

# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

235 South Beretania Street, 5<sup>TH</sup> 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  
**SENATE COMMITTEE ON GOVERNMENT OPERATIONS  
SENATE COMMITTEE ON ECONOMIC DEVELOPMENT, ENERGY AND TOURISM  
SENATE COMMITTEE ON TRANSPORTATION**

Tuesday, March 10, 2020

2:50 PM

State Capitol, Conference Room 225

In SUPPORT of  
**HB 2699, HD2**  
**RELATING TO THE ENVIRONMENT.**

Chair Thielen, Vice Chair Inouye, Chair Wakai, Vice Chair Taniguchi, Chair Inouye, Vice Chair Harimoto, and members of the Committees. The Hawaii State Energy Office (HSEO) supports HB 2699, HD2, which establishes clean ground transportation goals for state agencies on a staggered basis until 100% of light duty vehicles of each fleet are powered by renewable sources by December 31, 2035, and for all light duty vehicles in the State to be 100% powered by renewable sources by December 31, 2045. Hawaii Revised Statutes (HRS) §225P-5 establishes a statewide target to sequester more atmospheric carbon and greenhouse gases (GHG) than emitted within the State as quickly as practicable, but no later than 2045. In 2016, emissions from transportation activities in Hawaii were 8.69 million metric tons CO2 equivalent, accounting for 51% of energy sector emissions. Ground transportation accounted for 47% of those transportation emissions. The objective of transitioning all light duty vehicles to be powered by renewable resources will aid in eliminating a significant portion of Hawaii's GHG emissions from the ground transportation sector.

HRS §196-71 (b)(2) directs the HSEO to lead efforts to incorporate energy efficiency, renewable energy, energy resiliency, and clean transportation to reduce costs and achieve clean energy goals across all public facilities. Consistent with HRS §196-71 (b)(2) the HSEO will support agencies in their efforts to fulfill the direction of HB 2699, HD2, to convert all light duty ground transportation vehicles to be powered by renewable sources by 2035, as well as transitioning medium and heavy duty vehicles to renewable sources as alternatives become feasible and cost-effective.

HRS §196-71 (b)(3) directs the HSEO to provide renewable energy, energy efficiency, energy resiliency, and clean transportation project deployment facilitation to assist private sector project completion when aligned with state energy goals. HRS §226-18 provides that planning for the State's facility systems with regard to energy shall be directed toward the achievement of increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation.

Both HRS §196-71 (b)(3) and HRS §226-18 support the direction provided in HB 2699, HD2, for the HSEO and DOT to collaborate in developing strategies to transition all light-duty vehicles, public and private, in the State to meet the clean ground transportation goal of being 100% powered by renewable sources by December 31, 2045. The HSEO would like to provide comments that, rather than insert specific interim milestones in statute to achieve 100% of light duty vehicles powered by renewable resources by 2035, the HSEO will work with DOT and stakeholders on establishing appropriate interim milestones consistent with the 100% goal by 2035. A review of the interim milestones will ensure that the transition is efficient from both an operational and budgetary perspective, accounting for existing fleets and facilities.

Alternatively, the legislature could include a requirement for no new light duty passenger cars powered by fuel other than renewable resources shall be added to each fleet effective upon the passage of this bill in lieu of the specific target of 30% of all light duty vehicles, including but not limited to passenger cars, vans, SUVs and trucks, shall be powered by renewable resources by 2025. This would add light duty passenger cars fueled by renewable resources within the regular procurement schedule. Additionally, the HSEO proposes a renewable resource fueling infrastructure study be added to the bill to provide an actionable path forward for State fleets. The study could be funded through the energy security special fund. These amendments would encourage the near-term actions intended by the 2025 target, avoid early retirement of fleet vehicles, and allow for a renewable fueling infrastructure plan to be put in place to support a cost efficient conversion to 100% of all light duty fleet vehicles fueled by renewable resources by 2035. The HSEO notes that light duty passenger cars represent between 5% and 30% of total light duty vehicles in four of the State's five largest fleets. The five largest fleets represent 70% of the total light duty vehicles in state fleets. The current 2025 target of 30% would require 100% of light duty passenger cars to be converted by 2025 for these fleets. Some agency fleets would require significant conversion of other light duty vehicles, such as trucks, vans, and SUVs which are just starting to enter the market.

The HSEO defers to state agencies on procurement and budget considerations related to achieving the clean ground transportation goals.

Thank you for the opportunity to testify on this bill.



**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 Senate Committees on**  
**GOVERNMENT OPERATIONS**  
**and**  
**ENERGY, ECONOMIC DEVELOPMENT AND TOURISM**  
**and**  
**TRANSPORTATION**

**Tuesday, March 10, 2020**  
**2:50 PM**  
**State Capitol, Conference Room 225**

**In support of**  
**HOUSE BILL 2699, HOUSE DRAFT 2**  
**RELATING TO THE ENVIRONMENT**

House Bill 2699, House Draft 2 establishes clean ground transportation goals for state agencies on a staggered basis until achieving a 100 per cent light-duty vehicle clean fleet by 12/31/2035, and for all light-duty vehicles in the State by 12/31/2045. **On behalf of the Hawaii Climate Change Mitigation and Adaptation Commission (Commission) I support this measure, and defer to procurement and budgetary agencies where relevant.**

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 SLH 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 DLNR and Office of Planning, it consists of 20 members—chairs of four legislative committees, and executive department heads at the county and state levels.

Transportation (air and ground) is the single largest source of greenhouse gas emissions in Hawaii, which mirrors the trend nationwide (according to EPA, it was the largest source of GHG emissions in 2017). One of the two focuses of the Commission is to reduce emissions from ground transportation, and HB2699 is a crucial component of this effort. The Commission’s statement on

**Co-Chairs:**  
Chair, DLNR  
Director, Office of Planning

**Commissioners:**  
Chair, Senate AEN  
Chair, Senate WTL  
Chair, House EEP  
Chair, House WTH  
Chairperson, HTA  
Chairperson, DOA  
CEO, OHA  
Chairperson, DHHL  
Director, DBEDT  
Director, DOT  
Director, DOH  
Chairperson, DOE  
Director, C+C DPP  
Director, Maui DP  
Director, Hawai'i DP  
Director, Kaua'i DP  
The Adjutant General  
Manager, CZM

ground transportation, issued in November 2018, “supports mechanisms to reduce overall vehicle miles travelled (VMT) as well as converting all remaining vehicle-based ground transportation to renewable, zero-emission fuels and technologies.” It specifically urges the state to:

“Transform State and county fleets to address VMT reduction, congestion, and emissions—especially through electrification, renewable fuels, carshare, and supporting infrastructure development and deployment.”

House Bill 2699 House Draft 2 makes the case that electrification of light duty vehicles will have the added benefits of cost savings and energy independence for Hawaii. Several jurisdictions have taken advantage of tax credits, aggregated procurement, and other mechanisms to convert their public fleets in a cost effective manner.<sup>1 2</sup> In addition, at the 2020 Statewide Climate Change Conference held this month, researcher Katherine McKenzie, Hawaii Natural Energy Institute, emphasized the declining cost of electric vehicles and that “over the life of the vehicle however it may be already more cost effective to own and operate an EV, depending on the model and use, because of the low maintenance and fueling costs. In addition, low electricity rates are available from Hawaiian Electric Companies during daylight hours.”<sup>3 4</sup>

Thank you for the opportunity to testify on this measure.

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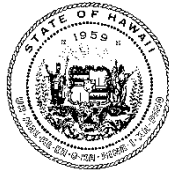
<sup>1</sup>A case study of three all-electric vehicle procurements conducted by the US Navy, City of New Bedford, MA, and City of Seattle, WA. EV Smart Fleets. June 2017.

