

HAWAII STATE ENERGY OFFICE STATE OF HAWAII

235 South Beretania Street, 5TH Floor, Honolulu, HI 96813 | energy.hawaii.gov

DAVID Y. IGE
GOVERNOR

SCOTT J. GLENN
CHIEF ENERGY OFFICER

(808) 587-3807

Testimony of
SCOTT J. GLENN, Chief Energy Officer

before the
HOUSE COMMITTEE ON FINANCE
Thursday, February 20, 2020
11:00 AM
State Capitol, Conference Room 308

In SUPPORT of
HB 1910, HD1
RELATING TO SUSTAINABLE AVIATION FUEL.

Chair Luke, Vice Chair Cullen, and Members of the Committee, the Hawaii State Energy Office (HSEO) supports HB 1910, HD1, which establishes a sustainable aviation fuel program in the High Technology Development Corporation and appropriates funds for grants to businesses in Hawaii developing sustainable aviation fuels or aviation greenhouse gas reduction, provided that its passage does not replace or adversely impact priorities indicated in our Executive Budget.

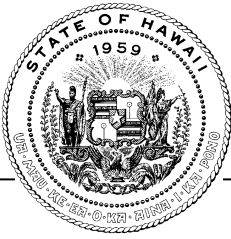
This is a very important area for innovation, and Hawaii is uniquely positioned to develop solutions and to continue to be a leader in the area of sustainable aviation fuels, building upon the success of the Federal initiative, headquartered in Hawaii, known as the Green Initiative For Fuels Transition – Pacific (GIFTPAC) from 2009-2019, and the recent Hawaii Aviation and Climate Action Summit, which convened national and international leaders in the field of sustainable aviation fuels here in Hawaii just two months ago.

Greenhouse gas emissions from air travel are a particularly significant area to address, since jet fuel is one of the largest sources of Hawaii's greenhouse gas emissions.

We look forward to successful developments in this important area.

HSEO's comments are guided by its mission to promote energy efficiency, renewable energy, energy resiliency, and clean transportation to help achieve a decarbonized economy.

Thank you for the opportunity to testify.



OFFICE OF PLANNING STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

DAVID Y. IGE
GOVERNOR

MARY ALICE EVANS
DIRECTOR
OFFICE OF PLANNING

Statement of
MARY ALICE EVANS
Director, Office of Planning
before the
HOUSE COMMITTEE ON FINANCE
Thursday, February 20, 2020
11:00 AM
State Capitol, Conference Room 308

in consideration of
HB 1910 HD 1
RELATING TO SUSTAINABLE AVIATION FUEL.

Chair Luke, Vice Chair Cullen, and Members of the House Committee on Finance:

The Office of Planning **supports** the intent of this measure. The purpose of HB 1910 HD 1 is to establish the sustainable aviation fuel program to provide grants to any business in Hawai'i that is developing products related to sustainable aviation fuel or aviation greenhouse gas reduction.

The Office of Planning has been actively working on sustainable development and climate adaptation to meet the needs of the present without compromising the ability of future generations to meet their own needs.

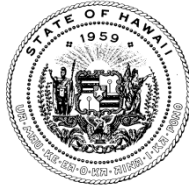
The Office of Planning recently published in December 2019 the *Feasibility and Implications of Establishing a Carbon Offset Program for the State of Hawai'i*. The publication was electronically provided to the Hawai'i State Legislature. The publication may also be found at the Office of Planning's website:

http://files.hawaii.gov/dbedt/op/sustainability/feasibility_and_implications_of_establishing_a_carbon_offset_program_for_the_state_of_hawaii_finalweb.pdf

Through this publication, the Office of Planning recommended that regardless of the use of offsets, the state government should take all actions at its disposal with appropriate financial consideration, to explore and implement all feasible greenhouse gas reduction measures. The *Feasibility and Implications of Establishing a Carbon Offset Program for the State of Hawai'i* report also recommended the adoption of alternative fuels in transportation.

HB 1910 HD 1 supports these greenhouse gas reduction efforts through the exploration and investment of a sustainable fuel program. The Office of Planning looks forward to supporting the Hawai'i Technology Development Corporation in these sustainable and climate adaptive endeavors. Mahalo for the opportunity to submit testimony in support of HB 1910 HD 1.

