LATE *Testimony submitted late may not be considered by the Committee for decision making purposes.

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

March 18, 2025
9:20 a.m.
State Capitol, Room 430 & Videoconference
S.B. 1120, S.D. 1, H.D. 1
RELATING TO TRANSPORTATION

House Committee on Energy & Environmental Protection

The Hawaii Department of Transportation (HDOT) **support the intent S.B. 1120, S.D. 1, H.D. 1,** that requires the HDOT to adopt rules governing a clean fuel standard for alternative fuels in the State and suggests amendments.

The HDOT supports a carefully curated and feasible program to govern a clean fuel standard for alternative fuels that reduces the carbon intensity of fuel used in the State while minimizing impacts to cost of living for our residents. If identified as the lead agency to implement the program to establish sustainable, equitable, and economically viable annual carbon intensity standards for alternative fuels, HDOT would work with the legislature to establish three to five new positions to be funded by salary savings from all four HDOT models. The HDOT also recommends an additional year and the implementation date of January 1, 2028, to adopt rules pursuant to chapter 91, Hawaii Revised Statutes, governing a clean fuel standard.

HDOT is currently developing a Greenhouse Gas (GHG) Reduction Plan to identify immediate actions to reduce GHG emissions, a roadmap for transportation in Hawaii to meet the State's net-zero GHG emissions target by 2045, and a long-term plan to reach zero emissions in the transportation sector. Although the specific strategies and benchmarks of HDOT's GHG Reduction Plan are still in development, we expect that increased clean fuels in all sectors will be a significant component of our Plan. For example, based on our initial calculations, it does not appear possible to reach the State's ambitious GHG reduction goals for the Aviation portion of the Transportation Sector without a significant increase in Sustainable Aviation Fuel use.

Thank you for the opportunity to provide testimony.

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

March 18, 2025
9:20 a.m.
Conference Room 325

Thank you for the opportunity to submit testimony in strong support of SB 1120_HD1. 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 begins in 2026. In addition, there are currently more than 10 additional states considering CFS policies, due to their effectiveness.

SB 1120_HD1 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, such as algae from the Pacific Ocean.

Another key component of SB 1120_HD1 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. SB 1120_HD1 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 uses science and innovative technology to transform waste and other resources into renewable fuels and circular raw materials. The company creates solutions for mitigating climate change and accelerating a shift to a circular economy. Being the world's leading producer of sustainable aviation fuel (SAF) and renewable diesel and a forerunner in developing renewable and circular feedstock solutions for polymers and chemicals, the company aims to help its customers to reduce their greenhouse gas emissions by at least 20 million tons annually by 2030.

Neste is committed to reaching carbon-neutral production by 2035 and will reduce the carbon emission intensity of sold products by 50% by 2040. Neste has also set high standards for biodiversity, human rights and the supply chain. The company has consistently been included in the CDP and the DJSI lists of the world's most sustainable companies.

House Committee on Energy & Environmental Protection

Representative Lowen, Chair

Representative Perruso, Vice Chair

March 18, 2025

9:20 AM

Committee Room 325

Thank you for the opportunity to submit testimony in strong support of SB1120 SD1 HD1. We are writing from the Pump Cleaner Fuels HI Coalition, a diverse group of business and community stakeholders in Hawaii, aimed at expanding access to renewable and low carbon fuels in the state.

The Clean Fuel Standard is critical, proven policy that support the decarbonization effort of the transportation system. It currently is in place throughout all of Canada, Washington State, Oregon, and California. Recently, New Mexico passed similar legislation which will be implemented in 2026. This policy has been essential scaffolding for a successful decarbonization effort in light, medium, and heavy duty, difficult-to-decarbonize sectors. It is responsible for the reduction of just shy of 200MMT CO2e from the transportation sector and over $1 billion into transportation electrification.

This program opens a market for renewables including electricity, hydrogen, renewable diesel, sustainable aviation fuel, critical fuels, and supports further innovation. Opening this market in Hawaii not only allows for decarbonization of difficult-to-abate sectors like aviation but also unlocks connection for renewable fuels between Asia and the West Cost of the United States. Due to the technology neutral aspect of the program, it allows for consumers and users to choose the best option rather than facing strict mandates.

The Clean Fuel Standard is not only credited with reduction in harmful pollutants, but health savings estimated to reach $80M/year and between $1.8 and $3.8 billion in Oregon and Washington State, respectively. Further, California estimates over 550MMT CO2e reduction in greenhouse gas emissions through 2046 as well as 4,281 tons of PM2.5 and 25,586 tons of NOx reduction compared to baseline.

Utilizing the science-based, third party, technology neutral GREET model developed by the Argonne National Lab ensures effective lifecycle decarbonization. The Clean Fuel Standard is the number one environmental policy credited with directly reducing fossil fuel usage in the transportation sector and our coalition urges strong support for this policy.

Liat Carlyle, Clean Fuel HI Coalition

Phone: (206) 979 1501

Email: liat@earthfinance.com

Clean Fuel HI Background
Clean Fuel HI is invested in reducing greenhouse gas emissions from Hawaii's highest-emitting sector: Transportation. The coalition represents a diverse group of stakeholders in Hawaii including renewable fuel producers and distributors, electric vehicle charging companies, nonprofit organizations, social justice advocates, automakers, aviation, businesses, trade associations, labor unions and renewable energy companies advocating for a just transition away from fossil fuels while ensuring economic prosperity for all.