<sup>2</sup>Capturing the federal EV Tax Credit for Public Fleets: A case study of a multi-jurisdictional electric vehicle fleet procurement in Alameda County, California. EV Smart Fleets. April 2017

<sup>3</sup> “Where 3 Million Electric Vehicle Batteries Will Go When They Retire”, Bloomberg Business Week, June 2018.

<sup>4</sup>“Electric Vehicle Lifecycle Cost Assessment for Hawaii”, Makena Coffman, University of Hawaii Economic Research Organization, for Hawaii Natural Energy Institute, Electric Vehicle Transportation Center study, September 2015.

DAVID Y. IGE  
GOVERNOR



SARAH ALLEN  
ADMINISTRATOR  
BONNIE KAHAKUI  
ASSISTANT ADMINISTRATOR

**STATE OF HAWAII  
STATE PROCUREMENT OFFICE**

P.O. Box 119  
Honolulu, Hawaii 96810-0119  
Tel: (808) 586-0554  
email: [state.procurement.office@hawaii.gov](mailto:state.procurement.office@hawaii.gov)  
<http://spo.hawaii.gov>  
Twitter: [@hawaiispo](https://twitter.com/hawaiispo)

TESTIMONY  
OF  
SARAH ALLEN, ADMINISTRATOR  
STATE PROCUREMENT OFFICE  
TO THE SENATE COMMITTEES  
ON  
GOVERNMENT OPERATIONS,  
ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM,  
AND  
TRANSPORTATION

Tuesday March 10, 2020, 2:50PM

HB 2699, HD2  
RELATING TO THE ENVIRONMENT

Chairs Thielen, Wakai, and Inouye; Vice Chairs Taniguchi and Harimoto; and members of the committees, thank you for the opportunity to submit testimony on HB 2699, HD2. The State Procurement Office (SPO) appreciates the intent of the bill, and offers the following comments and recommendations:

COMMENT: Section 2, Page 2, Lines 18-20, and Page 3, Lines 1-14 creates a new section within the procurement code that includes statements that are duplicative to HRS 103D-412, with the exception of a few words, which may be confusing to government buyers.

RECOMMENDATION: The following changes to Chapter 103D-412 to read as follows:

§103D-412 Light duty and other motor vehicle requirements. (a) the procurement policy for all agencies purchasing or leasing light- medium- and heavy-duty motor vehicles shall be to seek vehicles that reduce dependence on petroleum-based fuels that meet the needs of the agency where feasible and cost-effective.

(b) Beginning XXXX January 1, 2010, all state and county entities, when purchasing new vehicles, shall seek vehicles with reduced dependence on petroleum-based fuels that meet the needs of the agency priority for selecting vehicles shall be as follows:

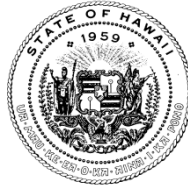
- (1) Electric or plug-in hybrid electric vehicles and fuel electric vehicles;
- (2) Other alternative fuel vehicles;
- (3) Hybrid electric vehicles; and
- (4) Vehicles that are identified by the United States Environmental Protection Agency in its annual "Fuel Economy Leaders" report as being among the top performers for fuel economy in their class.
- (5) Vehicles shall not be larger than necessary for their intended functions.

RECOMMENDATION: Remove Section 5, page 4, lines 14 to 20, page 5 in its entirety, and page 6 lines, 1 to 9 to Section 196-9, Hawaii Revised Statutes on Energy Efficiency and Environmental Standards for State Facilities, Motor Vehicles and Transportation Fuel.

CONCERN: Subject-specific goals should be included in the subject-specific HRS Chapter. The Code is meant for general procurement methods, and high-level. It should not be a receptacle for all industry-specific specifications or goals as this will, over time, create a vast, and complicated Code that will confuse buyers because it they will not be able to trust that specifications are in the respective chapter and procurement specific requirements are lost within the sea of specifications.

Thank you.

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

March 10, 2020  
2:50 P.M.  
State Capitol, Room 225

**H.B. 2699, H.D. 2**  
**RELATING TO THE ENVIRONMENT.**

Senate Committee(s) on Government Operations; Energy, Economic Development, and  
Tourism; & Transportation

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The Department of Transportation (DOT) **supports** this bill which establishes clean ground transportation goals for state agencies on a staggered basis until achieving a 100 percent light-duty vehicle clean fleet by 12/31/2035, and for all light-duty vehicles in the State by 12/31/2045.

The DOT continues to work and collaborate with the Hawaii State Energy Office on strategies towards the electrification of transportation in order to meet timelines of the State's clean transportation goals. The DOT has advertised a contract that will allow all State Agencies, Counties, and the University of Hawaii to purchase electronic vehicles and charging stations as a service or outright. The contract will be executed by April.

Thank you for the opportunity to provide testimony.



## TESTIMONY REGARDING HB 2699 HD2

**being heard by the Senate Committees on Government Operations;  
Energy, Economic Development and Tourism; and Transportation  
on Tuesday, March 10, 2020 at 2:50 PM  
Conference Room 225**

Aloha Chairs Thielen, Wakai, and Inouye, Vice Chairs and Members of the Committees:

Thank you for the opportunity to provide on HB 2699 HD2 which would establish clean ground transportation goals for state agencies such that 100 percent of their light duty fleets would have to be 100% renewably powered by December 31, 2045. Although laudable in its intent, Tesla is concerned that unless amended to further clarify that electric vehicles will count toward the clean ground transportation goals proposed, the measure will inappropriately narrow the scope of vehicle technologies that are deployed meet the bill's targets.

Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles and sustainable energy products, like storage and solar energy systems. Tesla is the only domestic mass market automobile manufacturer that exclusively builds and sells electric vehicles. To date we have sold over 900,000 EVs globally.

In 2018, the Mayors of Hawaii established an ambitious goal to eliminate the use of fossil fuels from ground transportation by 2045, recognizing the profound economic, energy security and environmental challenges that dependency on fossil fuels imposes on Hawaii and its residents. Bringing this proclamation to fruition will require concerted efforts by the state to support the deployment of alternative-fueled vehicles. Establishing clear goals for the procurement of these vehicles by state agencies has a potentially important role to play in achieving this, but such goals need to be carefully crafted so as to not limit the technological pathways that may be pursued.

Tesla is specifically concerned that this measure, by establishing goals for the share of vehicles in agency fleets that must be "powered by renewable sources", but without a clear definition for what qualifies as meeting this criterion, will create confusion and potentially result in the inadvertent exclusion of certain technologies, like battery electric vehicles, from counting toward these targets, despite the proven capacity of these types of vehicles to play a central role in decarbonizing the transportation sector.

To address this, Tesla asks that the term "powered by a renewable source" be clearly defined and to explicitly include plug-in battery electric vehicles. The deployment of pure electric vehicles is entirely consistent with objectives to eliminate the use of fossil fuels from ground transportation particularly within the context of Hawaii where the state's electricity system is on the path to 100% renewable energy by 2045.

Additionally, while Tesla supports the directive to the Department of Transportation, in consultation with the Hawaii State Energy Office, to develop strategies to transition all light-duty vehicles in the state,





public and private, to achieve the 100% renewably powered goal, we are concerned that this effort is both too narrow, and also does not establish any timelines for completion of this initiative or require any stakeholder engagement.

Regarding the narrowness of the effort, Tesla believes that it should include strategies to transition light, medium and heavy duty vehicles given the importance of eventually transitioning all vehicles away from fossil fuels. The legislation should also ensure that the development of these strategies is done in a timely manner by requiring the Department of Transportation to submit a final report to the legislature before the start of the 2021 legislative session. This will allow the study to inform additional legislative action that may be needed to further facilitate the transition away from fossil fuels. Additionally, this effort should require robust stakeholder engagement by directing the Department to meet regularly with stakeholders throughout the strategy development process and provide an opportunity for comments on a draft of the report before it is finalized and submitted to the legislature.

Tesla appreciates the opportunity to submit this testimony.