DAVID Y. IGE
GOVERNOR



TESTIMONY BY:

JADE T. BUTAY
DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

February 20, 2020
11:00 a.m.
State Capitol, Room 308

H.B. 1910, H.D. 1
RELATING TO SUSTAINABLE AVIATION FUEL.

House Committee on Finance

The Department of Transportation **supports** the intent of this bill to establish the sustainable aviation fuel program by appropriating general funds to provide grants to any business in Hawaii that is developing products related to sustainable aviation fuel or aviation greenhouse gas reduction.

The DOT welcomes renewable energy opportunities this program may bring in advancing Hawaii clean energy future by reducing Hawaii's dependence on fossil fuels.

Thank you for the opportunity to provide testimony.



Written Statement of
Len Higashi
Acting Executive Director
Hawaii Technology Development Corporation
before the
House Committee On Finance
Thursday, February 20, 2020
11:00 a.m.
State Capitol, Conference Room 308

In consideration of
HB1910, HD1
RELATING TO SUSTAINABLE AVIATION FUEL.

Chair Luke, Vice Chair Cullen, and Members of the Committee.

The Hawaii Technology Development Corporation (HTDC) offers **comments** on HB1910, HD1 that establishes the sustainable aviation fuel program to provide grants to any business in Hawaii that is developing products related to sustainable aviation fuel or aviation greenhouse gas reduction.

As part of HTDC's vision to create 80,000 new innovation jobs in Hawaii earning \$80,000 or more by 2030, HTDC supports initiatives aimed at growing tech and innovation jobs. HTDC's Hawaii Center for Advanced Transportation Technologies has previously piloted various hydrogen fuel technology demonstrations. HTDC's grant programs typically require a company match to ensure leverage for the State. HTDC previously testified that our attorney general notified us that the bill needs to be amended with more specific language. In subsequent discussions, the AG's concerns are recommendations rather than a requirement. The amendment in HD1 does provide further clarification for award criteria. HTDC looks forward to working with all stakeholders in moving this initiative forward provided it does not supplant the priorities in the Administration's budget.

Thank you for the opportunity to offer these comments.

HB-1910-HD-1

Submitted on: 2/19/2020 10:35:58 AM

Testimony for FIN on 2/20/2020 11:00:00 AM

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|------------------------------|---------------------------|---------------------------|
| Climate Protector | Climate Protectors Coalition | Support | No |

Comments:

HOUSE OF REPRESENTATIVES
THE THIRTIETH LEGISLATURE
REGULAR SESSION OF 2020
COMMITTEE ON FINANCE
20 Feb 2020

TESTIMONY ON HOUSE BILL NO. 1910 HD 1, RELATING TO SUSTAINABLE AVIATION FUEL

Position: **Support with Comments**

To the Honorable Silvia Luke, Chair; the Honorable Ty J.K. Cullen, Vice Chair; and Members of the Committee:

Our company was the convenor for the first-ever Hawaii Aviation and Climate Action Summit, which was held December 3rd 2019. At this Summit, which was free and open to the public, nearly 100 representatives from major airlines, local fuel and transportation industry leaders, environmental advocates, and officials from the State of Hawaii met to discuss actions to be taken to reduce the greenhouse gas (GHG) emissions from international airlines serving Hawaii. Attendees reviewed the mandate established by the International Civil Aviation Organization (ICAO)'s Carbon Offset and Reduction Scheme for International Aviation (CORSIA). CORSIA, the aviation equivalent of the Paris Climate Accord, applies to all international flights including those to and from Hawaii, and requires commercial airlines to reduce the GHG intensity of their operations by 50% below 2005 levels by 2050. Commercial airlines began benchmark reporting in 2019 and the program becomes mandatory for most developed countries' airlines in 2022.

At the Summit, attendees voted to rank several potential state policy measures to facilitate sustainable aviation fuel production in Hawaii for airlines serving Hawaii. Applying barrel tax funds to support infrastructure investments was the measure that received the highest ranking. Expanding HTDC's matching funding program was the mechanism that achieved the greatest consensus in the afternoon workshop. These and other findings and recommendations are [published online at www.simonpietri.com](http://www.simonpietri.com).