Comments before
March 18, 2025 House Committee on
Energy and Environmental Protection

OPPOSING
Senate Bill 1120
Relating to Studying "Clean Fuels" Subsidies

Mike Ewall, Esq.
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Aloha Honorable Committee members. Energy Justice Network is a national organization supporting grassroots groups working to transition their communities from polluting and harmful energy and waste management practices to clean energy and zero waste solutions. In Hawai'i, we've been working with residents who first sought our support in 2015. Since mid-2022, we have supported residents in forming the Hawai'i Clean Power Task Force and Kokua na Aina to address numerous energy and waste issues in the state.

Please oppose SB 1120.

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

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

SB 1120 exempts aircraft, railroad locomotives, military vehicles, and interstate waterborne vessels. By exempting aircraft, the liquid fuels would be used in sectors (land-based vehicles, electricity...) that can be run on non-burn clean energy sources like wind and solar electricity. There is no need to be studying how to use dirty and unnecessary fuels.

Production will not be local: As was discussed in the 1/29/2025 Joint Hearing on SB 995 before the Senate Energy and Intergovernmental Affairs and Agriculture and Environment Committees, the Department of Agriculture testified to the fact that there simply is not sufficient land or water to have a significant biofuels production industry within the state. See: https://www.youtube.com/live/eLQmyLuHOu8?si=T4I-6FFwZu5ybYjz&t=857 This means that most of the production will come from the continent, predominantly the Midwestern states, and from South America, defeating the goal of this bill to stimulate local and state economies, and failing to subsidize Hawaiian economies.

Competition with food: The same recent Senate hearing exposed how growing crops for biofuels in Hawai'i would take up land and water needed for the state's own food security goals to have more food grown in-state. This bill has no language to attempt to avoid food vs. fuel competition.

Genetic engineering: The Biotechnology Industry Organization regularly submits testimony in favor of these biofuels bills, yet fails to be transparent about their motivation. Clearly, they expect to have genetically engineered crops and/or enzymes used for the production of supposedly "sustainable" aviation fuels. This raises many biosecurity concerns, as well as concerns over increased herbicide spraying, since most genetically modified food crops are modified to withstand increased herbicide use.

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

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

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

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

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

Toxicity concerns

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

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

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

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

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

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

C&D waste contains many toxic ingredients. There are chlorine sources in wood treatment chemicals like pentachlorophenol, and in PVC plastics in C&D waste. Painted wood can contain lead and mercury, while treated wood can contain other toxic metals, namely arsenic, chromium, and copper. Testimony on the House

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

Not the right time

Prioritizing Conservation and Efficiency

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

No Such Thing as Transition Fuels

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

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

Prioritizing the Energy Sectors That Have Clean Alternatives

There are three sectors of energy consumption: electricity, transportation, and heating. Transportation can be broken down into land, sea, and air. Heating is broken down in federal energy reporting as industrial, residential, and commercial/institutional sectors of use.

Just as there are preferable non-burn solutions for every waste management need, there are clean non-burn solutions for nearly every energy sector, though long-distance commercial passenger aviation is not there yet.

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

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

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

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

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

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

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

Attached is a resolution adopted by the Democratic Party of Hawaii in 2024 in support of an alternative study, called for in SCR106 / SR87, which would look at non-burn alternatives for the transportation and other energy sectors. Such a study would be more appropriate and in line with the state's greenhouse gas (GHG) reduction goals and legal requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SanHi
GOVERNMENT STRATEGIES
A LIMITED LIABILITY LAW PARTNERSHIP

DATE: March 17, 2025

TO: Representative Nicole Lowen
Chair, Committee on Energy & Environmental Protection

Representative Amy Perruso
Vice Chair, Committee on Energy & Environmental Protection

FROM: Mihoko Ito

RE: **S.B. 1120, SD1, HD1 - Relating to Transportation**

Hearing Date: Tuesday, March 18, 2025 at 9:20 a.m.
Conference Room: 325

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

On behalf of Amazon, we submit this testimony **supporting the intent** of S.B. 1120, SD1, HD1, and the effort to establish a Low Carbon Fuel Standard (LCFS) to create a clean fuel standard for alternative transportation fuels in Hawaii. Amazon supports a LCFS as a cost-effective strategy to accelerate the transition to lower carbon vehicles and fuels for consumers and companies.

In 2019, Amazon co-founded The Climate Pledge, a commitment to be net-zero carbon by 2040—10 years ahead of the Paris Agreement. Amazon is making bold investments to meet this goal by reducing transportation-related emissions through improved fulfillment network efficiencies and optimizing their supply chain.

Additionally, Amazon is transitioning to all-electric delivery vans by 2030 to avoid millions of metric tons of carbon per year and have installed over 12,000 EV chargers at more than 100 Amazon delivery stations across the US. Amazon is also buying more sustainable aviation fuel than any other company that moves cargo and is excited about the promise of green hydrogen.

After launching The Climate Pledge, Amazon invited other companies to join and now has more than 450 signatories across 41 countries around the world. Amazon believes the LCFS will accelerate the transition to sustainable fuels and vehicles and enable Hawai'i to serve as a national leader in transportation decarbonization.

Partnership will be required across all sectors to continue to meet the transformation required in infrastructure, products, and services. Amazon looks forward to continued collaboration to achieve shared goals to drive climate progress and economic growth.

