sustainability & Carbon Certification*

¹³ 2023. "Renewable energy- method for calculating the share of renewables in the case of co-processing." *European Commission*

biofuel produced by co-processing.¹⁴ This judgment was issued in response to a case brought by BP France against the French government regarding a tax incentive requiring C-14 testing to verify claims of renewable content. BP is also notably a board member of the ISCC.¹⁵

Recently, in the US, issues with mass balance in the recycling industry have received increasing attention. A [ProPublica investigation published in June 2024](#) found that products advertised as 30% recycled through mass balance often contained less than 1% recycled content.¹⁶ Similar concerns were shown by the US EPA as early as 2023, which described the mass-balance methodology as deceptive and advised against promoting it. In August 2024, the US Environmental Protection Agency (EPA) launched a federal action against the mass-balance methodology used in the recycling sector.

In September 2024, California Attorney General Rob Bonta filed [a lawsuit against ExxonMobil](#) claiming that the oil major “deceptively” promoted chemical recycling as a solution to the plastic crisis, citing their use of mass balance calculations such as ISCC Plus.¹⁷ That lawsuit directly challenges the standard’s use of ISCC’s free allocation method as a system designed to enable greenwashing.¹⁸ The New York Times also recently [published a relevant article](#) on the challenges that mass balance presents to the recycling industry, which aligns with the challenges experienced in the renewable products industry.¹⁹

The best course for the proposed Clean Fuel Standard is not to allow any producers to report their biogenic content using mass balance calculations. However, if mass balance is used at all it is critical that these calculations be routinely verified by direct testing. The advantage of the updated RED protocol is that producers can choose to use calculations internally, while the program still ensures the information reported is accurate through direct Carbon-14 analysis. This is the only way to mitigate the risk to the program introduced by these calculations.

Require Routine Testing for Co-Processing in Refineries

It is critical that any co-processed operations credited under a potential Hawaiian Clean Fuel Standard routinely demonstrate the renewable content of their fuels via direct biogenic testing. This is particularly important for Hawaii, since the state’s only petroleum refiner, Par Hawaii, is currently being retrofitted for co-processing and intends to produce co-processed SAF, renewable diesel and naphtha.²⁰ The language included to regulate co-processing should reflect the same sections of the Clean Fuel Standard laws in California, Oregon, Washington and New Mexico, all of which require Carbon-14 test results to

¹⁴ 2024. “Opinion of Advocate General Campos Sánchez-Bordona Delivered on 11 January 2024: Case C-624/22.” *Court of Justice of the European Union*

¹⁵ 2024. “Board Members of the ISCC Association.” *International Sustainability & Carbon Certification*

¹⁶ 2024. “Biden EPA Rejects Plastics Industry’s Fuzzy Math That Misleads Customers About Recycled Content.” *ProPublica*

¹⁷ 2024. “The People of the State of California v. Exxon Mobil Corporation.” *Superior Court of the State of California*

¹⁸ 2024. “ExxonMobil Accused of “Deceptively” Promoting Chemical Recycling as a Solution for the Plastics Crisis.” *ProPublica*

¹⁹ 2024. “Is Your Water Bottle Really Made From Recycled Plastic?” *The New York Times*

²⁰ 2026. “Par Pacific: Hawaii Biorefinery Project Nears Startup” *Biodiesel Magazine*

establish the fraction of co-processed products that can be claimed as renewable in quarterly reporting. Hawaii should reflect these requirements in HB1986 to ensure accurate reporting of biogenic content for any co-processed fuels credited under this program.

As discussed above, refineries conducting co-processing are required to verify the renewable portion of their fuels under the US RFS, California's LCFS, Oregon's CFP, Washington's CFS, New Mexico's CTFP, Canada's CFR, British Columbia's LCFS and the EU RED. We re-emphasize the importance of the EU RED as a relevant example which allowed co-processed fuels to be submitted exclusively using calculations and was forced to quickly adopt C-14 testing requirements after discovering a massive case of fraudulent fuels last year. We also would like to emphasize the relevance of Canada's CFR and British Columbia's LCFS, which regulate hydrocarbon gas co-products from co-processing refineries, such as the renewable naphtha Par Pacific intends to sell in Hawaii. Refineries seeking to claim renewable content in co-processed naphtha, propane, butane or other gaseous co-products should be required to submit routine biogenic testing as well.

Require Testing for Any Biomethane Book-and-Claim

As the biomethane industry accelerates in jurisdictions with clean or low-carbon fuel programs, properly regulating the industry in this early stage is key to its future success. Recent developments in the US RFS and EU RED have demonstrated best practices for regulating biogas, biomethane and renewable natural gas (RNG) based on these programs' early experiences with these fuels.

The only way to reliably differentiate biogenic biomethane from fossil fuel methane is to require mandatory routine test results following ASTM D6866 Method B for any entities seeking recognition of emission reductions from the use of biomethane. Since biomethane and fossil fuel methane are chemically identical molecules, the only way to differentiate the two is to perform carbon-14 testing of the fuels or the emissions after combustion to assess what percentage of the mixture was biogenic.

The EU introduced biogenic testing requirements for fuels produced from biogas in a June 2023 update to the EU Renewable Energy Directive (RED) titled, [“Renewable energy- method for calculating the share of renewables in the case of co-processing.”](#)²¹ This update was specifically issued in response to the discovery of a major case of fraud within the RED program stemming from biodiesel submissions from China which were approved by mass balance calculations.²² The EU investigation into this issue is still ongoing, and the full extent of the damage is not yet known, but this was a significant setback for the program and quickly plummeted biodiesel prices in the EU. The EU tied biogas and RNG into the update in order to address these concerns for any fuels containing a mixture of biogenic and fossil content.