Hawaiian  
Electric

**LATE**

**TESTIMONY BEFORE THE SENATE COMMITTEE ON  
GOVERNMENT OPERATIONS;  
ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM;  
& TRANSPORTATION**

H.B. 2699, HD2

**Relating to the Environment**

Tuesday, March 10, 2020  
2:50 P.M.

State Capitol, Conference Room 225

Michael Colón  
Manager, Electrification of Transportation  
Hawaiian Electric Company, Inc.

Aloha Chair Thielen, Chair Wakai, and Chair and Vice Chair Inouye, Vice Chair Taniguchi, Vice Chair Harimoto and committee members,

My name is Michael Colón and I am testifying on behalf of Hawaiian Electric Company, Inc. (Hawaiian Electric) **in support of H.B. 2699, HD2, Relating to Electric Vehicles**. Hawaiian Electric supports this measure because it will strengthen Hawaii's commitment to clean ground transportation and help drive investment resulting in quantifiable emissions reductions. In addition, this bill also mirrors a global trend towards establishing clean transportation targets that will continue to show Hawaii's leadership in sustainability.

This landmark bill would bring the transportation sector in line with the state's clean energy goals by seeking the ultimate elimination of fossil fuels for ground transportation. The Company supports the legislature's broad vision and substantial commitment to carbon reduction and applauds the legislature's intent to have the State

lead by example by converting its own fleet over the next 15 years. H.B. 2699, HD2 will also help align clean energy planning with transportation in new and dynamic ways. Hawaiian Electric anticipates leveraging forecasted electric load growth to integrate renewable energy at a new scale, with increased opportunity for grid integration and demand response.

Reducing barriers to adoption and facilitating the electrification of transportation is one of the Company's top priorities established in our *Electrification of Transportation Strategic Roadmap*. In addition, the Company applauds the acknowledgment that this bill intends to establish a goal to help drive future clean transportation policies.

Accordingly, Hawaiian Electric supports H.B. 2699 HD2. Thank you for this opportunity to testify.



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

SENATE COMMITTEES ON GOVERNMENT OPERATIONS, ENERGY, ECONOMIC DEVELOPMENT & TOURISM,  
AND TRANSPORTATION

Tuesday, March 10, 2020 — 2:50 p.m. — Room 225

**Ulupono Initiative Supports HB 2699 HD 2, Relating to the Environment.**

Dear Chair Thielen, Chair Wakai, Chair Inouye, and Members of the Committees:

My name is Amy Hennessey, and I am the Senior Vice President of Communications & External Affairs at Ulupono Initiative. We are a Hawai'i-based impact investment firm that strives to improve our community's quality of life by creating more locally produced food; increasing affordable clean renewable energy and transportation options; and better managing waste and fresh water resources.

**Ulupono supports HB 2699 HD 2**, which establishes clean ground transportation goals for state agencies on a staggered basis until achieving a 100% light-duty vehicle clean fleet by 12/31/2035, and for all light-duty vehicles in the State by 12/31/2045.

Ulupono supports energy efficiency measures to lower consumption across the State. Electric vehicles (EVs) are an important avenue to address Hawai'i's pressing climate issues and align with the State's energy and environmental goals. Ground transportation makes up a significant portion of Hawai'i's reliance on imported oil and the largest contributor to our State's greenhouse gas emissions. EVs currently offer an effective option to progress clean renewable ground transportation and provide immediate benefits to Hawai'i.

We applaud legislators for pushing the State to lead by example and welcome the urgency to purchase zero emission vehicles, such as EVs, and setting a goal for the entire State fleet to be clean and electric. Not only will this help move the State's environmental, health and energy goals, but it will also signal to the market that Hawai'i demands EVs while creating a more robust EV market in the State, particularly as State vehicles enter the used car market. This market signal is critical positioning to help ensure suppliers prioritize clean vehicles for Hawai'i, particularly since the State is unable to join California and others via an EV mandate. However, it is important that this policy still be fiscally prudent so that agencies continue to optimize full utilization of the fleet and replace vehicles as they near the end of their useful life.

Lastly, this policy is akin to a number of other countries and cities around the world that have set future dates to eliminate the sale of gasoline vehicles. In such a global market, it is important for the State of Hawai'i to continue to lead by example, join the commitment made by the four counties and further show the world that Hawai'i is serious about the sustainability and resiliency of our community by encouraging EVs and EV infrastructure as this bill proposes.

Thank you for this opportunity to testify.

Respectfully,

Amy Hennessey, APR  
Senior Vice President, Communications & External Affairs

*Investing in a Sustainable Hawai'i*



Pono Hawai'i Initiative

Josh Frost - President • Patrick Shea - Treasurer • Kristin Hamada  
Nelson Ho • Summer Starr

Tuesday, March 10, 2020

Relating to the Environment  
Testifying in Support

Aloha Chair and members of the committee,

The Pono Hawai'i Initiative (PHI) **supports HB2699, HD2 Relating to the Environment**, establishes clean ground transportation goals for state agencies with a final goal of 100% light-duty motor vehicles in the state by 2045.

As Hawai'i moves toward a greener future the first to make positives changes should be our own state government and infrastructure. By requiring all state agencies to move toward clean ground transportation for light-duty motor vehicles, the State will lead the rest of the community to meet those goals. It is so important that the State show that these changes and steps can be taken and need to be taken in order to reach the goal of 100% renewable energy by 2045.

For all these reasons, we urge you to move this measure forward with an amended clean effective date.

Mahalo for the opportunity,  
Gary Hooser  
Executive Director  
Pono Hawai'i Initiative



John Uekawa, President  
Dave Rolf, Executive Director

HADA Testimony OPPOSED HB2699 HD2  
RELATING TO THE ENVIRONMENT

Presented to the Senate Committee on Government Operations, the Senate Committee on Economic Development & Tourism, and the Senate Committee on Transportation  
at the Public Hearing 2:50 p.m. Tuesday, March 10, 2020  
in Room 225 Hawaii State Capitol  
by David H. Rolf for members of the Hawaii Automobile Dealers Association,  
*Hawaii's franchised new car dealers, who provide sales, warranty work and other factory-certified maintenance service for Hawaii's privately-owned and fleet-owned cars and light trucks*

Chairs Thielen, Wakai, Inouye, Vice Chairs Inouye, Taniguchi and Harimoto and members of the committees:

HADA members appreciate the opportunity to provide input on HB2699 HD2—a bill which proposes to establish clean ground transportation goals for state agencies on a staggered basis until achieving a 100 per cent light-duty vehicle clean fleet by 12/31/2035, and for all light-duty vehicles by 12/31/2045.

HADA opposes the target date of 12/31/45 set for all light-duty vehicles in the state because no roadmap or plan has been set for including the electric charging and hydrogen production and fueling infrastructure necessary for such a transition by that time.

EV-uptake has proven slower than expected. Only 8% of vehicles sold in 2025 are projected to be EVs or HFCEVs, and a goal to see that number jump to 100% of vehicles sold in 2025, through 2045, means **the goal is not feasible**.

**Hawaii is not a Zero Emission Vehicle (ZEV) state—so automakers do not get credits for EVs sold in Hawaii...**thus it is difficult for some dealers to get an automaker's electric vehicles.

Lithium for an EV's lithium batteries is a big issue. **Lithium is in limited supply.**

HADA dealers **request that the 100% "goal" provision be deleted** from the bill; it is **NOT feasible**.

