

DAVID Y. IGE  
GOVERNOR OF  
HAWAII



SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

M. KALEO MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
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HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

Testimony of  
SUZANNE D. CASE  
Chairperson

Before the House Committee on  
ENERGY & ENVIRONMENTAL PROTECTION

Thursday, January 23, 2020

9:00 AM

State Capitol, Conference Room 325

In consideration of  
HOUSE BILL 555  
RELATING TO THE ENVIRONMENT

House Bill 555 proposes to require state agencies to participate in a carbon offset program to offset carbon emissions caused by their employees' air travel, and would require the Department of Land and Natural Resources to establish and administer a carbon offset program. **The Department of Land and Natural Resources (Department) supports this measure and provides the following comments.**

The State of Hawaii's commitment to uphold the Paris Climate Accord and progressive move towards carbon neutrality by 2045 requires that we actively invest in reducing our emissions and mitigate greenhouse gases (primarily carbon dioxide - CO<sub>2</sub>). Trees are the most efficient method for removing CO<sub>2</sub> from the atmosphere and investing in planting trees is one of the most effective ways to start mitigating our carbon footprint.

The Department recognizes that air travel by state employees produces carbon dioxide and other greenhouse gas emissions that contribute to global climate effects. Reforestation projects involving planting trees can sequester substantial amounts of carbon dioxide, as well as provide a variety of ecological, cultural, recreational, educational, and economic benefits.

The Department notes that establishing and administering a carbon offset program would require additional budgetary funding as well as personnel resources. However, as the program is implemented, fees paid to the Department could be used to cover program maintenance costs and serve as a revenue stream to accelerate the number of trees planted and cared for by afforestation or reforestation projects. The Department suggests integrating these costs when contemplating the establishment of this program.

Thank you for the opportunity to comment on this measure.



**STATE OF HAWAII**  
**HAWAII CLIMATE CHANGE MITIGATION & ADAPTATION**  
**COMMISSION**  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Testimony of**  
**ANUKRITI HITTLE**  
**COORDINATOR, HAWAII CLIMATE CHANGE MITIGATION AND ADAPTATION**  
**COMMISSION**

**Before the House Committee on**  
**ENERGY & ENVIRONMENTAL PROTECTION**

**Thursday, January 23, 2020**  
**9:00AM**  
**State Capitol, Conference Room 325**

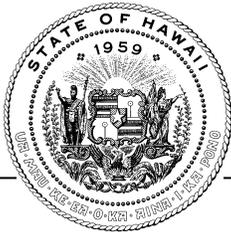
**In consideration of**  
**HOUSE BILL 555**  
**RELATING TO THE ENVIRONMENT**

House Bill 555 proposes to require state agencies to participate in a carbon offset program to offset carbon emissions caused by their employees' air travel, and proposes to require the Department of Land and Natural Resources to establish and administer a carbon offset program. **I offer the following comments on behalf of the Hawaii Climate Change Mitigation and Adaptation Commission (Commission) in support of this measure.**

The Hawaii Climate Change Mitigation and Adaptation Commission “recognizes the urgency of climate threats and the need to act quickly. It promotes ambitious, climate-neutral, culturally responsible strategies for climate change adaptation and mitigation in a manner that is clean, equitable and resilient.” The Commission, established by Act 32 Session Laws of Hawaii 2017, to uphold the United States’ pledges under the Paris Agreement, is the coordinating body for policies on climate change mitigation and adaptation for the state. It is a high-level multi-jurisdictional body that guides the priorities of the state’s climate response. Co-chaired by the Department of Land and Natural Resources and the Office of Planning, it consists of 20 members—four chairs of legislative committees, and executive department heads at the county and state levels.

Given its geography, air travel is a necessity of life in the Hawaiian islands, whether interisland, interstate or international. According to the State’s latest *Greenhouse Gas Emission Report*, Hawaii is on track to meet its emissions goals. However, since this accounting does not include emissions from air travel, which are a significant component of overall transportation emissions in Hawaii, as Hawaii progresses towards its goal to sequester more carbon than it produces by 2045, a carbon offset program will undoubtedly be a crucial component of mitigation. House Bill 555 is an important part of the equation, as it attempts to address some of the emissions from air travel. The Commission, in keeping with promoting ambitious strategies for climate change, encourages the consideration of offsets for all air travel.