I concur with HTDC's concerns that, as written, the language of the bill is too vague. After reviewing the language, I recommend that some of the specific recommendations from the Summit proceedings be incorporated into the language, and also specify that the program is to provide matching funds to small businesses, to bring it more in line with existing HTDC programs. I reviewed the Summit proceedings again and compiled some suggested edits into bill language form, which are attached to this testimony for your consideration.

Finally, I would like to note that the consensus at the Summit discussion was to apply the portion of the barrel tax funds that currently go to the General Fund. This supports this program without adversely affecting other HTDC programs.

Sincerely,



Marie-Joelle Simonpietri
President

About Simonpietri Enterprises

Simonpietri Enterprises is a boutique contracting/consulting company focused on technical innovation and first-of-kind project development of emerging clean and renewable technologies. We help established and emerging industrial companies 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 is the voluntary convener of the Federal Aviation Administration's public-private Commercial Aviation Alternative Fuels Initiative (www.CAAFI.org) focal for Hawaii and tropical regions, and serves as an industry advisory committee member of the Federal Aviation Administration's Aviation Sustainability Center of Excellence on renewable aviation fuel production and certification (www.ascent.aero).

A BILL FOR AN ACT

RELATING TO SUSTAINABLE AVIATION FUEL.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

Whereas: At the inaugural Hawaii Aviation and Climate Action Summit on December 3rd, 2019, participants found that

- 1) Tourism is the #1 driver of Hawaii's economy;*
- 2) Over 95% of visitor arrivals are by plane;*
- 3) Nearly one-third of the energy consumed in the state is for jet fuel, which is a higher proportion of petroleum consumption than any other energy sector;*
- 4) Over a third of Hawaii flights are to & from international destinations;*
- 5) In 2022, these flights will begin to come under the mandate established by the International Civil Aviation Organization (ICAO)'s Carbon Offset & Reduction Scheme for International Aviation (CORSIA);*
- 6) CORSIA requires commercial airlines to reduce greenhouse gas emissions by 50% below 2005 levels by 2050;*
- 7) Mechanisms for airlines to meet CORSIA requirements include fuel efficiency improvements, switching to sustainable aviation fuel with a greenhouse gas carbon intensity below a petroleum benchmark, and purchasing and retiring carbon offsets;*
- 8) The State of Hawaii can support small and local business innovation and technology development for this important*

sector by expanding the authority of the Hawaii Technology Development Corporation to match federal and private funding in this area; and

- 9) A portion of the environmental response, energy, and food security tax (aka 'barrel tax') currently allocated to the General Fund can be appropriately directed to HTDC to support this program.

Now therefore:

SECTION 1. Chapter 206M, Hawaii Revised Statutes, is amended ~~by adding a new section~~ to support the greenhouse gas lifecycle reduction of commercial aviation serving Hawaii, in support of the International Civil Aviation's Carbon Offset and Reduction Scheme for International Aviation. The amendment adds a new section to part I to be appropriately designated and to read as follows:

"§206M- Sustainable aviation fuel program;

established. (a) There is established the sustainable air transportation program, through which the development corporation may provide matching grants to any small business in Hawaii that is developing products related to sustainable aviation fuel or commercial aviation operations greenhouse gas reduction and requires assistance for any of the following items:

- (1) Business planning;
- (2) Technology development;
- (3) Engineering or

(4) Research.

(b) All moneys necessary to carry out the purposes of this section shall be appropriated by the legislature through appropriations out of the state environmental response, energy, and food security tax.

(c) In reviewing grant applications pursuant to this section, the development corporation shall analyze each application to determine whether the item to be undertaken will be economically viable and beneficial to the State."

(d) For the purposes of this program, product development activities eligible for these matching funds would reduce commercial aviation greenhouse gas emissions through:

(1) sustainable aviation fuel production

(2) airborne operations fuel efficiency

(3) ground support equipment fuel replacement

(4) ground support equipment fuel efficiency

(5) airport operations support to reduce overall jet fuel consumptions

(e) Definitions:

- "Sustainable Aviation Fuel" is "American Society for Testing and Materials (ASTM) D7566-compliant renewable aviation turbine fuel derived from eligible materials as defined under HRS §269-91 and with a greenhouse gas lifecycle carbon intensity lower than the baseline for jet fuel defined by the International Civil Aviation Organization."