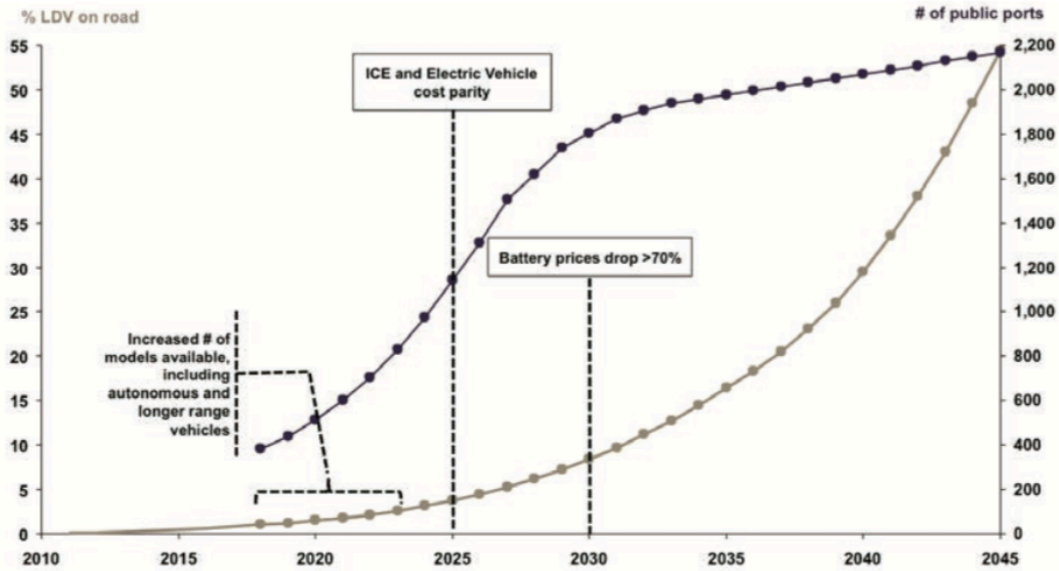
Hawaii Electric Company's Electric Vehicle Adoption Roadmap, filed with the Public Utilities Commission shows the utility's "forecast" of 55% electric vehicles by 2045, not 100%.

Further, HADA's forecasts, which correspond to most domestic and international auto manufacturer forecasts, anticipate 29% and 30% respectively by 2045, not 100%.

No other state forecasts renewable fuel vehicle adoption at 100% by 2045.

Please see the Hawaiian Electric Company Forecast.

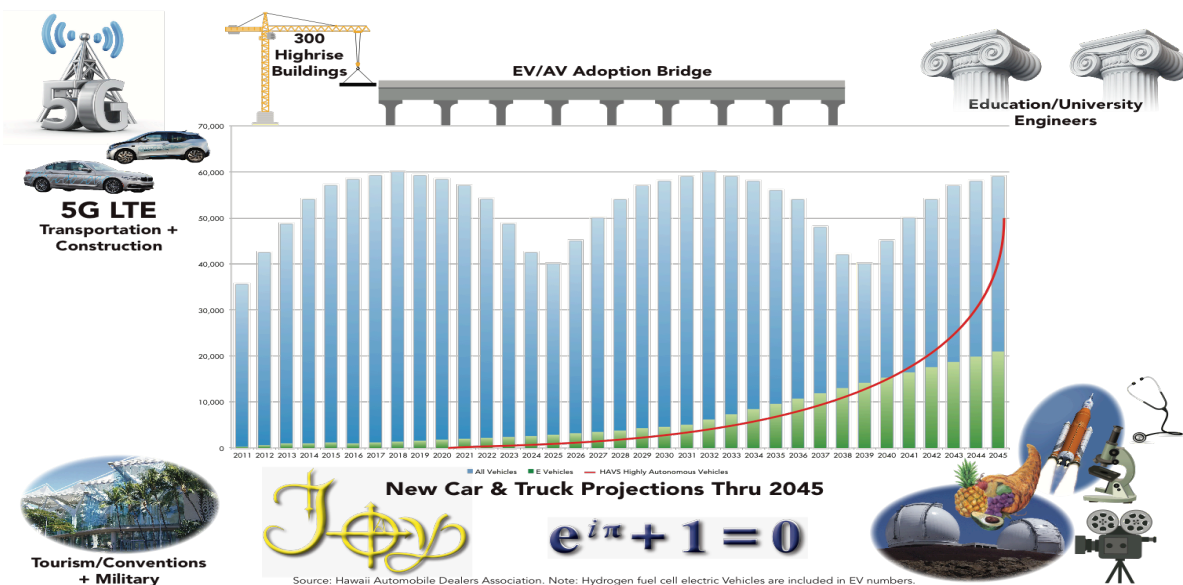
Figure 19. Hawaiian Electric's personal light-duty EV adoption forecast, O'ahu, 2010 – 2045



Source: Hawaiian Electric

HADA dealers, over the years, have ardently worked to help the State transition to renewable fuel vehicles. Dealers have paid to purchase thousands of electric vehicles for their inventories, paid to send their auto technicians off for training in the new technology, and paid to install expensive electric vehicle infrastructure and charging stations in their dealerships. Their efforts, and efforts of others have resulted in Hawaii posting the #2 rate of customer purchases of EVs, in the nation. Second only to California.

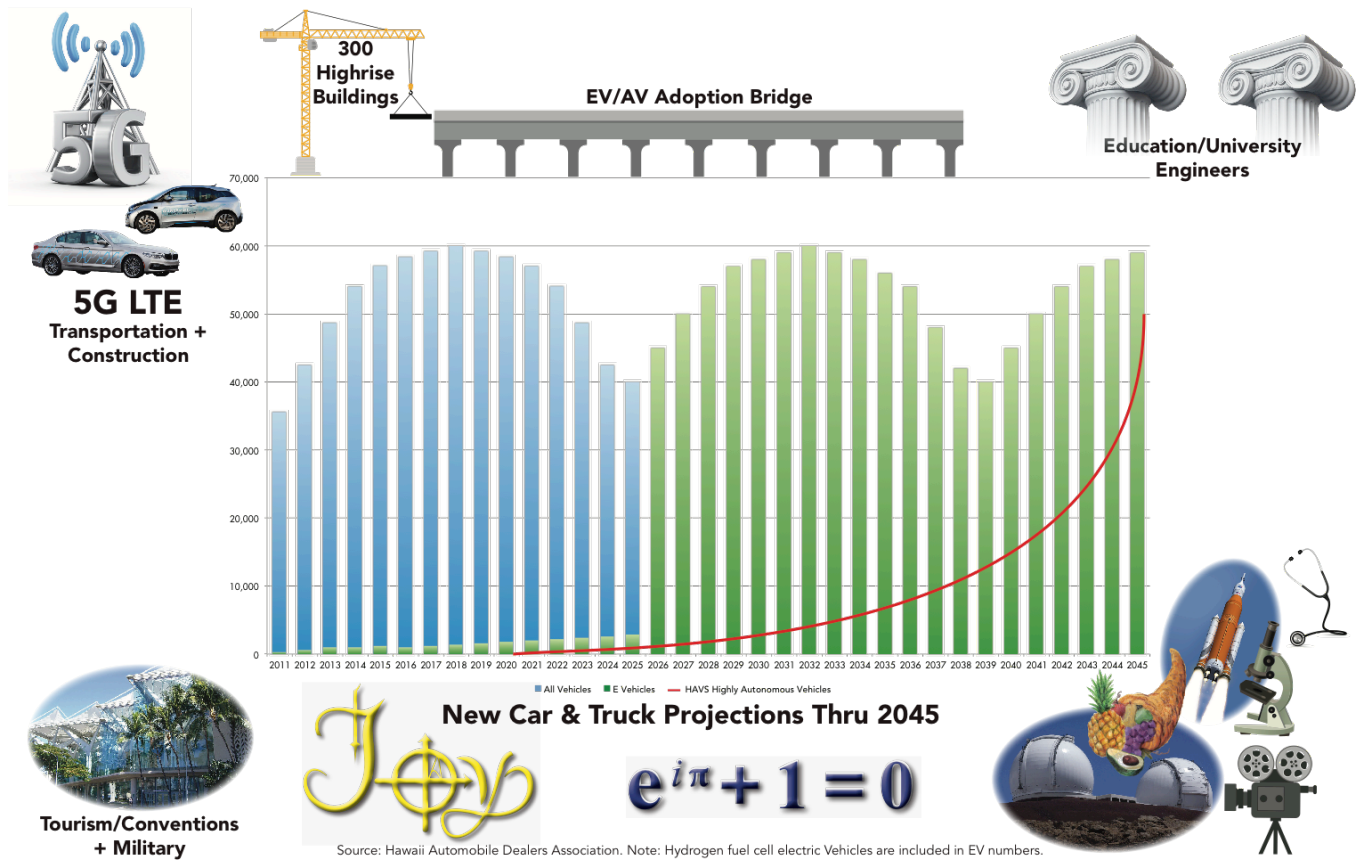
Reaching a 100 per cent light-duty clean fleet for all light-duty vehicles by 12/31/2045 provides an infrastructure challenge, and additionally may force the removal of many hybrid vehicles and other likely highly fuel-efficient vehicles that still operated on roadways by that date. HADA believes the process in an evolution, not a revolution, and that the free market provides the best path to achieving Hawaii's goals. So, where are we now in electric vehicle uptake and what is the likely uptake scenario through 2045?