Thank you for the opportunity to comment on this measure.



# OFFICE OF PLANNING STATE OF HAWAII

DAVID Y. IGE  
GOVERNOR

MARY ALICE EVANS  
DIRECTOR  
OFFICE OF PLANNING

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Written Statement of  
**MARY ALICE EVANS**  
Director, Office of Planning  
before the  
**HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**  
Thursday, January 23, 2020  
9:00 AM  
State Capitol, Conference Room 325

in consideration of  
**HB 555**  
**RELATING TO THE ENVIRONMENT.**

Chair Lowen, Vice Chair Wildberger, and Members of the House Committee on Energy and Environmental Protection.

The Office of Planning (OP) offers the following comments on HB 555. In accordance with Act 16, Session Laws of Hawai'i, the Office of Planning investigated and recently published the *Feasibility and Implications of Establishing a Carbon Offset Program for the State of Hawai'i* twenty days prior to the convening of the 2020 regular session, on December 26<sup>th</sup>, 2019. The publication was electronically provided to the Hawai'i State Legislature and the Hawai'i Climate Change Mitigation and Adaptation Commission, and physical copies of the feasibility report were provided to your respective offices. 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](http://files.hawaii.gov/dbedt/op/sustainability/feasibility_and_implications_of_establishing_a_carbon_offset_program_for_the_state_of_hawaii_finalweb.pdf).

The Office of Planning similarly hosted a Carbon Offset Symposium on April 10<sup>th</sup>, 2019 at the Hawai'i State Capitol. For those interested in learning about the complexity of the carbon market, and the criteria associated with carbon offsetting and generating carbon offset credits; the PowerPoints presentations and video of the Carbon Offset Symposium are available on the Office of Planning's website at: <http://planning.hawaii.gov/sustainability/carbon-offset-program/carbon-offset-symposium/>

The Office of Planning notes that sections 7.2 (pages 49-51) and 7.4 (pages 52-53) of the feasibility report describe the requirements of developing a potential carbon offset program for the State of Hawai'i. The Office of Planning notes that a Carbon Offset Program Administrator is not necessary to derive revenue from the offset market. Offset programs are intentionally separate from the offset market financial transactions. Instead, a Carbon Offset Program

Administrator would serve as a credible offset certification body, this is separate from carbon offset project development.

For the purposes of HB 555, the Office of Planning recommends the replacement of the word “offset” to “removal”<sup>1</sup> or “sequestration.”<sup>2</sup> This is because the use of the word “offset” in terms of the carbon market, is very specific, to reference a credit to mitigate 1 metric ton of carbon dioxide (CO<sub>2</sub>) equivalent by paying another party or entity to avoid 1 metric ton of (CO<sub>2</sub>) equivalent. Carbon offset credits are monetarily tradeable and must be evaluated and certified by an offset standard, which provides an established set of rules and criteria to ensure that the “offset” meet stringent requirements to ensure transparency and credibility within the carbon market.

The Office of Planning recommends that the program name mentioned in HB 555 be amended to a “carbon removal” or a “carbon sequestration program,” to not confuse the intent of this program with the carbon market’s definition of carbon offsetting and the role of carbon offset credits.

The Office of Planning recommends that a flat-fee be assessed to: 1. inter-island travel, 2. continental travel, 3. international travel, to match the carbon dioxide (CO<sub>2</sub>) equivalent of the greenhouse gases emitted and the length of the employees’ air travel. A similar model to this concept is the San Francisco Carbon Fund, primarily funded through local legislation calling for 13% of the costs of San Francisco municipal employees’ air travel for city business to be invested in local projects that mitigate and sequester travel-related greenhouse gas emissions.

The Office of Planning appreciates the opportunity to provide comments on HB 555.

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<sup>1</sup> The International Organization of Standards (ISO 14064-3:2019) defines “greenhouse gas removal (GHG removal)” as: the withdrawal of a greenhouse gas from the atmosphere by greenhouse gas sinks.