²¹ 2023. “Renewable energy- method for calculating the share of renewables in the case of co-processing.” *European Commission*

²² 2023. “ISCC Press Release July 27, 2023.” *International Sustainability & Carbon Certification*

As discussed, the advantage of this framework is that the EU was able to continue to accept calculation-based methodologies like mass and energy balance by requiring routine direct biogenic testing to validate the data. However, calculation-based approaches are much more common for co-processing, where all inputs and outputs are concentrated in a single facility, as opposed to biomethane and RNG which are often produced, upgraded and blended at multiple facilities.

The US introduced biogenic testing requirements for fuels produced from biogas in the 2023 Set Rule update to the US Renewable Fuel Standard (RFS), in a section called the [Biogas Regulatory Reform Rule](#).²³ This update requires routine biogenic testing for any biogas or RNG fuels seeking to generate RINs under the RFS. Starting on July 1st, 2024 for new facilities and January 1st, 2025 for existing facilities, fuels produced from biogas will need to submit biogenic test results of the biogas at the point of production from the digester/landfill, at the point of upgrading, and after upgrading prior to pipeline injection.

Beta encourages Hawaii's House Committee on Finance to consider following a similar approach, to enable a book-and-claim system for biomethane using routine direct testing. The US RFS model of testing at the point of production, at the point of blending with non-renewable components and at the point of injection into a pipeline, provides a comprehensive chain of custody for the renewable content in these fuels, making it possible to report and trade only real biogenic content introduced to the grid. Similarly, the EU RED model demonstrates that tying calculation-based accounting approaches to routine direct testing is the most secure way to access the benefits of a book-and-claim system without exposing the program to undue risk.

Conclusion

Introducing this bill to consider creating a Clean Fuel Standard was a critical step forward in Hawaii's decarbonization journey. By implementing best practices for verification established by similar state, federal and international fuel decarbonization programs, HB1986 can design a Clean Fuel Standard capable of successfully achieving and measuring its goals. Routine direct testing following ASTM D6866 Method B is the most effective way to incentivize and validate biogenic content under this program.

What is Biogenic Testing (Carbon-14)?

Carbon-14 analysis is a reliable method used to distinguish the percentage of biobased carbon content in a given material. The radioactive isotope carbon-14 is present in all living organisms and recently expired material, whereas any fossil-based material that is more than 50,000 years old does not contain any carbon-14 content. Since Carbon-14 is radioactive, the amount of carbon-14 present in a given sample begins to gradually decay after the death of an organism until there is no carbon-14 left. Therefore, a

²³ 2023. "40 CFR Parts 80 and 1090—Renewable Fuel Standard (RFS) Program: Standards for 2023–2025 and Other Changes." EPA

radiocarbon dating laboratory can use carbon-14 analysis to quantify the carbon-14 content present in a sample, determining whether the sample is biomass-based, fossil fuel-derived, or a combination.

The analysis is based on standards such as ASTM D6866 and its international equivalents developed for specific end uses, such as ISO 13833. ASTM D6866 is an international standard developed for measuring the biobased carbon content of solid, liquid, and gaseous samples using radiocarbon dating.²⁴ There are also many international standards based on the specific use of direct Carbon-14 testing, such as ISO 13833, which is an international standard developed for measuring the biogenic carbon content of stationary sources emissions.²⁵

Carbon-14 analysis yields a result reported as % biobased carbon content. If the result is 100% biobased carbon, this indicates that the sample tested is completely sourced from biomass material such as plant or animal byproducts. A result of 0% biobased carbon means a sample is only fossil fuel-derived. A sample that is a mix of both biomass sources and fossil fuel sources will yield a result that ranges between 0% and 100% biobased carbon content. Carbon-14 testing has been incorporated into several regulations as the recommended or required method to quantify the biobased content of a given material.

ASTM D6866 Method B - The Most Reliable Method

Carbon-14 is a very well-established method which has been in use by many industries (including the fossil fuel industry) and academic researchers for several decades.

Carbon-14 measurements done by commercial third party testing is robust, consistent, and with quantifiable accuracy/precision of the carbon-14 amount under **ASTM D6866 method B**. The EN 16785 is the only standard that allows a variant of the Mass Balance (MB) method of 'carbon counting' under EN 16785-2. The EN 16785-1 requires that the biocarbon fraction be determined by the carbon-14 method. However, when incorporating this EN 16785 method, certification schemes like the "Single European Bio-based Content Certification" **only** allow the use of EN 16785-1 due to its reliability and the value of a third-party certification. <http://www.biobasedcontent.eu/en/about-us/>

In ASTM D6866 method B, the carbon-14 result is provided as a single numerical result of carbon-14 activity, with graphical representation that is easily understood by regulators, policy makers, corporate officers, and more importantly, the public. The overwhelming advantage of carbon-14 is that it is an independent and standardized laboratory measurement of any carbon

²⁴ 2021. "Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis." *ASTM International (D6866-21)*

²⁵ 2013. "ISO 13833:2013 Stationary source emissions: Determination of the ratio of biomass (biogenic) and fossil-derived carbon dioxide." *International Organization for Standardization*

containing substance that produces highly accurate and precise values. In that regard, it can stand alone as a quantitative indicator of the presence of biobased vs. petroleum feedstocks. When carbon-14 test results are challenged, samples can be rapidly remeasured to verify the original reported values (unlike mass balance).

The quantification of the biobased content of a given product can be as low as 0.1% to 0.5% (1 relative standard deviation – RSD) based on Instrumental error for Method B (AMS). This error is exclusive of indeterminate sources of error in the origin of the biobased content, and manufacturing processes. As such a total error of +/-3% (absolute) has been assigned to the reported Biobased Content to account for determinate and indeterminate factors.²⁶

It is also important that the program should always require ASTM D6866 Method B, rather than allow Method C for any use. Where ASTM D6866 Method B uses the AMS Instrument to measure ¹⁴C, Method C uses Liquid Scintillation Counting (LSC). In Method B, the AMS Instrument directly measures the ¹⁴C isotopes. However, in Method C, scintillation molecules indirectly absorb the beta molecules that release with the decay of ¹⁴C and convert the energy into photons which are measured proportionally to the amount of ¹⁴C in the sample. Since Method B directly measures the ¹⁴C isotopes and Method C measures them indirectly, Method B is significantly more precise and should be prioritized in regulations.²⁷ LSC measurements, like those used in Method C, are commonly used as an internal testing tool when samples are limited and accuracy does not need to be extremely high.

