



Written Statement of
Len Higashi
Acting Executive Director
Hawaii Technology Development Corporation
before the
House Committee On Economic Development & Business
and the
House Committee On Energy & Environmental Protection
Wednesday, February 12, 2020
9:00 a.m.
State Capitol, Conference Room 309

In consideration of
HB1910
RELATING TO SUSTAINABLE AVIATION FUEL.

Chairs McKelvey and Lowen, Vice Chairs Kitagawa and Wildberger, and Members of the
Committee.

The Hawaii Technology Development Corporation (HTDC) offers **comments** on HB1910 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. The attorney general has notified us that the bill needs to be amended. We defer to their technical amendments. 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.

HOUSE OF REPRESENTATIVES
THE THIRTIETH LEGISLATURE
REGULAR SESSION OF 2019

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION /
ECONOMIC DEVELOPMENT & BUSINESS

DATE: 12 Feb 2020
TIME: 9 A.M.
PLACE: Conference Room 309

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

Position: **Support**

To the Honorable Nicole Lowen, Chair; the Honorable Tina Wildberger, Vice Chair; the Honorable Angus L.K. McKelvey, Chair; the Honorable Lisa Kitagawa, Vice Chair; and Members of the Committees:

Our company was the convener 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 (CORSA). CORSA, 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 developed countries' airlines in 2022.

At the Summit, attendees voted on several potential state policy measures to facilitate sustainable aviation fuel production in Hawaii for airlines serving Hawaii. "Apply 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. These and other findings and recommendations are [published online](#).

I would like to recommend one minor modification to the bill language, which is to insert "small" into the phrase "any business," in order to be more consistent with HTDC's existing small business programs and administration methods. Specifically:
"...There is established the sustainable aviation fuel program, through which the development corporation may provide grants to any *small* business in Hawaii that is developing products related to sustainable aviation fuel or aviation greenhouse gas reduction..."

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 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).



183 Pinana St., Kailua, HI 96734 • 808-262-1285 • info@350Hawaii.org

To: The House Committees on Economic Development & Business;
and Energy & Environmental Protection
From: Brodie Lockard, Founder, 350Hawaii.org
Date: Wednesday, February 12, 2020, 9:00 am

In strong support of HB 1910

Dear Chairs McKelvey and Lowen, and members:

350Hawaii strongly supports HB 1910.

According to the International Air Transportation Association, an international trade group that represents 290 carriers, domestic and international flights in 2018 emitted around 895 million metric tons of carbon dioxide in 2018. That was a 26% increase over 2013 [1].

Global air travel into and out of Hawaii alone in 2017 produced as much CO₂ as generating electricity for almost 1.1 million homes for a year [1].

Transportation has become the largest portion (29%) of total U.S. greenhouse gas emissions [2], and airplane flights are drawing increasing attention as a considerable contributor.

Flyers' 102,465 flights every day around the globe emit enormous amounts of CO₂ [3]. Because plane emissions involve other states and countries, they can't be easily regulated.

Renewable energy is now the cheapest form of new electricity generation across two thirds of the world [4]. Electric vehicles are spreading and receiving much attention. Electric planes are coming [5]. Pilots can make small changes in the way they operate aircraft, having a big impact on reducing fuel use and carbon emissions [1].

But currently, planes spew close to a billion metric tons of carbon dioxide every year, and they need to be far cleaner.

Please pass this bill and let Hawaii help reign in this increasing source of GHG emissions.

Brodie Lockard
Founder, 350Hawaii.org

- [1] <https://www.civilbeat.org/2019/08/air-travels-carbon-footprint-takes-a-big-environmental-toll-in-hawaii/>
- [2] <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>
- [3] <https://garfors.com/100000-flights-day-html/>
- [4] <https://thinkprogress.org/renewables-now-cheaper-than-new-coal-or-gas-across-two-thirds-of-the-world-c4980412cb53/>
- [5] <https://www.youtube.com/watch?v=1srmGS282bQ>

HB-1910

Submitted on: 2/6/2020 8:56:45 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jennifer Azuma Chrupalyk	Individual	Support	No

Comments:

HB-1910

Submitted on: 2/9/2020 8:34:15 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sherry Pollack	Individual	Support	No

Comments:

HB-1910

Submitted on: 2/9/2020 10:44:20 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Victoria Anderson	Individual	Support	No

Comments:

Please pass this important bill!

HB-1910

Submitted on: 2/10/2020 4:39:18 AM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Caroline Kunitake	Individual	Support	No

Comments:

Dear Chair McKelvey, Chair Lowen and Members of the Joint Committee on Economic Development & Business and Committee on Energy and Environmental Protection,

I am writing in support of HB1910 which 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.

Because Hawaii is so isolated and dependent on the aviation industry to bring tourist to Hawaii, it is in our state's interest to identify ways to reduce the aviation greenhouse gases. Hawaii could be a leader in developing the technologies and techniques to create a sustainable aviation fuel. We need to be more progressive in our efforts to find a way to make the tourism industry in Hawaii more sustainable for the planet.

Please pass HB1910.