<sup>2</sup> The International Organization of Standards (ISO 27919-1:2018) references to “sequestration” as an alternative use to the term “storage,” since “sequestration” is more generic and can also refer to the biological processes (absorption of carbon by living organisms).

**HB-555**

Submitted on: 1/22/2020 10:52:29 AM

Testimony for EEP on 1/23/2020 9:00:00 AM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Alexandra Kahn	Surfrider Oahu	Support	No

Comments:

**LATE**



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

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Nicole E. Lowen, Chair

Rep. Tina Wildberger, Vice Chair

DATE: Thursday, January 23, 2020

TIME: 9:00 AM

PLACE: Conference Room 325

HB 1242 RELATING TO THE ENVIRONMENT

Monitor

Aloha Chair Lowen, Vice Chair 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.

The bill needs far more substance as it advances. Carbon offsets are complicated.

Carbon offsets must avoid additionality: getting credit for something that would be done anyway); requiring the state to be carbon zero by 2045 and using tree planting to offset travel emissions may be double counting depending on the details. The bill states that the DLNR may or may not establish rules which is highly significant.

The Carbon Sequestration Task Force was defunded and in this session appears may be refunded. DLNR has no authority over air travel but is being charged with offsetting air travel emissions.

Mahalo

Henry Curtis

Executive Director



**LATE**

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

To: The House Committee on Energy & Environmental Protection  
From: Brodie Lockard, Founder, 350Hawaii.org  
Date: Thursday, January 23, 2020, 9:00 am

**In strong support of HB 555**

Dear Chair Lowen, Vice Chair Wildberger, and members:

350Hawaii strongly supports HB 555. Carbon offsets for government flights would help decrease Hawaii's carbon footprint and set an excellent example for others.

Global air travel into and out of Hawaii in 2017 produced as much CO<sub>2</sub> 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.

Until zero-emission airplanes are a reality, planting native trees is an effective way to compensate for the significant CO<sub>2</sub> that our 102,465 flights emit every day around the globe [3]. Because plane emissions involve other states and countries, they can't be easily regulated. But a carbon offset requirement would at least counteract the emissions from our State's government airplane travel.

Carbon offsetting should bring Hawaii officials' attention to whether any given plane trip is really necessary. It will encourage cleaner alternatives like conference calls and videoconferencing. Flights for neighbor island legislators must be considered carefully.

As the most remote islands in the world, Hawaii can and should set an example for other governments, companies, NGOs, foundations, and all manner of groups.

Please pass HB 555 and help to reduce Hawaii's total 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/>

**HB-555**

Submitted on: 1/22/2020 5:07:42 PM

Testimony for EEP on 1/23/2020 9:00:00 AM



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

Comments:

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 555. Transportation is the largest portion of U.S. greenhouse gas (GHG) emissions, and a carbon offset requirement would help to reduce overall emissions in Hawaii.

As an archipelago practically accessible only by air, Hawaii should set an example for other jurisdictions. Regulating emissions is complex because it involves other states and countries. But we can at least take responsibility for the emissions from our own government's airplane travel.

Airplane emissions are coming under increasing scrutiny as a significant source of greenhouse gas emissions. Transportation was the largest portion (29%) of total U.S. GHG emissions in 2017 [1].

Global air travel to and from Hawaii in 2017 produced approximately 6.3 million tons of carbon. That's the equivalent of the CO2 produced by generating electricity for almost 1.1 million homes for a year [2].

A carbon offset program will make Hawaii officials consider their air travel more carefully, probably reducing unnecessary trips, and the corresponding emissions. It will encourage alternatives like videoconferencing.

Zero-emission air travel is not yet available, but planting native trees is a simple, effective way to compensate for the damage flights cause to the climate.

Please pass HB 555 and help to reduce Hawaii's total GHG emissions.

Nanea Lo

**LATE**

**HB-555**

Submitted on: 1/22/2020 5:13:50 PM  
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Jonathan Boyne	Individual	Support	No

Comments:

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 555. Transportation is the largest portion of U.S. greenhouse gas (GHG) emissions, and a carbon offset requirement would help to reduce overall emissions in Hawaii.