About Beta Analytic

Beta Analytic was among the originators of the use of Accelerator Mass Spectrometry (AMS) for the ASTM D6866 biobased / biogenic testing standard using Carbon-14 to distinguish renewable carbon sources from petroleum sources. Beta began testing renewable content in 2003 at the request of United States Department of Agriculture (USDA) representatives who were interested in Beta's Carbon-14 capabilities for their BioPreferred[®] Program (www.biopreferred.gov). At their request, Beta joined ASTM under subcommittee D20.96. Beta's previous president, Darden Hood, was positioned as a technical contact for the USDA and within 3 months completed the ASTM D6866-04 standard. The Carbon-14 technique is now standardized in a host of international standards including ASTM D6866, CEN 16137, EN 16640, ISO 16620, ISO 19984, BS EN ISO 21644:2021, ISO 13833 and EN 16785. Carbon-14 analysis can be used on various types of samples (gas, liquids and solids). Beta Analytic continues to be a

²⁶2021. Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis. *ASTM International (D6866-21)*. pp 1-19. doi: 10.1520/D6866-21.

²⁷2022. "Testing the methods for determination of radiocarbon content in liquid fuels in the Gliwice Radiocarbon and Mass Spectrometry Laboratory." *Radiocarbon*

technical contact for ASTM D6866 with current president Ron Hatfield and is involved with all their latest ASTM D6866 versions.

The Carbon-14 standardized method is also incorporated in a variety of regulatory programs including the California AB32 program, US EPA GHG Protocol, US EPA Renewable Fuels Standard, United Nations Carbon Development Mechanism, Western Climate Initiative, Climate Registry's Greenhouse Gas Reporting Protocol and EU Emissions Trading Scheme.

We are currently technical experts on Carbon-14 in the following committees:

ASTM D6866 (D20.96) Plastics and Biobased Products (Technical Advisor)
ASTM (D02.04) Petroleum Products, Liquid Fuels and Lubricants (Technical Advisor)
ASTM (061) US TAG to ISO/TC 61 Plastics (Technical Expert)
USDA BioPreferred Program TAC (Technical Advisor)
ISO/TC 61/SC14/WG1 Terminology, classifications, and general guidance (Technical Expert)
CEN/TC 411 Biobased Products
CEN/TC 411/WG 3 Biobased content
CEN/TC 61/SC 14/WG 1 Terminology, classifications, and general guidance (Technical Expert)

ISO/IEC 17025:2017 Accredited Laboratory

To ensure the highest level of quality, laboratories performing ASTM D6866 testing should be ISO/IEC 17025:2017 accredited or higher. This accreditation is unbiased, third party awarded and supervised. It is unique to laboratories that not only have a quality management program conformant to the ISO 9001:2008 standard, but more importantly, have demonstrated to an outside third-party laboratory accreditation body that Beta Analytic has the technical competency necessary to consistently deliver technically valid test results. The ISO 17025 accreditation is specifically for natural level radiocarbon activity measurements including biobased analysis of consumer products and fuels, and for radiocarbon dating.

Required tracer-free facility for Carbon-14

For carbon-14 measurement to work, be accurate, and repeatable, the facility needs to be a tracer-free facility, which means artificial/labeled carbon-14 is not and has never been handled in that lab. Facilities that handle artificial carbon-14 use enormous levels relative to natural levels and it becomes ubiquitous in the facility and cross contamination within the facility, equipment and chemistry lines is unavoidable. Results from a facility that handles artificial carbon-14 would show elevated renewable contents (higher pMC, % Biobased / Biogenic values), making those results invalid. Because of this, Federal contracts and agency programs (such as the USDA BioPreferred Program) require that AMS laboratories must be 14C tracer-free facilities in order to be considered for participation in solicitations.

Areas where cross-contamination might occur include but are not limited to; biomedical or nuclear reactors, isotope enrichment / depletion columns, water, soil, plant, or air samples collected near or at biomedical / nuclear reactor sites, medical, industrial, or hazardous waste sites, samples specifically manipulated to study the uptake / fractionation of stable isotopes due to biological or metabolic processes. To learn more about the risks associated with testing natural levels Carbon-14 samples in a facility handling artificially enhanced isotopes please see the additional information provided after this comment.

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<https://biodieselmagazine.com/articles/par-pacific-hawaii-biorefinery-project-nears-startup>

Demand a Tracer-Free Laboratory for Radiocarbon Dating

As part of its commitment to provide high-quality results to its clients, ISO/IEC 17025-accredited Beta Analytic does not accept pharmaceutical samples with “tracer Carbon-14” or any other material containing artificial Carbon-14 (14C) to eliminate the risk of cross-contamination. Moreover, the lab does not engage in “satellite dating” – the practice of preparing individual sample graphite in a remote chemistry lab and then subcontracting an AMS facility for the result.

High Risk of Cross-Contamination

Pharmaceutical companies evaluate drug metabolism by using a radiolabeled version of the drug under investigation. AMS biomedical laboratories use 14C as a tracer because it can easily substitute 12C atoms in the drug molecule, and it is relatively safe to handle. Tracer 14C is a well-known transmittable contaminant to radiocarbon samples, both within the AMS equipment and within the chemistry lab.

Since the artificial 14C used in these studies is phenomenally high (enormous) relative to natural levels, once used in an AMS laboratory it becomes ubiquitous. Cross-contamination within the AMS and the chemistry lines cannot be avoided. Although the levels of contamination are acceptable in a biomedical AMS facility, it is not acceptable in a radiocarbon dating facility.