First Hawaiian Center
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Testimony of the Oahu Metropolitan Planning Organization

Committee on Energy and Environmental Protection

March 18, 2025 at 9:20 AM
State Capitol CR 325 & Videoconference

SB 1120 SD 1 HD 1
Relating to Transportation

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

The Oahu Metropolitan Planning Organization (OahuMPO) **supports SB 1120 SD 1 HD 1**, which would require the Department of Transportation to conduct a feasibility study on implementing a clean fuel standard for alternative fuels in the State and require no later than 1/1/2028, the Department of Transportation to adopt rules governing a clean fuel standard for alternative fuels in the State

Similar programs in other locations, like California, have reduced their dependence on petroleum-based fuels, while also fostering the growth of renewable fuel sources for cleaner transportation options[1]. As the sector moves toward zero emissions, these efforts have contributed to clean air improvements that bring public health and climate benefits for local communities. The efforts modeled by California have since been mirrored in other states including Oregon, British Columbia, and Washington, and considered in Minnesota, New Mexico, and other parts of the Midwest[2].

This initiative aligns with Hawaii's climate goals by reducing vehicle emissions and encouraging more sustainable fuel options. SB 1120 SD 1 HD 1 is in alignment with the vision and goals of the Oahu Regional Transportation Plan (ORTP), reinforcing both state and county commitments to environmental sustainability and public health in the investments and operation of the transportation system.

The OahuMPO is the federally designated Metropolitan Planning Organization (MPO) on the island of Oahu responsible for carrying out a multimodal transportation planning process, including the development of a long-range (25-year horizon) metropolitan transportation plan, referred to as the Oahu Regional Transportation Plan (ORTP), which encourages and promotes a safe, efficient, and resilient transportation system that serves

[1]California Air Resources Board. "FAQ: Standardized Regulatory Impact Assessment for the Low Carbon Fuel Standard." California Air Resources Board, https:// https://shorturl.at/06OVh.
[2] Electrification Coalition. Clean Fuel Standards. Electrification Coalition. https://electrificationcoalition.org/resource/clean-fuel-standards/.

the mobility needs of all people and freight (including walkways, bicycles, and transit), fosters economic growth and development, while minimizing fuel consumption and air pollution (23 CFR 450.300).

OahuMPO notes the amendments and comments by the Hawaii State Energy Office and respectfully requests the Committee consider them.

Mahalo for the opportunity to provide testimony on this measure.

Oahu Metropolitan Planning Organization
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Telephone: (808) 587-2015 | Fax: (808) 587-2018
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Testimony of
ALASKA AIRLINES and HAWAIIAN AIRLINES

Before the House Committee on
ENERGY & ENVIRONMENTAL PROTECTION

Tuesday, March 18, 2025
9:20 A.M.
Hawai‘i State Capitol, Room 325

In consideration of
SENATE BILL 1120 SD1 HD1
RELATING TO TRANSPORTATION

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

Re: **Comments on Senate Bill 1120 SD1, Relating To Transportation**

Aloha Chair Lowen, Vice Chair Perruso and members of the Committee on Energy & Environmental Protection,

Alaska Airlines and Hawaiian Airlines appreciate the opportunity to submit comments on Senate Bill 1120 SD1 HD1 (SB1120), which proposes the establishment of a Clean Fuel Standard (LCFS) in Hawai‘i. As the largest airlines serving the state, we are deeply committed to supporting efforts that reduce greenhouse gas emissions and contribute to a more sustainable future for Hawai‘i’s transportation sector.

Support for Sustainable Aviation Fuel (SAF) Inclusion

While federal law preempts state and local regulation of aviation fuel, we fully support the voluntary inclusion of sustainable aviation fuel (SAF) in a Hawai‘i clean fuels program. Allowing fuel producers and/or distributors to opt into the program and generate credits for

SAF sold in Hawai‘i would create incentives for increased production and usage of SAF without overstepping federal jurisdiction. By promoting the voluntary production and use of SAF, the state would not only advance its decarbonization goals but also support our industry’s commitment to achieving net-zero carbon emissions.

Considerations for Implementing a Clean Fuel Standard in Hawai‘i

We recognize that implementing and administering a LCFS is a significant undertaking. To ensure a successful and effective program, it is crucial that the state engage a broad range of stakeholders—including airlines, fuel producers, fuel distributors, utilities, and transportation sector representatives—to avoid unintended consequences.

Hawai‘i’s energy landscape is unique compared to mainland states that have implemented clean fuel programs. Given the state’s heavy reliance on aviation fuel and liquid fuels for power generation, a Hawai‘i LCFS must take these distinct factors into account. Additionally, Hawai‘i’s small market means there would be only a limited number of obligated parties under the clean fuels program, potentially creating challenging market dynamics.

Support for a Feasibility Study on Clean Fuel Standards

As part of the state’s broader clean energy transition, we support the requirement to conduct a feasibility study on implementing clean fuel standards for alternative fuels. A comprehensive study would provide critical insights into the potential benefits, challenges, and economic impacts of a LCFS in Hawai‘i. This study should assess the viability of integrating SAF and other renewable fuels into the program, analyze the implications for fuel availability and cost, and ensure that policy decisions are informed by data-driven analysis. By taking this step, the state can develop a well-informed, practical approach to clean fuel implementation that aligns with Hawai‘i’s unique energy landscape.

Cost Considerations and Need for Additional Incentives

The cost of producing renewable transportation fuels is significantly higher than that of traditional fossil fuels. While federal programs help to bridge some of the cost gap, state-level incentives are necessary to make renewable fuels more competitive.

We strongly encourage pairing the LCFS with an expansion of the Hawai‘i Renewable Fuels Production Tax Credit (HRS 235-110.32) to ensure that local renewable fuel production is supported and incentivized. This is particularly important because clean fuel credit

markets often take years to develop before they become an effective long-term incentive for renewable fuels.