As an archipelago practically accessible only by air, Hawaii should set an example for other jurisdictions. Regulating emissions is complex because it involves other states and countries. But we can at least take responsibility for the emissions from our own government's airplane travel.

Airplane emissions are coming under increasing scrutiny as a significant source of greenhouse gas emissions. Transportation was the largest portion (29%) of total U.S. GHG emissions in 2017 [1].

Global air travel to and from Hawaii in 2017 produced approximately 6.3 million tons of carbon. That's the equivalent of the CO2 produced by generating electricity for almost 1.1 million homes for a year [2].

A carbon offset program will make Hawaii officials consider their air travel more carefully, probably reducing unnecessary trips, and the corresponding emissions. It will encourage alternatives like videoconferencing.

Zero-emission air travel is not yet available, but planting native trees is a simple, effective way to compensate for the damage flights cause to the climate.

Please pass HB 555 and help to reduce Hawaii's total GHG emissions.

Jonathan Boyne

**LATE**

**HB-555**

Submitted on: 1/22/2020 8:11:28 PM  
Testimony for EEP on 1/23/2020 9:00:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Lynn Aaberg	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection  
From: Lynn Aaberg  
Date: Thursday, January 23, 2020, 9:00 am

In strong support of HB 555

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 555. Transportation is the largest portion of U.S. greenhouse gas (GHG) emissions, and a carbon offset requirement would help to reduce overall emissions in Hawaii.

As our islands are practically only accessible by air, Hawaii should set an example for other jurisdictions. Regulating emissions is complex because it involves other states and countries. But we can at least take responsibility for the emissions from our own government's airplane travel.

Airplane emissions are coming under increasing scrutiny as a significant source of greenhouse gas emissions. Transportation was the largest portion (29%) of total U.S. GHG emissions in 2017 [1].

Global air travel to and from Hawaii in 2017 produced approximately 6.3 million tons of carbon. That's the equivalent of the CO2 produced by generating electricity for almost 1.1 million homes for a year.

A carbon offset program will make Hawaii officials consider their air travel more carefully, probably reducing unnecessary trips, and the corresponding emissions. It will encourage alternatives like videoconferencing.

Zero-emission air travel is not yet available, but planting native trees is a simple, effective way to compensate for the damage flights cause to the climate.

Please pass HB 555 and help to reduce Hawaii's total GHG emissions.

Mahalo,

Lynn Aaberg

**HB-555**

Submitted on: 1/22/2020 8:31:29 PM

Testimony for EEP on 1/23/2020 9:00:00 AM

**LATE**

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Eric Micha'el Leventhal	Individual	Support	No

Comments:

To: The House Committee on Energy & Environmental Protection

From: Eric Micha'el Leventhal

Date: Thursday, January 23, 2020, 9:00 am

In strong support of HB 555

Dear Chair Lowen, Vice Chair Wildberger, and members:

I strongly support HB 555. Transportation is the largest portion of U.S. greenhouse gas (GHG) emissions, and a carbon offset requirement would help to reduce overall emissions in Hawaii.

As an archipelago practically accessible only by air, Hawaii should set an example for other jurisdictions. Regulating emissions is complex because it involves other states and countries. But we can at least take responsibility for the emissions from our own government's airplane travel.

Airplane emissions are coming under increasing scrutiny as a significant source of greenhouse gas emissions. Transportation was the largest portion (29%) of total U.S. GHG emissions in 2017 [1].

Global air travel to and from Hawaii in 2017 produced approximately 6.3 million tons of carbon. That's the equivalent of the CO2 produced by generating electricity for almost 1.1 million homes for a year [2].

A carbon offset program will make Hawaii officials consider their air travel more carefully, probably reducing unnecessary trips and the corresponding emissions, and instead encouraging alternatives like videoconferencing.

Zero-emission air travel is not yet available, but planting native trees is a simple, effective way to compensate for the damage flights cause to the climate.

Please pass HB 555 and help to reduce Hawaii's total GHG emissions.

Eric Micha'el Leventhal