Biomedical AMS facilities routinely measure tracer-level, labeled (Hot) 14C samples that are hundreds to tens of thousands of times above the natural 14C levels found in archaeological, geological, and hydrological samples. Because the 14C content from the biomedical samples is so high, even sharing personnel will pose a contamination risk; “Persons from hot labs should not enter the natural labs and vice versa” (Zermeño et al. 2004, pg. 294). These two operations should be absolutely separate. Sharing personnel, machines, or chemistry lines run the risk of contaminating natural level 14C archaeological, geological, and hydrological samples.

Avoid the Risks

Find out from the lab that you are planning to use that they have never in the past and will never in the future:

- accept, handle, graphitize or AMS count samples containing Tracer or Labeled (Hot) 14C.

- share any laboratory space, equipment, or personnel with anyone preparing (pretreating, combusting, acidifying, or graphitizing) samples that contain Tracer or Labeled (Hot) 14C.

- use AMS Counting Systems (including any and all beam-line components) for the measurement of samples that contain Tracer or Labeled (Hot) 14C.

Tracer-Free Lab Required

Recently, federal contracts are beginning to specify that AMS laboratories must be 14C tracer-free facilities in order to be considered for participation in solicitations.

A solicitation for the National Oceanic and Atmospheric Administration (NOAA) has indicated that “the AMS Facility utilized by the Contractor for the analysis of the micro-samples specified must be a 14C tracer-level-free facility.” (Solicitation Number: WE-133F-14-RQ-0827 - Agency: Department of Commerce)

As a natural level radiocarbon laboratory, we highly recommend that researchers require the AMS lab processing their samples to be Tracer-free.

No Exposure to Artificial Carbon-14

According to ASTM International, the ASTM D6866 standard is applicable to laboratories working without exposure to artificial carbon-14 routinely used in biomedical studies. Artificial carbon-14 can exist within the laboratory at levels 1,000 times or more than 100 % biobased materials and 100,000 times more than 1% biobased materials. Once in the laboratory, artificial ^{14}C can become undetectably ubiquitous on materials and other surfaces but which may randomly contaminate an unknown sample producing inaccurately high biobased results. Despite vigorous attempts to clean up contaminating artificial ^{14}C from a laboratory, isolation has proven to be the only successful method of avoidance. Completely separate chemical laboratories and extreme measures for detection validation are required from laboratories exposed to artificial ^{14}C . Accepted requirements are:

- (1) disclosure to clients that the laboratory working with their products and materials also works with artificial ^{14}C
- (2) chemical laboratories in separate buildings for the handling of artificial ^{14}C and biobased samples
- (3) separate personnel who do not enter the buildings of the other
- (4) no sharing of common areas such as lunch rooms and offices
- (5) no sharing of supplies or chemicals between the two
- (6) quasi-simultaneous quality assurance measurements within the detector validating the absence of contamination within the detector itself.

ASTM D6866-22 – Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis.



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"... tracer ^{14}C should not be allowed in a radiocarbon laboratory." "Despite vigorous recent efforts to clean up the room, the "blanks" we measured had ^{14}C contents equivalent to modern or even post-bomb levels."

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"Samples that contain high concentrations of radiocarbon ("hot" samples) are a catastrophe for low background AMS laboratories." "In our case the ion source system was seriously contaminated, as were the preparation lines."



Beta Analytic

www.radiocarbon.com



House Committee on Finance
Representative Chris Todd, Chair
Representative Jenna Takenouchi, Vice Chair

March 5, 2026
2:00pm
House Conference Room 308

Aloha Chair Todd and Vice Chair Takenouchi:

On behalf of Clean Energy, I would like to express **strong support for HB 1986** which would require the Department of Transportation to adopt rules governing a clean fuel standard for alternative fuels in the state of Hawaii.

Our company was a foundation stakeholder since a CFS was conceived in the respective California, Oregon, New Mexico and Washington processes. Each of these states has been a success and we believe it will be a success in Hawaii as well. As North America's largest provider of renewable natural gas (RNG) transportation fuel with over twenty-nine years of leading industry experience, Clean Energy provides construction, operation and maintenance services for refueling stations nationwide. We have a deep understanding of the growing marketplace, as our portfolio includes over 600 stations in 43 states and we deliver liquified natural gas to Hawaii's utility and built a fuel station in Honolulu.

Already used as a clean, low carbon source of energy around the world, RNG is proven to be a cost-saving alternative fuel to diesel and gasoline. RNG for transportation fuel strengthens our economy with lower fuel costs, increases our energy security, and significantly benefits our environment by reducing carbon emissions and smog-forming NOx emissions by up to 300% and 99%, respectively, relative to diesel fuel.

As we have seen in California, this approach will not significantly raise fuel prices. Recent analyses show that retail fossil fuel prices are strongly influenced by many factors (e.g., global events, holiday weekends, seasonal fluctuations, refinery disruptions and decisions about production that affect supply, refinery pricing decisions, seasonal fuel blends, and taxes) and fossil fuel producer pricing strategies are complex, reflecting local and regional market conditions. **As the California Air Resources Board has noted: "The reality is that the actual cost pass-through from LCFS to retail gasoline or diesel prices is uncertain, that there is no correlation between historical LCFS credit prices and gasoline prices, and that the LCFS is not a major driver of overall retail fuel prices in California."**

The CFS is a cost-effective critical tool not only to effectively meet carbon emission reduction targets, but also as a mechanism that fosters technological innovation, supports a robust market for alternative fuels, provides long-term investment certainty and stimulates job creation and investment. In addition, the CFS could provide compliance flexibility to producers of high carbon intensity transportation fuels to either invest in low carbon alternative fuels or to purchase credits from low carbon fuel producers. This market-based program enables regulated parties to make their own choice as to whether to invest in low carbon fuels directly or to continue to sell purely high carbon emitting fuels.

For example, California's LCFS is working: it's helping deliver clean air, good jobs and clean energy choices to all Californians and has strengthened the demand for low carbon fuels. California is the fourth-largest economy in the world: we can have clean fuels and grow our economy. The CFS is a powerful tool for supporting the commercialization of the fastest broad-market transitions to clean and low-carbon technologies.