Mahalo,

Caroline Kunitake

HB-1910

Submitted on: 2/10/2020 8:18:57 AM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nanea Lo	Individual	Support	No

Comments:

Hello,

My name is Nanea Lo. I am a lifelong resident of Hawai'i on O'ahu. I am writing in to say I support this bill.

me ke aloha 'Ä• ina,

Nanea Lo

HB-1910

Submitted on: 2/10/2020 2:19:38 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Justin Salisbury	Individual	Support	No

Comments:

HB-1910

Submitted on: 2/10/2020 5:54:43 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andrea Quinn	Individual	Support	No

Comments:

Dear Honorable Committee Members:

Please support HB1910, which will help in the fight against climate change.

Thank you for the opportunity to present my testimony.

Andrea Quinn

Kihei, Maui

HB-1910

Submitted on: 2/10/2020 9:36:34 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Roseann Michaud	Individual	Support	No

Comments:

HB-1910

Submitted on: 2/11/2020 8:31:38 AM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
helen raine	Individual	Support	No

Comments:

Date: Wednesday, February 12, 2020, 9:00 am

In strong support of HB 1910

Dear Chairs McKelvey and Lowen, and members:

I strongly support HB 1910.

According to the International Air Transportation Association, an international trade group that represents 290 carriers, domestic and international flights in 2018 emitted around 895 million metric tons of carbon dioxide in 2018. That was a 26% increase over 2013 [1].

Global air travel into and out of Hawaii alone in 2017 produced as much CO2 as generating electricity for almost 1.1 million homes for a year [1].

Transportation has become the largest portion (29%) of total U.S. greenhouse gas emissions [2], and airplane flights are drawing increasing attention as a considerable contributor.

Flyers' 102,465 flights every day around the globe emit enormous amounts of CO2 [3]. Because plane emissions involve other states and countries, they can't be easily regulated.

Renewable energy is now the cheapest form of new electricity generation across two thirds of the world [4]. Electric vehicles are spreading and receiving much attention.

Electric planes are coming [5]. Pilots can make small changes in the way they operate aircraft, having a big impact on reducing fuel use and carbon emissions [1].

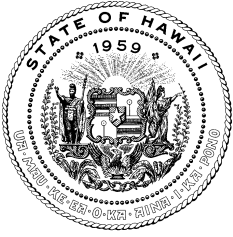
But currently, planes spew close to a billion metric tons of carbon dioxide every year, and they need to be far cleaner.

Please pass this bill and let Hawaii help reign in this increasing source of GHG emissions.

Climate change is the single greatest threat to our state. Thank you for passing this bill to do something about it.

Regards

Helen Raine



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 COMMITTEES ON
ECONOMIC DEVELOPMENT & BUSINESS
AND
ENERGY & ENVIRONMENTAL PROTECTION**

Wednesday, February 12, 2020
9:00 AM
State Capitol, Conference Room 309

Comments in consideration of
**HB 1910
RELATING TO SUSTAINABLE AVIATION FUEL.**

LATE

Chairs McKelvey and Lowen, Vice Chairs Kitagawa and Wildberger, and Members of the Committees, the Hawaii State Energy Office (HSEO) appreciates the intent of SB 1910, 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.

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 last month.

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

It is our understanding that there may be some modifications needed to the current bill, but we believe the concept has merit, and we look forward to successful revisions. We are ready to work with partners as designated in the bill to promote clean transportation.

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.

LATE



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

COMMITTEE ON ECONOMIC DEVELOPMENT & BUSINESS

Rep. Angus L.K. McKelvey, Chair

Rep. Lisa Kitagawa, Vice Chair

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Nicole E. Lowen, Chair

Rep. Tina Wildberger, Vice Chair

DATE: Wednesday, February 12, 2020

TIME: 9:00 a.m.

PLACE: Conference Room 309

HB 1910 Relating to Sustainable Aviation Fuel

Support, Amendment

Aloha Chairs McKelvey and Lowen, Vice Chairs Kitagawa and Wildberger, and Members of the Committees

Life of the Land is Hawai'i's own energy, environmental and community action group advocating for the people and `aina for 49 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Reducing aviation's lifecycle greenhouse gas emissions is of paramount importance.

One approach is developing aviation fuel with a substantially lower lifecycle greenhouse gas footprint.

This is the approach being taken in HB 1910.

The bill needs two amendments.

First, the funding will be supplied by the barrel tax.

Second, funding should only be used for developing fuels that reduce emissions X% below average 2020 aviation fuel lifecycle greenhouse gas emission levels, with X to be developed as the bill moves forward.

Aviation leaving Hawai`i airports account for about one-third of our official statewide greenhouse emissions.

The State of Hawai`i excludes accounting for greenhouse gas emissions of planes arriving in Hawai`i from elsewhere, even if the passengers were induced to fly to Hawai`i by an aggressive state marketing campaign.

Passengers who fly first-class or at night have higher greenhouse gas emissions on a per-mile basis.

Mahalo
Henry Curtis
Executive Director

LATE

HB-1910

Submitted on: 2/11/2020 3:04:25 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Noel Morin	Individual	Support	No

Comments:

Dear Chairs McKelvey and Lowen, and members:

I strongly support HB 1910.