Totalling the green bars, the HADA Rosetta Stone graphic shows our association’s predictions of EV / HFCEV uptake by customers through 2045 at 29%. Which corresponds to independent uptake percentage projections by major auto manufactures. (Note we use Euler’s Identity, as a mathematical proof of “JOY” because the process of transition to renewable fuels is going to be hard so we thought it might as well be joyful.)

There are around 11,000 EVs on Hawaii roadways now. Around 1% of the state’s 1.1 million light duty vehicles.

HADA notes, that if the light duty cars and trucks... units in operation, UIO, remain the same at approximately 1.1 million units...reaching 100% EV/HFCEV vehicles by 2045 would require 100% of all new vehicles sold after 2025 to be EVs/ or HFCEVs. And the graph would look like this, if Units in Operation (UIOs) remained at current private vehicle levels.



This scenario, jumping from 8% of EV sales in 2025 to 100% overnight so to speak, remains challenging because it is not likely that the electric charging infrastructure and electricity production for 100% EVs could be provided in that time period, and certainly it would be difficult to put in that much hydrogen fuel cell infrastructure almost overnight to meet this scenario, and a 100% goal.

Soon, however, with the introduction of 5G technology, “Cars will be Connected to Almost Everything.”

That’s why HADA has proposed working with so many sectors (The Energy Sector, The Broadband Sector, The Transportation Sector, The Housing Sector, The Artificial Intelligence Sector, the Higher Education Community and more.



That's why HADA has proposed the movement to the renewable energy goal through private enterprise and the "AV-pockets concept" around the coming rail stations. It all ties in with the Hawaii Executive Order 17-07 announcing that "Hawaii is open for business for the testing and development of autonomous vehicles." (Many of which, will be EVs and HFCEVs in the future...helping Hawaii to reach its renewable energy goals while boosting the Hawaii economy)



HADA appreciates the opportunity to offer industry input on HB2699 HD2, and respectfully asks that the committees delete the 100% goal by 12-31-45 for all light-duty vehicles. HADA is Making Hawaii Better Together.

We are working on helping the State economy with a large, all-encompassing plan that includes, Multi-modal Transportation, Clean Energy, Affordable Housing, Retail development, Broad Band development, Artificial Intelligence development, Introduction of the Driverless Car, Care for the Environment, Focus on Sustainability and more. Indeed, cars are connected to everything.

Clarity on how a 100% goal can be accomplished in ground transportation is much needed before such a 100% goal for light-duty vehicles is published.

Respectfully submitted,  
David H. Rolf, for the members of the Hawaii Automobile Dealers Association

**HADA**  
**Making Hawaii Better Together**



**HB-2699-HD-2**

Submitted on: 3/6/2020 2:55:28 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Justin Salisbury	Individual	Support	No

Comments:

**HB-2699-HD-2**

Submitted on: 3/7/2020 12:06:45 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ronald FitzGerald	Individual	Support	No

Comments:

Please support this bill so we can increase the ownership and use of EV cars and trucks.

**HB-2699-HD-2**

Submitted on: 3/7/2020 3:15:23 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Dean Shimabukuro	Individual	Support	No

Comments:

Please support passage of this bill. I believe that through leadership of this kind, the State can help to influence the decision of many individuals who may be close to making a personal decision to convert their choice of next transportation to a renewable alternative.

Mahalo.

**HB-2699-HD-2**

Submitted on: 3/7/2020 8:09:42 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Kenneth Eisner	Individual	Support	No

Comments:

**HB-2699-HD-2**

Submitted on: 3/7/2020 9:49:42 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Larry Saltzman	Individual	Support	No

Comments:

I feel our environment is in great Danger and we must promote electric vehicles. I purchased my vehicle because of environmental concerns and I think we all need to move rapidly in this direction to preserve the environment so future Generations can survive on this planet.

**HB-2699-HD-2**

Submitted on: 3/8/2020 5:58:45 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Michelle Matson	Individual	Support	No

Comments:



**HB-2699-HD-2**

Submitted on: 3/8/2020 6:58:04 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ron Reilly	Individual	Support	No

Comments:

Dear Committee Members,

I am in full support of HB 2699.

To achieve our state goal of 100% renewable energy by 2045 it is essential that the state take the lead in managing its fleet vehicles and lead by example.

Providing objective metrics along the way will be important to ensure that we are on track for 2045.

Thank you for your support of this measure,.

Ron Reilly Volcano Village, Hawaii

**HB-2699-HD-2**

Submitted on: 3/8/2020 12:46:35 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Tamlyn Hunt	Individual	Support	No

Comments:

I support HB2699 HD2 because transportation emissions are the major source of greenhouse gases in Hawaii, and probably the toughest area to achieve significant reductions. EVs are growing relatively quickly in many parts of the country but growth will be challenged in Hawaii as long as electricity prices are so high (because having electricity rates three times normal mainland rates eliminates much of the economic benefits of EVs). It is for this reason that Hawaii will need to diligently work on aggressive but achievable ground transportation goals and policies -- starting with its own fleets.

**HB-2699-HD-2**

Submitted on: 3/8/2020 1:15:58 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Henri Etta Schmitz	Individual	Support	No

Comments:

**HB-2699-HD-2**

Submitted on: 3/8/2020 1:49:09 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Douglas Perrine	Individual	Support	No

Comments:

Hawaii has clear goals and is making substantial progress toward its goal of 100% renewable electric power generation. However, there has been very little progress in the transportation sector, with electric vehicles currently representing barely over 1% of all vehicles on the road, and nearly all the rest powered by carbon-emitting, health-endangering fossil fuels that have to be imported from outside of Hawaii. HB2699 will help Hawaii move toward a clean transportation future.

**HB-2699-HD-2**

Submitted on: 3/8/2020 1:52:06 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Lorn	Individual	Support	No

Comments:

ALoha,

I am proud to say that I have been part of the solution by driving electric cars since 2006. It's time to define that actual steps in our state's goals.... Please support this first step, thanks... Lorn DOuglas

**HB-2699-HD-2**

Submitted on: 3/8/2020 2:43:41 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Peter Sternlicht	Individual	Support	No

Comments:

March 8, 2020

Dear Chair Inouye, Vice Chair Harimoto, and members:

I'd like to offer **STRONG SUPPORT** of HB2699 HD1. This measure is critical to achieving our State's goal of RFS 2045. I encourage all legislators to support this measure.

Peter Sternlicht, Pepeekeo, HI 96783

**HB-2699-HD-2**

Submitted on: 3/8/2020 3:45:13 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Phil Barnes	Individual	Support	No

Comments:

As the owner of an electric vehicle I am encouraged by the increased number of EVs that I see on the road. However EVs are still a miniscule fraction when compared to the total vehicle count. Hopefully the state will be able to help to increase the rate of conversion to EVs with this bill. Thank you for your consideration.