Our company is a prime example of success from clean fuel standards and we look forward to continuing this success in Hawaii. **Please support HB 1986.**

Sincerely,

A handwritten signature in blue ink, appearing to read "Ryan Kenny", with a long horizontal flourish extending to the right.

Ryan Kenny
Policy Director – Western U.S.
Clean Energy

RIVIAN



House Committee on Finance
Rep. Chris Todd, Chair
Rep. Jenna Takenouchi, Vice Chair
Thursday, March 5, 2026
2:00PM, Conference Room 308

March 4, 2026

Re: Support for HB 1986 HD2, Relating to Clean Fuel Standard

Aloha Chair Todd, Vice Chair Takenouchi, and members of the committee,

As a manufacturer of electric vehicles (“EVs”) and EV charging infrastructure, **Rivian Automotive, LLC, (“Rivian”)** is pleased to express its support for HB 1986 HD2. A clean fuel standard is an elegant and proven policy that can catalyze growth in the EV sector without burdening the state budget.

The signature strength of the clean fuels standard (“CFS”) proposed by HB 1986 is its portfolio-based approach to expanding the use of a variety of clean fuels in Hawai‘i. This includes electricity. Clean fuels policies create new markets that marshall private capital for accelerated investment in the provision and use of clean fuels like electricity. Crucially, this means that the state can enjoy the benefits of a surge of investment in clean transportation fuel use—including job creation and growth—without requiring substantial new budget commitment and annual appropriations.

For the EV industry, the benefits of a clean fuels standard are many.

- A CFS establishes a market for trading compliance credits, creating powerful incentives for the use of a portfolio of clean fuels, including electricity.
- The use of electricity as a transportation fuel can be particularly beneficial under a CFS. In California, for example, to date charging providers have earned more than \$1 billion in compliance credits under the state’s low carbon fuel standard, a powerful “pull” factor encouraging further investment in building out the charging networks that earn those credits.¹
- With the appropriate policy frameworks in place, earnings from credit trading could also support retail consumer purchases of EVs and fleet-switching by

¹ California Air Resources Board, *California Low Carbon Fuel Standard Workshop*, April 10, 2024, www.arb.ca.gov/sites/default/files/2024-04/LCFS%20April%20Workshop%20Slides.pdf.



both light- and medium-/heavy-duty fleet operators—complementing the state’s ambitions to grow the EV market in Hawai’i.

Put simply, a well designed and implemented clean fuels policy can improve the economics of our business and help us achieve scale. The EV industry is eager to invest and grow our market in Hawai’i. Rivian expresses its support for HB 1986 HD2.

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

Sincerely,

Abigail Ramsden

About Rivian

Founded in 2009, Rivian is an independent U.S. company. Rivian manufactures all of its vehicles in the United States. With over 14,000 employees across the globe, Rivian’s expertise lies primarily in engineering, software development, and manufacturing.

In addition to our vehicles, Rivian is a manufacturer of direct current fast chargers (DCFC) and those chargers in our Rivian Adventure Network. We provide service to Rivian drivers in Hawai’i from our service center location on the island of O’ahu, creating local jobs and investment.



March 5, 2026

House Committee on Finance
Hawai'i State Legislature

RNG Coalition testimony in Support of HB 1986

Honorable Chair Todd and Members of the Committee,

The RNG COALITION strongly supports HB 1986, which would direct the Hawai'i Department of Transportation to establish a Clean Fuel Standard (CFS) to reduce lifecycle greenhouse gas emissions from transportation fuels.

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, which one end use is as a low-carbon transportation fuel.

Transportation is Hawai'i's largest source of greenhouse gas emissions, and decarbonizing this sector is essential to meeting the State's long-term climate commitments. A Clean Fuel Standard is a technology-neutral, market-based policy that reduces emissions by rewarding fuels based on lifecycle carbon intensity. This approach has proven highly effective in other states, including California, Oregon, and Washington.

HB 1986 appropriately incorporates best practices from existing CFS programs by:

- Using the Argonne National Laboratory's GREET model to measure lifecycle emissions
- Establishing a credit-and-deficit system that rewards environmental performance
- Including cost-containment mechanisms to ensure compliance flexibility

Importantly, a CFS creates new markets for fuels produced from waste streams that are particularly relevant to Hawai'i, including organic waste, wastewater, agricultural residues, and biogas-derived fuels such as renewable natural gas. These fuels can be used directly in existing vehicles and infrastructure, providing immediate emissions reductions, especially for heavy-duty and hard-to-electrify transportation sectors.

HB 1986 represents a thoughtful, flexible, and proven framework for reducing transportation emissions while supporting local economic development and energy resilience. For these reasons, the RNG Coalition urges the Committee to support HB 1986.

Respectfully,

Yanni Psareas

Manager of State Government Affairs

RNG COALITION

yanni@rngcoalition.com



March 4, 2026

The Honorable Chris Todd
Chair, House Committee on Finance
Hawai'i State House of Representatives
Hawai'i State Capitol
415 South Beretania Street
Honolulu, HI 96813

RE: The American Biogas Council Strongly Supports HB 1986

Dear Chair Todd and members of the Finance Committee,

As the voice of the American biogas industry, the American Biogas Council (ABC) appreciates the opportunity to express strong support for Hawaii House Bill 1986 (HB 1986) and urges the House Committee on Finance to favorably pass HB 1986.

A Clean Fuel Standard can advance the state's transition to a clean transportation sector, reducing greenhouse gas (GHG) emissions, through proven technology neutral, supply-driven, and market-based policy. In other state programs, not only has the market for clean fuels grown substantially, but the resulting revenue streams have funded EV purchase rebates, supported refueling station installations, and allowed fleet operators to purchase electric trucks and buses, demonstrating the programs' diverse benefits and utility. Established programs from other jurisdictions showcase significant investments and economic activity across the clean fuels industry.