Air transport consumes a significant amount of fossil fuel and contributes significant greenhouse gas emissions. This is particularly significant for Hawaii, given our inter-island travel and tourist activity. There are emergent technologies that offer the opportunity to reduce the emissions associated with air travel, e.g., electric power trains, biofuels. There are also procedural strategies that might be used to reduce fuel use, e.g., optimizing flight schedules, occupancy, taxiing duration, etc...

The potential of biofuels is promising – we have the opportunity to produce this fuel, something that is already being used by major airlines to reduce the footprint of their flights.

HB 1910 will facilitate innovation in the area of sustainable fuel. I encourage that the bill is amended to ensure that the solutions don't involve the creation of a dependency or increased dependence on fossil fuels. Instead, it should focus on exploration of sustainable biodiesel production and solutions that have a negative to neutral carbon footprint.

Please pass this bill with the suggested amendment.

Sincerely,

Noel Morin

LATE

HB-1910

Submitted on: 2/11/2020 4:37:59 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Phaethon Keeney	Individual	Comments	No

Comments:

Aloha! I am leery of but support the basic concept of HB1910, which 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.

First and foremost, we have to acknowledge per UN IPCC data that crops for fuel on limited land mass will compete with food production, and that Hawaii needs to focus on self sufficiency food production or else shipping in more food will simply increase our GHG emissions. Also we must acknowledge in light of the Climate Crisis that Hawaii has to realistically look at cutting aviation programs in favor of lower energy transport, such as ships, especially sailing via wind power.

However, I do think that in some form aviation can be useful, so in that light, please ensure that HB1910 is limited to short term or annual crops, and does not cause forest biomass with long carbon payback periods to be used to emit more carbon into the air now at this critical window of time we have to mitigate climate disaster. Annual crops or short rotation crops seem ok, but we need to watch this area closely to determine if this sort of endeavor is helping or hurting us over the long run, and end support for such endeavors quickly, so adding a review period or short sunset is advisable.

Mahalo,

Phaethon Keeney

Honoka'a Hawai'i

LATE

HB-1910

Submitted on: 2/11/2020 4:58:11 PM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nathan A Sparks	Individual	Support	No

Comments:

To: The House Committees on Economic Development & Business;
and Energy & Environmental Protection

From: **Nathan Sparks**

Date: Wednesday, February 12, 2020, 9:00 am

In strong support of HB 1910

Dear Chairs McKelvey and Lowen, and members:

I strongly support HB 1910.

According to the International Air Transportation Association, an international trade group that represents 290 carriers, domestic and international flights in 2018 emitted around 895 million metric tons of carbon dioxide in 2018. That was a 26% increase over 2013 [1].

Global air travel into and out of Hawaii alone in 2017 produced as much CO2 as generating electricity for almost 1.1 million homes for a year [1].

Transportation has become the largest portion (29%) of total U.S. greenhouse gas emissions [2], and airplane flights are drawing increasing attention as a considerable contributor.

Flyers' 102,465 flights every day around the globe emit enormous amounts of CO2 [3]. Because plane emissions involve other states and countries, they can't be easily regulated.

Renewable energy is now the cheapest form of new electricity generation across two thirds of the world [4]. Electric vehicles are spreading and receiving much attention. Electric planes are coming [5]. Pilots can make small changes in the way they operate aircraft, having a big impact on reducing fuel use and carbon emissions [1].

But currently, planes spew close to a billion metric tons of carbon dioxide every year, and they need to be far cleaner.

Please pass this bill and let Hawaii help reign in this increasing source of GHG emissions.

Nathan Sparks

LATE

HB-1910

Submitted on: 2/12/2020 12:28:45 AM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Severine Busquet	Individual	Support	No

Comments:

Dear Chairs McKelvey and Lowen, and members:

Planes spew close to a billion metric tons of carbon dioxide every year. They need to be far cleaner. Flying is most convenient to get in and out of the island to visit families. However, we all need to reduce our carbon footprint including while traveling.

For these reasons, I strongly support HB 1910.

Thanks for your attention

Severine Busquet

Hawaii Kai, Honolulu

LATE

HB-1910

Submitted on: 2/12/2020 9:10:06 AM

Testimony for EDB on 2/12/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Zoe Malia Ozoa Loos	Individual	Support	No

Comments:

To: The House Committees on Economic Development & Business;
and Energy & Environmental Protection

From: **ZOE LOOS**

Date: Wednesday, February 12, 2020, 9:00 am

In strong support of HB 1910

Dear Chairs McKelvey and Lowen, and members:

I strongly support HB 1910.

According to the International Air Transportation Association, an international trade group that represents 290 carriers, domestic and international flights in 2018 emitted around 895 million metric tons of carbon dioxide in 2018. That was a 26% increase over 2013 [1].

Global air travel into and out of Hawaii alone in 2017 produced as much CO2 as generating electricity for almost 1.1 million homes for a year [1].

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But currently, planes spew close to a billion metric tons of carbon dioxide every year, and they need to be far cleaner.

Please pass this bill and let Hawaii help reign in this increasing source of GHG emissions.

ZOE LOOS