Additionally, consumers will bear the costs of a clean fuels program. It is essential that the state estimate the financial impact on Hawai‘i’s drivers, particularly low-income families who rely on older, less fuel-efficient vehicles and may not have the means to transition to electric vehicles. Without proper mitigation measures, these households could disproportionately bear the costs of a LCFS.

Conclusion

Alaska Airlines and Hawaiian Airlines remain committed to supporting Hawai‘i’s decarbonization efforts and recognize the potential benefits of a well-structured clean fuels program. However, we urge the legislature to ensure that the program:

- **Incorporates voluntary incentives for SAF** to promote sustainable aviation without conflicting with federal law.
- **Considers Hawai‘i’s unique energy needs and market size** to prevent unintended economic and operational challenges.
- **Pairs the LCFS with expanded state-level tax incentives** to accelerate the production and affordability of renewable fuels.
- **Assesses the financial impacts on consumers,** particularly lower-income families who may face increased fuel costs.
- **Conducts a feasibility study** to analyze the implementation of clean fuel standards for alternative fuels and ensure informed policy decisions.

We appreciate the opportunity to provide these comments and look forward to continued discussions on how we can collectively advance clean energy goals while ensuring a balanced and feasible approach for all stakeholders.

Mahalo for your consideration.

Clean Energy
Ryan.Kenny@cleanenergyfuels.com

www.cleanenergyfuels.com

Ryan Kenny
Policy Director – Western U.S.

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

March 18, 2025
9:20 a.m.
Conference Room 325

Aloha Chair Lowen and Vice Chair Perruso:

On behalf of Clean Energy, I would like to express **strong support for SB 1120** 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-eight 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 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 fifth-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 SB 1120.**

Sincerely,

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

March 18, 2025

TESTIMONY IN SUPPORT TO
SENATE BILL 1120 SD1 HD1
RELATING TO TRANSPORTATION

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

Tuesday, March 18, 2025, 9:20 am
VIA VIDEOCONFERENCE
Conference Room 325
State Capitol
415 South Beretania Street

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

Island Energy Services, LLC ("IES") offers the following testimony in SUPPORT to SB 1120 SD1 HD1, which proposes the implementation of a Clean Fuel Standard (CFS) for Hawai'i. IES is in favor of this bill as it provides the means to provide market forces to encourage lowering the carbon intensity of transportation fuels used in the state. This measure is critical in addressing the environmental challenges associated with using fossil fuels in our transportation sector and aligns with the state's goal of achieving 100% clean energy by 2045. IES offers the following testimony:

- CFS programs have already been adopted in Washington, Oregon, California, New Mexico and all of Canada, with many other states considering implementing CFS programs. CFS is an incentive program designed to promote the lowering of emissions in all transportation fuels. It can also be a benefit to the maritime, aviation, and drayage industries for those wanting access to sustainable aviation fuels and other renewable fuels as well as creating opportunities for individuals looking to enter the renewable sector job market.
- The CFS program's 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.
- The CFS program treats both local renewable production and renewable fuel imports equitably when considering the carbon intensity. We very much support in-state

production of biofuels, however imports will need to be part of the fuel solution to enable Hawaii to meet its long range decarbonization goals and this CFS program allows imports that to be possible.

- Hawaii should be aligning carbon regulations with the other western states and Canada (CA, OR, WA, BC) given its geographic location and market dynamics to create a level commercial playing field. Hawai'i will be in direct competition with the U.S. West Coast states and British Columbia for renewable fuels and without a carbon pricing or similar CFS program, Hawai'i will be at a distinct commercial disadvantage to attract renewable fuels.
- The CFS program is an equitable way to drive carbon intensity down across end-users. IES believes that CFS programs are a more equitable way to drive carbon intensity down rather than tax-based programs. CFS programs burdens the users of the fuel rather than unfairly burdening the taxpayers of Hawaii.

Although in favor of the bill, IES advocates the following considerations to modify the bill:

- Allow intrastate marine fuel to opt in to the program. As written, the current bill allows for exemptions for diesel, gasoline, or other fuels used by aircraft, railroad locomotives, military vehicles, and interstate waterborne vessels. IES feels that local marine traffic should be able to opt in to the program as well.

In conclusion, SB 1120 SD1 HD1 represents a crucial step towards achieving Hawaii's clean energy goals and addressing the carbon emissions from the transportation sector. We support this legislation, recognizing its potential to promote innovation, create employment opportunities, and contribute to a cleaner and more sustainable future for the state.

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

Albert D.K. Chee, Jr.

Vice President

Island Energy Services, LLC

House Energy & Environmental Protection Committee

March 17, 2025

SB 1120, relating to transportation

Position: Support

The Low Carbon Fuels Coalition is a non-profit industry trade association with diverse membership of companies that produce clean fuels and clean technologies, and that provide services to the clean fuels industry. Our members include some of the leading companies and organizations that produce, provide and/or represent liquid, gaseous and electric fuels for all transportation sectors including on-road, aviation and marine, as well as large end users of these fuels.

The Coalition can attest to the effectiveness of existing similar programs in California, Oregon and Washington, and therefore, supports SB 1120 in Hawaii. Real-world data shows that these programs not only support greenhouse gas reductions in transportation and economic development through private investments, but do so without driving fuel prices.

The data shows no correlation between retail gasoline prices and credit prices in these programs. In fact, renewable diesel as a direct substitute for petroleum diesel has often been cheaper as a result of fuel market competition.

Due to this demonstrated success in other states, we are in strong support of SB 1120.