- California: From 2011 through the first quarter of 2018, the program increased the value of the clean fuels market by an estimated \$2.8 billion.¹
- Oregon: From 2016 through 2021, the program generated \$328 million in credits, with that amount steadily growing annually.² Further, analysis shows a preliminary estimate of \$100 million per year is saved in avoided health costs.³
- Clean Fuel Programs have little to no impact on gasoline prices, as revealed by a study of California's program in 2022.⁴

This legislation can diversify Hawaii's energy economy and accelerate greenhouse gas reductions by decarbonizing the transportation fuel supply. A fuel-based approach minimizes impacts on drivers and consumers by avoiding fuel or vehicle mandates while positioning Hawaii as a national leader in the transition to clean fuels.

ABC and its members applaud the efforts of this body and fully support the efforts to create a Hawaii Clean Fuel Standard via HB 1986. We welcome the opportunity to work with members of this Committee on this important legislation.

Sincerely,

Jonathan Harding

Manager of State Policy

About the American Biogas Council

The American Biogas Council is the voice of the US biogas industry dedicated to maximizing carbon reduction and economic growth using biogas systems. We represent more than 400 companies in all parts of the biogas supply chain who are leading the way to a better future by maximizing all the positive environmental and economic impacts biogas systems offer when they recycle organic material into renewable energy and soil products. Learn more online at www.AmericanBiogasCouncil.org, Twitter [@ambiogascouncil](https://twitter.com/ambiogascouncil), and [LinkedIn](https://www.linkedin.com/company/ambiogascouncil)

¹ See: California Delivers – Low Carbon Fuel Standard (cadelivers.org)

² Wind, C. et al. Oregon Clean Fuels Program: Program Review. Department of Environmental Quality. February 2022. Page 24.

³ Ibid, at page 13

⁴ Bates White: Economic Consulting. Low Carbon Fuel Standards Market Impacts and Evidence for Retail Fuel Price Effects. April 2022. Page 25.

To: Representative Chris Todd, Chair
Representative Jenna Takenouchi, Vice Chair
Committee on Finance

From: Veronica Moore, Individual Citizen

Date: March 4, 2026

RE: House Bill 1986 HD2
Measure Title: RELATING TO A CLEAN FUEL STANDARD.
Report Title: Clean Fuel Standard; Alternative Fuels; Rules; Department of
Transportation

To All Concerned,

My name is Veronica Moore and I support House Bill 1986 HD2. Your consideration is appreciated.

Sincerely,

Veronica M. Moore

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

COMMITTEE ON FINANCE

Rep. Chris Todd, Chair
Rep. Jenna Takenouchi, Vice Chair

Rep. Daisy Hartsfield	Rep. Dee Morikawa
Rep. Ikaika Hussey	Rep. Amy A. Perruso
Rep. Sue L. Keohokapu-Lee Loy	Rep. Shirley Ann Templo
Rep. Lisa Kitagawa	Rep. Kyle T. Yamashita
Rep. Matthias Kusch	Rep. David Alcos III
Rep. Mike Lee	Rep. Joe Gedeon
Rep. Tyson K. Miyake	Rep. Julie Reyes Oda

NOTICE OF HEARING

DATE: Thursday, March 5, 2026
TIME: 2:00 p.m.
PLACE: VIA VIDEOCONFERENCE
Conference Room 308

Public commentor: Ted Metrose (independent) Technically Opposed

The clean fuel standard (CFS) bill HB1986 appears well-intended and is directionally correct. However, as proposed, this framework bill represents a serious affordability concern because of how HDOT intends to implement it - extending the application of the CFS to interstate flights and voyages, with possibility of using public funds (tax credits) to additionally incentivize the use of renewable fuels in interstate travel. And by setting far-reaching carbon intensity targets.

The costs, impacts and benefits of this bill are confusing, and misrepresented (both understated and overstated). There are many inconsistencies and the premise upon which it is based is not aligned with the State's goals, priorities or its legal authority.

Income tax credits or other public subsidies should not be used to underwrite the clean fuel standard

Surprisingly the proposed framework bill provides an exemption from the CFS for emissions from all air travel - arguably its primary target. While widely recognized as the most difficult sector to decarbonize, the bill and HDOT's Energy Security /GHG reduction plan for the transportation sector will be affected through the adoption of the CFS through "voluntary" participation which may be encouraged through public subsidies (undermining one of the prime advantages of the CFS approach).

While the CFS is not a tax, it has certainly will have that pragmatic effect if state income tax

credits are used to subsidize the use of sustainable aviation fuel (SAF) in both inter-island flights and interstate flights. The bill should be amended to ensure that once the CFS is established that the renewable fuel production tax credit (HRS 235-110.32) or any similar measures exclusively for (SAF) should be rapidly phased out. Additionally, or in the alternative, clean fuel credits should be precluded from being issued in relation to any fuel for which the State has issued state tax credits, particularly renewable fuels used by utilities already obligated by RPS. The foundational premise of the clean fuel standard that it can lead to a reduction of GHG emission without a tax or public subsidies, is violated, if tax credits for the same fuel are provided by other sections of Hawaii's tax code.

The clean fuel standard should be mandatory for aviation fuel consumed within the State

HB1986 requires that the fuels consumed by waterborne vessels operating throughout State would be subject to the CFS, however in stark contrast it oddly proposes to exempt aviation fuel consumed during air travel between the islands from the clean fuel standard. Pursuant to HB1986-HD2 the proposed CFS to be drafted by HDOT would be created with the following framework:

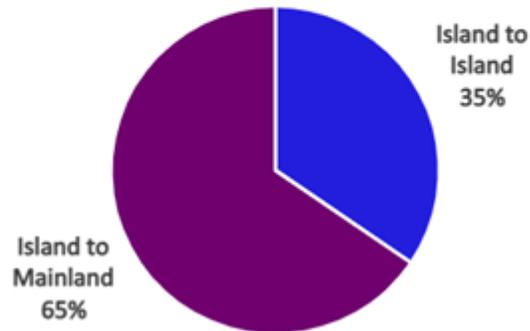
"Exemptions for diesel, gasoline, or other fuels used by aircraft, railroad locomotives, military vehicles, and interstate waterborne vessels."