Phil Barnes

Hilo, HI 96720

**HB-2699-HD-2**

Submitted on: 3/8/2020 4:09:51 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Keith Neal	Individual	Support	No

Comments:

I support HB2699 HD2.

It is important for the state of Hawaii and it's counties to establish clean ground transportation goals to achieve 100% light-duty vehicle clean fleets and a timely plan to do so.

Ground transportation makes up a significant portion of Hawai'i's dependence on imported oil and the largest contributor to our State's greenhouse gas emissions. Wide adoption of Electric Vehicles (EVs) provide effective progress to clean renewable ground transportation and immediate benefits to Hawai'i.

State and counties must lead by example and welcome urgent purchase of zero emission vehicles and enabling of their infrastructure. Public entities must do their part in the State's environmental, health and energy goals.

Public acquisition of EV's and their infrastructure will foster a healthy and diverse market of suppliers. A healthy market for EVs and infrastructure is sorely needed in Hawai'i.

I support HB2699 HD2 as it will demonstrate Hawai'i is serious about sustainability and resiliency.

Sincerely,

-Keith Neal



**HB-2699-HD-2**

Submitted on: 3/8/2020 8:39:42 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Renata Walczuk	Individual	Support	No

Comments:

Supporting the bill. I am an electric car owner in Hawaii.

**HB-2699-HD-2**

Submitted on: 3/8/2020 9:20:36 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Climate Protector	Testifying for Climate Protectors Coalition	Support	No

Comments:



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183 Pinana St., Kailua, HI 96734 • 808-262-1285 • [info@350Hawaii.org](mailto:info@350Hawaii.org)

To: The Senate Committees on Government Operations;  
Energy, Economic Development, and Tourism; and Transportation  
From: Brodie Lockard, Founder, 350Hawaii.org  
Date: Tuesday, March 10, 2020, 2:50 pm

**In strong support of HB 2699 HD2**

Dear Chairs Thielen, Wakai and Inouye, and members:

350Hawaii.org's 6,000 members strongly support HB 2699 HD2. The dates in this bill are ten years too late. But they're a start. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.

The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. More than two-thirds of the fossil fuel imported into the State is used for transportation.

The private sector should be fully capable of providing the infrastructure needed to accommodate 100% EVs.

Our four mayors have already committed to fully-electric fleets.

It's time for the State to step up. HB 2699 would lead the way for every vehicle in the state to be electric.

Brodie Lockard  
Founder, 350Hawaii.org

**HB-2699-HD-2**

Submitted on: 3/9/2020 7:43:22 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Jenny Webster	Individual	Support	No

Comments:

Please ensure that the entire state fleet goes electric. Our leaders were hired to make good decisions not just for their constituents today, but for generations of people living in Hawaii and on the planet. Our actions in our lifetime may have a larger impact than those of any generation on the planet up to this point. How we react to the climate crisis will determine the survivability of our grandchildren. Make better decisions and be a leader for the community. Make the fleet electric and then start the work of making electric cars the norm. Thank you.

**HB-2699-HD-2**

Submitted on: 3/9/2020 7:55:24 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
donald erway	Individual	Support	No

Comments:

Dear Chairs Thielen, Wakai and Inouye, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2699 HD2. The dates in this bill are ten years too late. But they're a start. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.

The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. More than two-thirds of the fossil fuel imported into the State is used for transportation.

The private sector should be fully capable of providing the infrastructure needed to accommodate 100% EVs.

Our four mayors have already committed to fully-electric fleets.

It's time for the State to step up. HB 2699 would lead the way for every vehicle in the state to be electric.

**HB-2699-HD-2**

Submitted on: 3/9/2020 7:56:46 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Nanea Lo	Individual	Support	No

Comments:

Dear Chairs Thielen, Wakai and Inouye, and members:

As one of [350Hawaii.org](http://350Hawaii.org)'s 6,000 members, I strongly support HB 2699 HD2. The dates in this bill are ten years too late. But they're a start. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.

The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. More than two-thirds of the fossil fuel imported into the State is used for transportation.

The private sector should be fully capable of providing the infrastructure needed to accommodate 100% EVs.

Our four mayors have already committed to fully-electric fleets.

It's time for the State to step up. HB 2699 would lead the way for every vehicle in the state to be electric.

me ke aloha 'Ä• ina,

Nanea Lo

**Hawaii Electric Vehicle Association**

PO BOX 6310

Hilo, HI 96720

hawaiidriveelectric@gmail.com

March 9, 2020

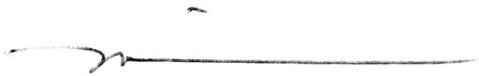
Dear Chairs Thielen, Wakai and Inouye, and members:

On behalf of the Hawaii Electric Vehicle Association, I'd like to offer **STRONG SUPPORT** of **HB2699 HD2**.

The electrification of our transportation sector is urgently needed – this sector consumes a significant portion of our fossil fuel imports and contributes to a large portion of our greenhouse gas emissions. **HB2699 HD2** will help create greater tension towards changes that will be necessary to escalate our transition to clean ground transportation. There are important details to work out, coordination with the counties and the private sector, and tuning of policies and codes in order for a rapid and just transition to occur. Aggressive state-level goals and commitments like those offered in **HB2699 HD2** will build this tension for change.

Thank you for the opportunity to provide testimony on **HB2699 HD2**.

Sincerely,



Noel Morin  
President  
Hawaii Electric Vehicle Association

*The Hawaii Electric Vehicle Association is a chapter of the Electric Auto Association ([electricauto.org](http://electricauto.org)), a national organization dedicated to increasing adoption of electric vehicles. The Hawaii Electric Vehicle Association represents electric vehicle owners and advocates across the state.*

**HB-2699-HD-2**

Submitted on: 3/9/2020 9:17:50 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Steve Parsons	Testifying for Small Biz, Kauai EV member,	Support	No

Comments:

Aloha, My name is Steve Parsons and I'm running for KIUC's board of directors, so I REALLY follow this issue. I've been pushing KIUC to adopt a moratorium on the purchase of NEW FF/ICE (Fossil Fuel or Internal Combustion Engines) based on fiscal responsibility. While I support this bill, it's too slow. Why!?! See the below graph. TODAY, EV's are cheaper to own than FF/ICE when considering TCO (Total cost of ownership). I understand this fast shift may be tough to execute. However, I think if there's some procurement piece that mandates that purchases have to be brought through a 5 or 10 year Total cost of Ownership rigorous screening, then my concern becomes moot as, Starting NOW, there should be no more FF/ICE purchases happening for cars or F-150 type Trucks. New York city has committed to a 10 yr 100% electrification goal. Fleet EVERYTHING, cars, buses, Police, Fire, Garbage service. I think they'll do it in 9 years. No reason we can't beat them. Especially, if the carbon tax goes into effect, that will accelerate the TCO in favor of EV's. Lastly, not sure the state understands it's ICE/FF Fleet's depreciation is going to accelerate too. So, this is part of a broader fiscal responsibility to limit "Stranded-assets". Mahalo for your time and everything you do to fight climate change. Hawaii's future legislature and Keiki will thank you for acting!!!