SB-1120-HD-1
Submitted on: 3/17/2025 7:55:53 AM
Testimony for EEP on 3/18/2025 9:20:00 AM

Submitted By	Organization	Testifier Position	Testify
Cory-Ann Wind	Clean Fuels Alliance America	Support	Written Testimony Only

Comments:

The Clean Fuels Alliance America (Clean Fuels) appreciates the opportunity to provide written comments on SB 1120. Clean Fuels is the U.S. trade association representing the entire supply chain for biodiesel, renewable diesel, sustainable aviation fuel, and Bioheat® fuel for thermal space heating. Our membership includes over 100 farmers, producers, marketers, distributors, and technology providers, and many are members of environmental organizations supportive of state and local initiatives to achieve a sustainable energy future.

Clean Fuels strongly supports the adoption of SB 1120 which would establish a technology-neutral and market-based clean fuels standard for the state of Hawaii. A clean fuel standard is the most successful policy being implemented to decarbonize transportation emissions while providing lower tailpipe pollution and improving public health. The clean fuels that we represent have replaced over 70% of the diesel pool in California, and around 25% in Oregon and Washington...the states that are currently implementing a clean fuel standard.

Thank you again for the opportunity to submit written comments on this bill and please feel free to contact me at cwind@cleanfuels.org if you have any questions.

Par Hawaii

COMMENTS ON SB 1120 SD1 HD1
RELATING TO TRANSPORTATION

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

Tuesday, March 18, 2025, 9:20 a.m.
Conference Room 325 & Videoconference

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

Thank you for the opportunity to submit testimony offering **comments** on SB 1120 SD1 HD1, Relating to Transportation. 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.

SB 1120 SD1 would require the Department of Transportation to adopt rules governing a clean fuel standard fuel 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 are committed to a part of this future by investing $90 million to develop Hawaii's largest liquid renewable fuels manufacturing facility at its Kapolei refinery. The project — to be commissioned in 2025 — is expected to produce approximately 61 million gallons each year of renewable diesel, sustainable aviation fuel, renewable naphtha and liquified petroleum gases using renewable feedstock.

We have three principal comments on SB 1120 SD1 HD1:

- **Section 2 requires the completion of a feasibility study of clean fuel standards (CFS). Implementing and administering a clean fuel standard is a significant undertaking. It is important that a broad range of stakeholders are heard from and consulted to avoid unintended consequences of this legislation. We strongly support the idea of a study that considers fuel price impacts of a clean fuel standard, and potential impacts to fuel supply, among other factors.**

- 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.

- 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.

HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION
March 18, 2025, 9:20 A.M.
Conference Room 325 and videoconference

TESTIMONY IN SUPPORT OF SB 1120 SD1 HD1

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

Blue Planet Foundation strongly supports SB 1120 SD1 HD1, which requires the Department of Transportation to adopt rules for a Clean Fuel Standard (CFS) that will reduce the carbon intensity of Hawai'i's transportation fuels and help our state meet its climate goals.

While Hawai'i has made solid progress on its renewable electricity targets, transportation carbon emissions remain stubbornly flat. Transportation is the state's largest source of lifecycle greenhouse gas emissions. A Clean Fuel Standard is an effective, market-based policy to reduce emissions in this sector—while also improving air quality, supporting local economies, and accelerating the transition to a healthier and more resilient Hawai'i.

To ensure that Hawaii's CFS delivers the maximum benefit to our communities and our climate, however, we respectfully offer the following amendments to strengthen and align this policy with our state's net-negative emissions target and our values of equity, resilience, and innovation.

RECOMMENDED AMENDMENTS TO STRENGTHEN SB 1120

1. **More Ambitious Carbon Intensity Targets**
   Increase the carbon intensity reduction goal to at least 30% below 2019 levels by 2035, and 90% below by 2045 to better align with Hawaii's net-negative emissions goals. These goals would be similar to those set by California's Low Carbon Fuel Standard.

2. **Add Interim Benchmarks & Accountability Mechanisms**
   Require a biennial review and progress report to ensure the program remains on track. Include authority to tighten standards if reductions lag behind schedule.

3. **Add Explicit Alignment with Net-Negative Goal**
   Clarify that the CFS is a tool to help Hawai'i become carbon-negative by 2045.

4. **Equity and Environmental Justice Provisions**
   Include requirements for meaningful consultation with impacted communities and allocate a portion of program revenues or credits to support low-income households,

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rural communities, Native Hawaiian communities, and those most burdened by pollution.

5. **Incentivize Community Benefit Projects**
   Establish a mechanism to direct a share of program-generated credit revenues into a Community Clean Transportation Fund to support access to EVs, charging infrastructure, public transit electrification, and local workforce development.

6. **Lifecycle Emissions Transparency**
   Supplement GREET model assessments with Hawaii-specific lifecycle data and review methodologies every three years to ensure comprehensive emissions accounting, including land use change, upstream methane leakage, and Scope 3 emissions.

7. **Promote Local, Circular Economy Solutions**
   Add bonus credit multipliers for alternative fuels produced and consumed in Hawai‘i, and for fuels derived from waste or invasive species that otherwise have no beneficial use.

8. **Electrofuel & Carbon Removal Integration**
   Codify eligibility for carbon-negative fuels (e.g., electrofuels from direct air capture and renewable electricity) and integrate carbon sequestration projects, such as biochar or regenerative agriculture, into the credit system.

9. **Opt-in Provisions for Maritime and Aviation Fuels**
   Encourage decarbonization in aviation and marine sectors through optional participation pathways, especially for interisland and intrastate operators.

10. **Prioritize Non-Combustion Solutions**
    Ensure the CFS does not over-incentivize combustion-based fuels at the expense of truly zero-emission pathways, such as electrification and hydrogen.