As highlighted above there is no exemption proposed for marine fuels consumed within the State. The CFS exemption for marine fuel applies only during interstate transit. More importantly, the exclusion or omission of the in-state aviation sector is inconsistent with the priority focus on in-state transportation emissions specified by HRS 225P-8. Chapter 225P defines the transportation modes subject to the State's zero-emissions goal includes ground transportation and interisland transit by sea and air. Particularly given how much aviation fuel is consumed in flights between islands, it should be subject to the CFS just like the marine distillate fuel consumed by ships and boats operating between the islands.

According to HDOT's Energy Security Plan and as specifically presented in Figure 2-4 interisland aviation fuel represents 35% of domestic jet fuel consumption. While there is good legal rationale for excluding aviation fuel used in interstate travel from the CFS, (the State does not have legal authority to regulate interstate fuels), the CFS should nonetheless be mandatory for aviation fuel consumed within the State.

Figure 2-4. Domestic Flight Fuel Consumption Distribution

Domestic Flight Fuel Consumption Distribution



In addition to the 35% of aviation fuel for which participation in the CFS would be mandatory, and as a secondary priority (and perhaps at a later date) aviation fuel consumed in interstate travel (which represent 65%) of the domestic aviation fuel could still participate in the CFS credit program on a voluntary basis, as hoped for by HDOT's Energy Security (GHG reduction) plan, but only if that the production and use of that fuel is not otherwise subsidized by the State.

Related Note: Throughout the 2026 legislative session Hawaiian Airlines and Alaska Airlines have been providing repeated testimony that the commercial consumption (uplift) of aviation jet fuel in Hawaii is about 600 million gallons per year, which is a reasonable approximation of the average over a number of years. **However**, the State's largest airlines (Hawaiian and Alaska Airlines) have also been testifying that amount of aviation fuel used on **interisland flight represents only 10% of the aviation fuel used on domestic travel**. Relative to HDOT's estimate, that is a very big disparity - 350%. The 10% estimate for in-state aviation fuel consumption gives the false impression that reducing GHG from in-state flights is not the main concern - when in fact it is - by statute.

The CFS goals prescribed by HB1986-HD2 are not consistent with those prescribed by existing State statutes.

Although the bill purports to advance the goals specified in HRS 225P-5, 225P-7, and 225P-8, as quickly as possible, it provides new targets for carbon intensity under the CFS which are not consistent with those goals. More specifically the proposed bill provides HDOT with the following charter for the clean fuel standard (CFS):

*"A schedule to phase in the implementation of the clean fuel standard for alternative fuels in a manner that reduces the average carbon intensity ... beginning with targets no less than **ten per cent below 2019 levels by 2035** and **no less than fifty per cent below 2019 levels by 2045**, including the establishment of annual carbon intensity standards for alternative fuels."*

The proposed charter for establishing new carbon intensity targets (above) should be entirely struck/removed from the clean fuel standard bill or else the CI targets should be limited to just those transportation fuels consumed during travel to other states. Exactly what are the proposed targets in reference to?

As written the proposed carbon intensity (CI) targets are woefully inadequate for ensuring that State will meet the zero-emissions transportation goal of HRS §225P-8 by 2045. In contrast with HRS §225P-8 this bill which is clearly focused on transportation fuels, specifies a target carbon intensity reduction of (just) 50% by 2045. This bill and the targets in particular add unnecessary confusion to implementation of a statute which is in desperate need of additional clarity, as has been proposed by other bills.

This bill additionally specifies the establishment of carbon intensity (CI) target relative to a 2019 baseline, whereas the interim 50% reduction targets established by HRS 225P-5 are relative to a 2005 baseline and dictate a 50% reduction by 2030 (which is almost upon us already). It is simply far too early in process to specify CI reductions when baselines or reference years have not yet been established for CI. Moreover, the scope of their applicability is ill defined. Does it apply to all fuels subject to the CFS, including those that participate in the credit program voluntarily or just transportation fuels consumed within the State for which compliance with the CFS will or should be mandated? The evaluation of the cost of the CFS by HDOT will also be burdened and limited by this uncertainty as well. The State does not need is another GHG target or two (for 2035 and 2045) that will be very difficult if not impossible to meet and could be the subject of yet another lawsuit.

HB1986's Clean Fuel Standard (CFS) framework is explicitly premised on implementing the HDOT Energy Security Plan. Unfortunately, the Plan misinterprets HRS §225P-5 by treating it as authority to regulate interstate aviation emissions, then HB1986 is being built on a legally incorrect foundation that will produce far higher compliance costs than the Legislature ever contemplated.

1. HRS §225P-5 only sets statewide in-state emissions targets.
2. HRS §225P-8 limits transportation decarbonization to ground and inter-island travel.
3. HDOT's Plan incorrectly expands this to include interstate aviation.
4. HB1986 adopts the Plan's assumptions wholesale.
5. Therefore, HB1986 and SB2999 will impose obligations and costs the Legislature never authorized or intended.

What the ESWRP actually says (and why it's misleading)

HDOT's ESWRP states:

"The Plan sets out to chart a course to comply with the state law targets to reduce GHG transportation emissions 50 percent by 2030 (from 2005 levels) and achieve net-negative transportation emissions by 2045,...."

This is HDOT's interpretation, not a statutory requirement.

The Plan takes the statewide 50% target from HRS §225P-5 and recasts it as a transportation-sector mandate, even though:

- the statute does not say that,
- the Legislature has never enacted such a requirement, and
- transportation emissions are only one part of the statewide inventory.

This is the foundation of the misinterpretation embodied by the ESWRP.