- "Carbon intensity" shall be measured in the units of "grams of carbon dioxide equivalent per megajoule"
- "Hawaii jet fuel baseline carbon intensity" shall be set at 89 grams of carbon dioxide equivalent per megajoule, in line with the benchmark established by the International Civil Aviation Organization. This carbon intensity may be revised from time to time by the Hawaii State Legislature after a recommendation from the Hawaii State Energy Office based upon future revisions to the U.S. Department of Energy's GREET model.
- "GREET" is the Greenhouse gases, Regulated Emissions, and Energy use in Transportation full life-cycle model maintained by the U.S. Department of Energy.
- "Grant" means financial assistance provided to SBIR, ~~and~~ STTR, and other agency and private sector awardees and applicants under the terms and conditions provided in this chapter.
- "Hawaii Small Business Innovation Research, ~~and~~ Small Business Technology Transfer, and Sustainable Aviation Grant Program" means the programs administered by the development corporation to encourage participation by Hawaii companies in the federal research and development programs.
- "other agency" means an award or contract granted by the U.S. Department of Agriculture, Transportation,

Energy, Defense, Commerce, or other federal agency for activity consistent with those defined in this Program.

SECTION 2. There is appropriated out of the general revenues of the State of Hawaii the sum of \$ _____ or so much thereof as may be necessary for fiscal year 2020-2021 for the sustainable aviation fuel program.

The sum appropriated shall be expended by the Hawaii technology development corporation for the purposes of this Act.

SECTION 3. New statutory material is underscored.

SECTION 4. This Act shall take effect on July 1, 2020.

INTRODUCED BY: _____

Report Title:

HTDC; Sustainable Aviation Fuel Program; Appropriation

Description:

Establishes the sustainable aviation fuel program to provide grants to any business in Hawaii that is developing products related to sustainable aviation fuel or aviation greenhouse gas reduction. Appropriates funds.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.



February 19, 2020

To: The House Committee Members on Finance
The Honorable Sylvia Luke, Chair
The Honorable Ty J.K. Cullen, Vice Chair

Re: Strong Support of HB1910 HD1, Relating to Sustainable Aviation Fuel

Hrg: February 20, 2020 at 11:00 AM at Capitol Room 308

The Hawaii Public Health Association (HPHA) is a group of over 600 community members, public health professionals and organizations statewide dedicated to improving public health. HPHA also serves as a voice for public health professionals and as a repository for information about public health in the Pacific.

HPHA strongly supports HB1910 HD1, which would establish the sustainable aviation fuel (SAF) program to provide grants to any business in Hawaii that is developing products related to sustainable aviation fuel or aviation greenhouse gas reduction and appropriates funds.

The movement towards sustainable aviation fuel has taken off not only within the mainland United States but also in the European Union, the Netherlands, the United Kingdom, and Norway. The International Energy Agency (IEA) in their World Energy Outlook (WEO) has highlighted that the world's need for fuel will double within 50 years. Developing this capacity locally contributes to reducing fossil fuel impacts on our islands and the health of our communities while providing sustainable new business opportunities

The effect of shifting to SAF not only has an economic impact but most importantly an environmental impact. The Union of Concerned Scientists noted in a July 2008 publication titled *The Hidden Costs of Fossil Fuels*, updated in August 2016, that in 2014 approximately 78 percent of US global warming emissions were energy-related emissions. Burning fossil fuels also emit other pollutants including sulfur dioxide, nitrogen oxides, particulate matter, and mercury. The individual health effects of these include respiratory ailments or lung tissue damage. Actions that reduce climate change can dramatically improve health. Choices we make now will determine the magnitude of climate impacts faced in the future

We believe that shifting to SAF would catalyze not only economic opportunities in the development of sustainable fuels but also will lead to a gradual alleviation of current energy-related emissions. Reducing climate pollution will simultaneously reduce the incidence of communicable and non-communicable disease, improve mental health and promise significant health care cost savings.

Thank you for the opportunity to provide testimony on critical issues affecting the health of the people of Hawaii.

Respectfully submitted,

Tenaya Jackman, MPH
Board Member
Climate Change Legislative Sub-Committee Chair
Hawaii Public Health Association

7192 Kalanianaʻole Highway, Suite A143A, PMB 226, Honolulu, HI 96825-1832
www.hawaiipublichealth.org info@hawaiipublichealth.org