WHY THIS MATTERS NOW

Hawai‘i needs new tools to rapidly decarbonize its transportation sector. Programs like California’s Low Carbon Fuel Standard have catalyzed billions in clean infrastructure and fuel investments while avoiding significant price impacts at the pump. But we also must learn from other states' experiences and ensure that Hawai‘i’s CFS does not inadvertently lock in burnable biofuels or extractive feedstocks that harm communities or ecosystems. We must prioritize electrification, circular economy solutions, and deep decarbonization pathways—especially those that align with community priorities and support local resilience.

Blue Planet Foundation urges this Committee to pass SB 1120 with the amendments outlined above to ensure that Hawaii’s Clean Fuel Standard is not just effective—but equitable, future-ready, and climate-aligned.

Thank you for the opportunity to provide testimony.

Environmental Caucus of The Democratic Party of Hawai‘i

March 17, 2025

Testimony in Opposition to SB1120 SD 1 HD1 RELATING TO TRANSPORTATION

Submitted to: Chair Nicole E. Lowen, Vice Chair Amy A. Perruso, and Members of the Committee on Energy & Environmental Protection

Date: Tuesday, March 18, 2025 Time: 9:20 a.m.

Place: Conference Room 325 and Videoconference

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

As representatives of the Environmental Caucus of the Democratic Party, we submit this testimony in opposition to SB1120 SD1 HD1. While the bill seeks to promote the use of alternative fuels through a clean fuel standard, we have significant concerns about the measure's potential economic and logistical impacts.

1. **Economic Burden on Residents and Businesses:** Implementing a clean fuel standard could lead to increased fuel costs, disproportionately affecting low-income families and small businesses. The feasibility study may not adequately address these economic impacts, leaving residents vulnerable to higher living expenses.
2. **Premature Rule Adoption Deadline:** The requirement for the Department of Transportation to adopt rules by January 1, 2028, may not provide sufficient time to thoroughly evaluate the feasibility study's findings, engage stakeholders, and develop equitable and effective policies.
3. **Lack of Comprehensive Planning:** The bill does not outline a clear framework for integrating the clean fuel standard with existing state and federal initiatives, potentially leading to redundancy, inefficiency, and confusion among stakeholders.

We urge the Committee to reconsider the approach outlined in SB1120 SD1 HD1. Instead, we recommend a more phased and inclusive process that prioritizes stakeholder engagement, economic impact analysis, and alignment with broader sustainability goals.

Thank you for the opportunity to provide testimony.

Mahalo nui loa,
Melodie Aduja and Alan Burdick
Co-chairs, Environmental Caucus of the Democratic Party

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

MARCH 18, 2025

SB 1120, SD1, HD1, RELATING TO TRANSPORTATION

POSITION: COMMENTS

Coalition Earth **provides the following comments** on SB 1120, SD1, HD1, relating to transportation, which requires the Department of Transportation to conduct a feasibility study on implementing a clean fuel standard for alternative fuels in the State and requires, no later than 1/1/2028, the Department of Transportation to adopt rules governing a clean fuel standard for alternative fuels in the state.

According to a report produced by the Hawai'i Climate Change Mitigation and Adaptation Commission, global sea levels could rise more than three feet by 2100, with more recent projections showing this occurring as early as 2060. In turn, over the next 30 to 70 years, approximately 6,500 structures and 19,800 people statewide will be exposed to chronic flooding. Additionally, an estimated $19 billion in economic loss would result from chronic flooding of land and structures located in exposure areas. Finally, approximately 38 miles of coastal roads and 550 cultural sites would be chronically flooded, on top of the 13 miles of beaches that have already been lost on Kaua'i, O'ahu, and Maui to erosion fronting shoreline armoring.

As we work to reduce carbon emissions and stave off the worst consequences of climate change, we must begin preparing for the adverse impact of sea level rise on our shores. We are now quantifying the speed at which we must act. We cannot continue to develop the 25,800-acre statewide sea level rise exposure area–one-third of which is designated for urban use–without risking massive structural damage and, potentially, great loss of life.

Just two years ago, we witnessed the impact of the climate emergency on our shores. On August 8, 2023, wildfires swept across Maui and killed at least 100 people, making it one of the nation's deadliest natural disasters. The spread of the fires has been attributed to climate change conditions, such as unusually dry landscapes and the confluence of a strong high-pressure system

to the north and Hurricane Dora to the south. The wildfires destroyed over 2,200 structures, including numerous residential buildings, historic landmarks, and school facilities. In September 2023, a report from the United States Department of Commerce estimated the total economic damage of the wildfires to be roughly $5.5 billion. Investing in renewable energy generation could not be more urgent, given the growing threat of climate catastrophes to our island home.

Therefore, **our state should take steps to accelerate our transition to a clean energy economy and continue our fight against climate change, including by hastening our transition to a clean transportation network.** Transportation is our state's largest source of lifecycle greenhouse gas emissions, a fact that is exacerbated by our economic reliance on visitor-related travel. Development of a clean fuel standard is intended to reduce the state's direct and indirect greenhouse gas emissions, while also protecting Hawai'i's financial security, public health, and natural resources.

As our nation expands its use of zero-emission vehicles, other states like California, Oregon, and Washington have implemented clean fuel standards and aligned programs that seek to reduce the carbon footprint of their transportation fuels. California's Low Carbon Fuel Standard (LCFS) is designed to decrease the carbon intensity of the state's transportation fuel pool and support a range of low-carbon and renewable alternatives to reduce petroleum dependency, achieve air quality benefits, and amplify energy resilience.