Navahine Settlement Extends the Scope of HDOT's Energy Security Plan and Applicability of the proposed Clean Fuel Standard to Interstate Travel and Transportation?

To solidify legislative support and the public's acceptance (of its costs), HDOT's Energy Security plan and the airlines also incorrectly cite the Navahine settlement as a mandate to reduce/eliminate GHG emissions from interstate flights

Based on HDOT's interpretation of the settlement agreement, HDOT's final draft of the ESWRP covers not only interisland transportation as set forth by HRS **§225P-8** but also all interstate transportation by air and sea. Expansion of the greenhouse reduction plan to interstate travel has huge financial implications and accounts for most of the public's concerns. Provided below is HDOT response to a key question which attempts to explain its rationale for covering interstate transportation.

General Comment Summary Question 2: Can you please confirm which flights are covered by the strategies in this Plan?

Response 2: 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.

Additional legislation like the CFS should not be advanced on a misrepresentation of HRS 225P-5 or the Navahine case.

Hawai'i has authority to regulate fuel sold for inter-island aviation and inter-island marine shipping, but not interstate aviation or interstate maritime fuel. Because the HDOT Plan and HB1986 assume authority over sectors which the State cannot regulate, the Legislature should narrow the scope and defer action until the legal boundaries are correctly defined.

While the evaluation and development of CFS approach is worthwhile, before advancing the specific framework prescribed by HB1986, additional legislative guidance is needed to direct and prioritize the State's focus on emissions generated within the State. Consider limiting HRS 225P-5 more explicitly to emissions from non-transportation sectors and allow HRS 225P-8 to establish clear goals for transportation sector. The regulation and required reduction of emissions from interstate transportation may be managed separately in the future, once the State receives greater authority. As widely acknowledged the State will already be significantly challenged to meet its in-state goals for the transportation sector.

March 4, 2026

Representative Todd and Representative Takenouchi,
Chair, Vice Chair and Members of the Finance committee,

Re: Concerns Regarding HB1986 – Clean Fuel Standard Framework

I write to provide comments on HB1986 and SB2999 which would establish a Clean Fuel Standard (CFS) for Hawai'i. These bills represent a significant policy shift with major economic implications for residents and businesses. Because the proposed CFS framework is explicitly premised on the Hawai'i Department of Transportation's Energy Security and Waste Reduction Plan ("HDOT Plan"), it is essential that the Legislature evaluate whether the Plan rests on a correct reading of existing law.

After reviewing the statutory framework, it appears that the HDOT Plan is built on a misinterpretation of HRS §225P-5. As a result, SB2999 and HB1986 risk imposing costs and compliance burdens that the Legislature did not intend when it enacted Hawai'i's statewide emissions-reduction statutes.

1. The HDOT Plan Misinterprets HRS §225P-5 by Treating It as a Mandate to Address Interstate Aviation Emissions

HRS §225P-5 establishes statewide greenhouse gas reduction targets. It does not assign sector-specific obligations, expand HDOT's jurisdiction, or authorize the State to regulate emissions from interstate aviation, which is governed by federal law.

The statute refers to statewide, in-state emissions, not emissions from transpacific flights or interstate aviation operations. The Legislature has never directed HDOT to regulate or plan for emissions outside Hawai'i's jurisdiction.

2. HRS §225P-8 Confirms That Transportation Decarbonization Applies Only to Ground and Inter-Island Travel

HRS §225P-8 is the only statute that specifies the transportation modes subject to the State's zero-emissions goal. It identifies:

- ground transportation, and
- sea and air inter-island transportation.

The omission of interstate aviation is deliberate. Under standard rules of statutory interpretation, when the Legislature lists specific categories, agencies may not expand them. The HDOT Plan's inclusion of interstate aviation emissions therefore exceeds statutory authority.

3. SB2999 and HB1986 Adopt the HDOT Plan's Incorrect Assumptions and Would Create Obligations the Legislature Never Authorized

Both bills rely on the HDOT Plan as the analytical foundation for the proposed CFS. Because the Plan incorrectly treats interstate aviation emissions as a required area of reduction, the CFS framework is built on a legally flawed premise.

This creates two significant problems:

- The CFS would be designed to reduce emissions that the State cannot regulate under federal law.
- To compensate for unattainable reductions in interstate aviation, the CFS would necessarily impose higher compliance burdens on in-state fuels, including gasoline, diesel, marine fuels, and inter-island aviation.

Nothing in HRS §225P-5 or §225P-8 authorizes the creation of a program that shifts the cost of reducing federally regulated emissions onto Hawai'i residents and businesses.

4. The Resulting Cost Impacts Would Exceed What the Legislature Contemplated When Enacting HRS §225P-5

Affordability is a major concern for Hawai'i families. A CFS designed around an incorrect statutory interpretation will:

- raise fuel prices across multiple sectors,
- increase transportation and goods-movement costs, and
- disproportionately affect residents with limited alternatives.

These impacts were not contemplated when the Legislature adopted HRS §225P-5, which set broad statewide targets but did not authorize HDOT to impose a regulatory structure aimed at reducing interstate aviation emissions.

A policy built on a misreading of statute cannot be assumed to reflect legislative intent.

5. The Legislature Should Not Advance a CFS Until the HDOT Plan Is Corrected to Align With Statutory Limits

Because SB2999 and HB1986 rely on the HDOT Plan's interpretation of HRS §225P-5, and because that interpretation exceeds statutory authority, it would be prudent for the Legislature to:

- require HDOT to revise the Plan to conform to HRS §225P-5 and §225P-8, and
- evaluate the true cost impacts of a CFS that is limited to the transportation modes the Legislature actually intended to cover.

Only after the Plan is corrected can the Legislature accurately assess whether a CFS is appropriate, feasible, or affordable for Hawai'i.

Thank you for your consideration of these concerns. Ensuring that major regulatory programs rest on a correct reading of statute is essential to protecting both legislative intent and the economic well-being of Hawai'i residents.