# ***ENDURANCE***<sup>™</sup>

<b>\$52,500</b>	Initial cost
<b>5</b> ⇅	Years owned
<b>20,000</b> ⇅	Mileage per year
<b>0.13</b>	Electric Cost Per kWh, \$ <sup>1</sup>
<b>\$5,200</b>	Fuel cost <sup>2</sup>
<b>\$1,800</b>	Maintenance cost <sup>3</sup>
<b>(\$7,500)</b>	Federal tax credit <sup>4</sup>
<b>0</b>	Local tax credit <sup>5</sup>
<b>1</b>	Number of vehicles
<b>\$52,000</b>	<b>TOTAL</b>
<b>(\$19,178)</b>	<b>DIFFERENCE</b>

**HB-2699-HD-2**

Submitted on: 3/9/2020 10:00:46 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Bill van den Hurk	Testifying for Hawaiian Automobile Dealers Association	Oppose	Yes

Comments:

**HB-2699-HD-2**

Submitted on: 3/9/2020 10:21:40 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Paula Miller	Individual	Support	No

Comments:

Dependence on fossil fuels is bad for the state, the country, and the planet. Every effort should be made to move away from fossil fuels and invest in clean energy. Ground transportation and state-owned fleets should run on clean energy to not only set an example to the citizens of Hawaii, but to save money and end the state's reliance on fossil fuels.

I respectfully request that HB2699 be passed into law.

Paula Miller

Ninole, HI 96773

**HB-2699-HD-2**

Submitted on: 3/9/2020 10:25:52 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Katherine Ray	Individual	Support	No

Comments:

Dear Chairs Thielen, Wakai and Inouye, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2699 HD2. The dates in this bill are ten years too late. But they're a start. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.

The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. More than two-thirds of the fossil fuel imported into the State is used for transportation.

The private sector should be fully capable of providing the infrastructure needed to accommodate 100% EVs.

Our four mayors have already committed to fully-electric fleets.

It's time for the State to step up. HB 2699 would lead the way for every vehicle in the state to be electric.

Sincerely,

Katherine Ray

**HB-2699-HD-2**

Submitted on: 3/9/2020 10:37:38 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Suzanne Egan	Individual	Support	No

Comments:

To: The Senate Committee on Government Operations

Energy, Economic Development and Tourism; and Transportation

From: Suzanne Egan

Date: March 10, 2020, 2:50 pm

In strong support of HB 2699 HD2

Aloha,

Thank you for your leadership. You have chosen to serve, may you be blessed with wisdom. It is very clear that we must do EVERYTHING we can to offset our children's challenging future on this copromised planet. Move from fossil fuels. This being said, evolving our local transprotation, Hawaii's greatest source of greenhouse gas, is at present your reponsibility. Please support this bill which is an integral part of achieving 100% carbon neutrality. Other countries and island communities have lead the way. All four mayors have made the commitment. Follow through with the necessary action.

Thank you,

Suzanne Egan



**Written Statement of Elemental Excelerator  
before the Senate Committees on Government Operations, Energy, Economic Development,  
and Tourism, and Transportation  
March 10, 2020**

**In consideration of [HB 2699 HD 2](#)  
RELATING TO THE ENVIRONMENT**

**Aloha Chairs Thielen, Wakai, and Inouye and Members of the Senate Committees on  
Government Operations, Energy, Economic Development, and Tourism, and Transportation:**

Elemental Excelerator respectfully submits support for the intent of HB 2699 HD 2, which establishes clean ground transportation goals for state agencies on a staggered basis until achieving a 100 per cent light-duty vehicle clean fleet by 12/31/2035, and for all light-duty vehicles in the State by 12/31/2045.

Elemental Excelerator is a Honolulu-based non-profit organization that supports climate positive startup companies that are helping solve Hawai'i's most urgent environmental problems. Each year, we select 15-20 companies annually that best fit our mission and fund each company up to \$1 million. To date, we have awarded \$36 million to 99 companies resulting in over fifty demonstration projects in Hawai'i & the Asia Pacific. Fifteen percent of Elemental Excelerator's portfolio has companies like AMPLY, KIGT, eMotorWerks, and Chargetrip that specifically support solutions that advance the electrification of transportation.

**We support the intent of HB 2699 HD 2 because** it signals to the broader mobility innovation sector Hawai'i's commitment to growing its economy through cleantech innovation and opens opportunities to mobility companies like the ones in our portfolio to support our state's ambitious goals. The City & County of Honolulu is currently analyzing pathways toward clean transportation goals that evaluate both vehicle miles traveled as well as electrification. We recommend that the language in this bill set targets for fleets under State control and work with the State Energy Office, Office of Planning, and utilities to identify pathways for clean transportation.

Mahalo for the opportunity to provide testimony on this legislation.

Sincerely,

*Tiffany Huynh*

Tiffany Huynh  
Director of External Affairs

**HB-2699-HD-2**

Submitted on: 3/9/2020 2:06:05 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
william metzger	Testifying for 350 HAWAII	Support	No

Comments:

WE NEED CLEAN TRANSPORT SOONER.

**HB-2699-HD-2**

Submitted on: 3/9/2020 2:08:45 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
tlaloc tokuda	Individual	Support	No

Comments:

To: The Senate Committees on Government Operations;  
Energy, Economic Development, and Tourism; and Transportation

From: **Tlaloc Tokuda**

Date: Tuesday, March 10, 2020, 2:50 pm

**In strong support of HB 2699 HD2**

Dear Chairs Thielen, Wakai and Inouye, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2699 HD2. The dates in this bill are ten years too late. But they're a start. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.

The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. More than two-thirds of the fossil fuel imported into the State is used for transportation.

The private sector should be fully capable of providing the infrastructure needed to accommodate 100% EVs.

Our four mayors have already committed to fully-electric fleets.

It's time for the State to step up. HB 2699 would lead the way for every vehicle in the state to be electric.

Mahalo for your consideratrion

Tlaloc Tokdua

Kailua Kona HI 96740





**SENATE COMMITTEE ON GOVERNMENT OPERATIONS  
SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM  
SENATE COMMITTEE ON TRANSPORTATION**

March 10, 2020, 2:50 P.M.

Room 225

(Testimony is 7 pages long, including attachment)

**TESTIMONY IN SUPPORT OF HB 2699 HD2**

Aloha Chair Thielen, Chair Wakai, Chair Inouye, Vice Chair Taniguchi, Vice Chair Harimoto, and members of the Committees:

Blue Planet Foundation **supports HB 2699 HD2**, which sets a planning vision for the elimination of fossil fuels from ground transportation in Hawai'i by 2045. This bill will help to promote alignment and collaboration in ongoing and future planning efforts for multiple aspects of the state's transportation energy sector.

## **HAWAI'I NEEDS A VISION FOR 100% CLEAN TRANSPORTATION**

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The legislature has long stressed the importance of the state's transition to a renewable energy system. For example, in 2001's Act 272 the legislature adopted a renewable standard for electricity, recognizing "the economic, environmental, and fuel diversity benefits of renewable energy resources" and encouraging further development of renewable resources. The legislature found that "while Hawaii is a national leader in the development of renewable energy resources for electricity production, there may be more that the State can do to encourage the development and implementation of renewable energy. These efforts can reduce the amount of imported oil used for the generation of electricity."

More recently, Hawai'i's leaders set a vision for 100% renewable electricity by 2045, becoming the first state in the nation to set such a target. That vision has become a driving force in electricity planning, and a focal point for a variety of key energy issues.