According to the Kleinman Center for Energy Policy, California's Low Carbon Fuel Standard is a prominent part of the state's climate mitigation strategy. The LCFS requires the carbon intensity of transportation fuels sold in California to decline every year. To comply, bulk fuel sellers must either reduce emissions within their own supply chains or procure credits from companies that sell lower-carbon fuels, all based on life cycle carbon intensity calculations overseen by the state climate regulator.

Notably, however, the value of LCFS credits issued since 2013 in California equates to approximately $22.1 billion, about 80 percent of which has gone to combustion-based biofuel producers. While the primary justification for supporting biofuels in the LCFS is that the state expects a prolonged process of replacing combustion-powered vehicles with clean transportation models (especially when it comes to heavy duty vehicles), that transition needs investment in fast-charging infrastructure and vehicle rebates. **Therefore, the LCFS runs the risk of undermining California's clean transportation transition goals by funneling capital toward replacing fossil diesel with biofuels, rather than toward funding electrification.**

Additionally, the fastest-growing category of biofuels credited under California's LCFS, renewable diesel, is primarily made from food crops like soybean and canola oil. Crop-based biofuels compete with food production and increase land-use impacts, including deforestation, that may not be accurately captured by the LCFS program's carbon intensity scores. The Kleinman Center and other energy experts have noted that California's LCFS is "likely leading to 'resource shuffling' of renewable diesel made to comply with national production mandates. **To the extent that those fuels reduce pollution relative to fossil alternatives, they would do so with or**

without the LCFS." Finally, there are growing technical and environmental justice concerns about biomethane projects credited under the LCFS that claim to avoid methane emissions from dairies, landfills, and other sources**. Notably, biomethane projects earn LCFS credits even when they don't deliver fuel to California**, a policy that further destabilizes the in-state carbon reduction implications of the program and that could be even more problematic if applied in Hawai'i.

To ensure that our local carbon reduction targets are achieved on a timescale that aligns with our clean economy goals, we should establish clean transportation strategies that strengthen community resilience and sustainability, spur green growth and development, maximize the potential of emerging clean energy technologies, follow the regenerative principles of a circular economy, and bolster our carbon reduction efforts. Any clean fuel standard adopted by our state must embrace those core values.

Coalition Earth is a nongovernmental organization that works to preserve the well-being of people and our planet. We champion policies that advance climate resilience, clean energy, public health, and economic fairness for working families. ***Contact us at info@coalitionearth.org.***

SB-1120-HD-1
Submitted on: 3/16/2025 9:42:18 AM
Testimony for EEP on 3/18/2025 9:20:00 AM

Submitted By	Organization	Testifier Position	Testify
Susan B Roberts Emery	Green Party of Hawai'i	Oppose	Written Testimony Only

Comments:

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

My name is Susan RobertsEmery, I am the Co Chair of the Green Party of Hawai'i . The Green Party of Hawai'i strongly opposes SB1120 SD1 HD1. This is not a true Clean fuel, burnable fuel,is not clean. The fact that SB1120 excludes aircraft, the liquid fuels would be used in land based sectors that Could Use, No Burn sources such as solar power! This makes no sense whatsoever. Why would we not use clean sources of power for all our land based needs!

The Green Party asks that common sense prevail, and a Hold vote is the way of SB1120 SD1 HD1.

Sincerely,

Susan RobertsEmery
Green Party Hawai'i
Paauilo

Joint Testimony of
Twelve Benefit Corporation & **Infinium Operations, LLC**
on
S.B. 1120, S.D. 1, H.D. 1
Relating to Transportation

House Committee on Energy & Environmental Protection
March 18, 2025; 9:20 A.M.

Twelve Benefit Corporation (Twelve) and Infinium Operations, LLC (Infinium) appreciate the opportunity to provide this joint testimony in support of Senate Bill 1120, S.D. 1, H.D. 1, which would direct the Department of Transportation to adopt rules governing a Clean Fuel Standard (CFS) for diesel, gasoline, and alternative fuels used in Hawaii.

Twelve and Infinium are California-based companies focused on the production of electrofuels.[1, 2] Sometimes referred to as power-to-liquid (PtL) fuels or e-fuels, electrofuels are ultra-low carbon intensity (CI), drop-in liquid fuels made from waste carbon dioxide (e.g., CO_2 captured from an ethanol fermentation plant, refinery, or cement plant), water, and renewable electricity. Compared to their conventional, petroleum-based counterparts, electrofuels – for example, Twelve's E-Jet® and Infinium's eDiesel – reduce lifecycle greenhouse gas (GHG) emissions by up to 90 percent. These innovative fuels conform to the specifications of the relevant ASTM International fuel standards, and importantly, do not present the indirect land use change impacts or feedstock constraints that other types of alternative fuel (e.g., crop-based and waste oil-based fuels) do.

Electrofuels are widely regarded as one of the most promising pathways, if not the most promising pathway, to decarbonization of the transportation sector. The *U.S. National Blueprint for Transportation Decarbonization*, a multi-agency effort released by the federal government two years ago, pointed out that electrofuels represent "a viable

[1] For more on Twelve and Infinium and our respective technologies and electrofuel products, please visit our company websites at https://www.twelve.co/ and https://www.infiniumco.com/.

[2] Twelve and Infinium previously presented joint testimony in support of S.B. 1120, S.D.1 to the House Committee on Transportation, while Twelve previously presented testimony in support of S.B. 1120 to the Senate Committees on Transportation and Culture and the Arts and Agriculture and Environment.

pathway" to sustainable, low-carbon transportation fuels,[3] while the International Energy Agency (IEA) has asserted that electrofuels "made from biogenic or air-captured CO_2 can potentially provide full emissions reduction, making them the primary production pathway that is consistent with achieving net zero [aviation, marine, and on-road transport sector] emissions mid-century."[4] In its report, the IEA emphasized that "[g]overnments need to take bolder action to stimulate demand for low-emission e-fuels."[5]

It is important to understand that, as the term implies, electrofuels are electricity intensive. For that reason, Twelve, Infinium, and others in the PtL fuels space rely on renewable sources of energy like solar, wind, and hydropower. Indeed, the deep CI reductions that electrofuels achieve result from this reliance on renewable, zero-CI electricity.

With the above background in mind, Twelve and Infinium offer the following comments on S.B. 1120, S.D. 1, H.D. 1.

First, we applaud the broad definition of "alternative fuel" in section 3(c) of the bill. In particular, we strongly support the express inclusion of fuels from carbon capture and utilization and electrofuels (as well as sustainable aviation fuel). This clear language would leave no doubt that the liquid fuels produced by our companies (and, of course, other PtL fuel producers) are encompassed within the definition and, hence, are eligible to generate credits under the CFS.

Second, notwithstanding the unmistakable legislative intent set forth in section 1 and the directives contained in section 3(a)(2) and other provisions within section 3(a), we suggest that the introductory text on lines 7-11 of page 4 be revised to read as follows (<u>underline</u> indicates additions):

> No later than January 1, 2028, the department of transportation shall adopt rules pursuant to chapter 91, Hawaii Revised Statutes, governing a clean fuel standard for

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[3] *The U.S. National Blueprint for Transportation Decarbonization: A Joint Strategy to Transform Transportation*, at 55 (Jan. 2023), available at https://www.energy.gov/sites/default/files/2023-01/the-us-national-blueprint-for-transportation-decarbonization.pdf.

[4] IEA, *The Role of E-Fuels in Decarbonising Transport*, at 10, 24 (Jan. 2024), available at https://iea.blob.core.windows.net/assets/a24ed363-523f-421b-b34f-0df6a58b2e12/TheRoleofE-fuelsinDecarbonisingTransport.pdf.

[5] *Id.* at 9.

> <u>diesel, gasoline, and</u> alternative fuels in the State. The rules shall include:

We similarly suggest on lines 15 and 17 of page 3 and also on line 1 of page 4 that "diesel, gasoline, and" be inserted immediately before "alternative fuels." Together, these revisions would eliminate any ambiguity and make it crystal clear that the CFS rules shall apply to diesel, gasoline, and alternative fuels, not just the latter.

Finally, and perhaps most importantly, we recommend that a new clause be added to section 3(b), providing as follows:

> (13) Mechanisms whereby electrofuel producers can utilize indirect accounting to lower the carbon intensity of electricity used in the fuel production process through the retirement of renewable energy certificates.

By adding this provision to the bill, the Hawaii State Legislature would be incentivizing the production and in-state use of innovative, ultra-low CI electrofuels like Twelve's E-Jet and Infinium's eDiesel. This is because the State would be affording electrofuel producers like Twelve and Infinium the flexibility to source the zero-CI electricity needed for the fuel production process through renewable energy certificates (RECs). The ability to rely on RECs associated with off-site renewable electricity in lieu of needing to have a direct, behind-the-meter connection to a renewable energy source, in turn, would enable the generation of credits under the CFS in those instances when a direct connection is simply not feasible, thus incentivizing the production and use of electrofuels throughout the State.[6] This, of course, would yield tremendous GHG reduction benefits for Hawaii and its residents.

In short, Twelve and Infinium strongly encourage the Legislature to heed the IEA's call, as referenced above, and authorize the Department of Transportation to include in the CFS rules indirect accounting mechanisms for the renewable electricity that is integral to the production of electrofuels. Doing so, it bears emphasizing, would be consistent with and make truly consequential the inclusion of electrofuels within the CFS definition of "alternative fuel."

[6] For a host of reasons, co-locating an electrofuel production facility with, or otherwise ensuring that it has a direct, behind-the-meter connection to, a renewable power source is often infeasible and impractical (and in the case of hydropower, difficult or physically impossible to accomplish).

* * *

Twelve and Infinium thank you again for the opportunity to submit this joint testimony.

SB-1120-HD-1
Submitted on: 3/14/2025 9:18:54 PM
Testimony for EEP on 3/18/2025 9:20:00 AM

Submitted By	Organization	Testifier Position	Testify
Tasman Kekai Mattox	Individual	Support	Written Testimony Only

Comments:

It would be awesome to see DaBus running on cleaner fuel!

SB-1120-HD-1
Submitted on: 3/16/2025 7:41:38 AM
Testimony for EEP on 3/18/2025 9:20:00 AM

Submitted By	Organization	Testifier Position	Testify
Robert Culbertson	Individual	Oppose	Written Testimony Only

Comments:

Aloha legislators!

I oppose SB 1120 and you should too. It's time to end burning anything!

'Crop residues' should be turned into the soil (or lava substrate) to build and fortify nutrients. The old Hawaiians were masters of growing food amid lava rock.

Please kill this unwarranted bill!

Respectfully,

R A Culbertson

Honokaa

SB-1120-HD-1
Submitted on: 3/17/2025 2:06:21 PM
Testimony for EEP on 3/18/2025 9:20:00 AM

Submitted By	Organization	Testifier Position	Testify
Janice Palma-Glennie	Individual	Oppose	Written Testimony Only

Comments:

aloha,

please vote "NO" on this bill which is strongly opposed by Energy Justice Network, an organization whose work and opinions i strongly support.

mahalo and sincerelyl,

janice palma-glennie

kailua-kona