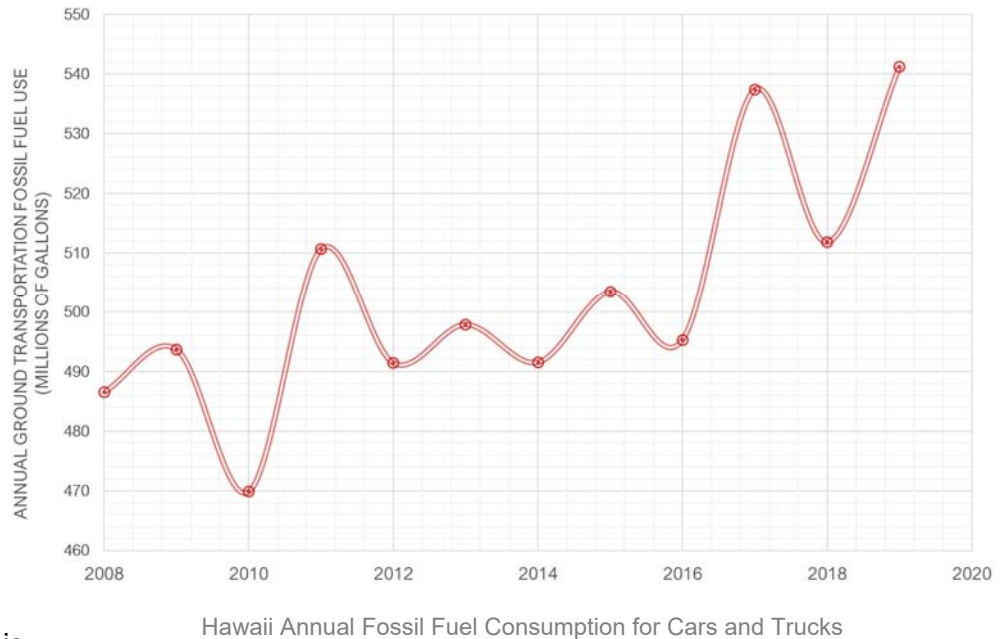
While Hawai'i has made substantial progress on policies, programs, and actions to reduce burning fossil fuels in the electricity sector, **we are falling short on decarbonizing our ground transportation sector**. Greenhouse gas emissions from transportation are increasing. Last year, we sold more gasoline than the previous year.<sup>1</sup> Over one million gasoline-powered vehicles are on Hawai'i's roads—and from them comes nearly five million metric tons of climate-

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<sup>1</sup> *DBEDT Monthly Energy Trends*, February 2020, <http://dbedt.hawaii.gov/economic/energy-trends-2/>.

changing carbon pollution. Although we now have over 11,000 electric vehicles (EVs) on Hawai'i's roads, they still only make up a mere 1% of all registered vehicles in the state.<sup>2</sup>

Recognizing that emissions from ground transportation have been increasing in recent years, in December 2017, **the mayors from all four of Hawai'i's counties pledged to transform ground transportation to 100 percent renewable fuel by 2045.** The purpose of their action was to set a vision for clean, modern mobility options for all. This goal is necessary and achievable. **The state should support these county goals and set its own goal for 100% renewable ground transportation.**



With the mayors' proclamations in December 2017, Hawai'i joined the ranks of several countries who have also recognized that fossil fuel-powered ground transportation needs to end. **Both France and Britain have set a target for phasing out the sale of new gas cars by 2040.** India, Netherlands, Israel, and Denmark have set a similar goal for 2030. Norway plans to have all new cars, buses, and light commercial vehicles be zero emission vehicles by 2025. And China—the world's largest auto market—also announced plans to electrify its entire vehicle fleet. These countries recognize the environmental imperative for setting long-term transportation policies. Here, policy is key, as the market fails to account for the environmental and social cost of carbon pollution from vehicles today.

In the current national political climate, the importance of a vision for our state energy plan cannot be overstated. News reports from indicate that President Trump is attempting to dismantle progress on decarbonization. He intends to weaken vehicle fuel efficiency, end a moratorium on new coal mines, stop the Clean Power Plan, and eliminate a review of climate impacts in environmental impact statements. Without state action, these steps will hurt local consumers and our environment, simply to line the pocket of the fossil fuel industry.

**Hawai'i's leaders must set the state's own vision and narrative for local, clean energy.** Answers to several Frequently Asked Questions are attached to this testimony. Topics include:

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<sup>2</sup> *Id.*

- The **urgent need** for a planning target date for 100% clean transportation;
- The **economic benefits** of clean transportation;
- The **achievability of a 2045 planning target**, with trends such as electrified vehicles, biofuels, and multi-modal transportation options.

Thank you for the opportunity to submit this testimony.

# 100% Clean Ground Transportation

## Frequently Asked Questions

### Why is a 100% Clean Transportation Necessary?

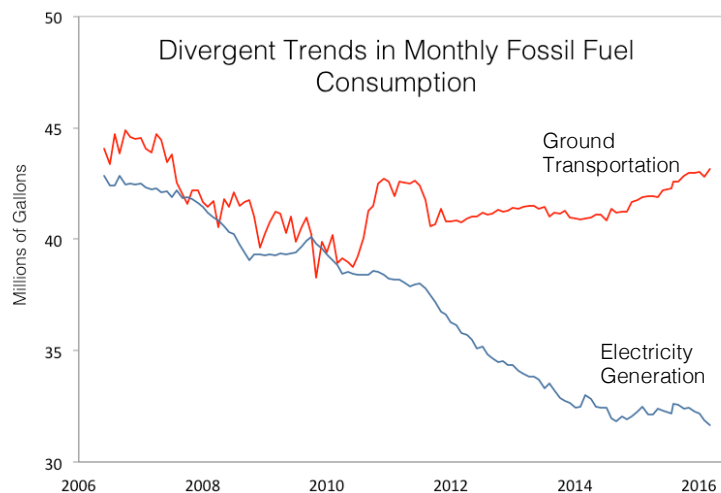
Hawai'i's policy leaders have long stressed the importance transitioning the state's energy system to clean energy. This transition has been driven by economics, and also by concern for our shared environment. As described by Governor George Ariyoshi:

**“Stewardship . . . mean living with the constant reminder that our actions occur in context of other people over generations.”**

Ground transportation accounts for around one-third of the state's fossil fuel consumption and greenhouse gas emissions. A resilient economy and a healthy environment require that we consider these impacts.

This is especially important in an age where 194 countries—essentially every country on earth—have agreed that it is imperative that we rapidly reduce greenhouse gas emissions.<sup>3</sup>

The state has long utilized planning targets as a way to set a course for reducing fossil fuel consumption in the electricity sector.<sup>4</sup> This transformation is on track to reach the goal of 100% renewable energy by 2045. In contrast, fossil fuel consumption for ground transportation is essentially unchanged from a decade ago.



Closing this gap will require many efforts by many entities, both today and in the future. The importance of HB 1580 is that it can align those efforts around a common vision, set by the state's leaders.

### What are the Economic Benefits?

The transition to clean transportation creates many opportunities for cost savings. Some of these opportunities come in the form of more efficient multi-modal transportation (e.g. saving money with more walking, biking, and public transit). Other opportunities arise from fuel-cost savings.

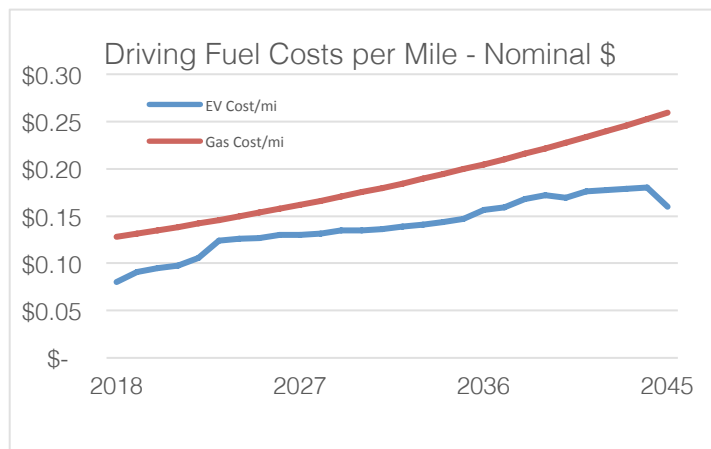
<sup>3</sup> See Paris Agreement, U.N. Framework Convention on Climate Change (2016).

<sup>4</sup> See H.R.S. § 269-91.

For example, the transition to clean energy is sure to include more electric passenger vehicles, buses, and fleet vehicles (“EVs”).<sup>5</sup> This electrification trend provides a double benefit. First, the cost of powering an EV is generally less than powering an equivalent gasoline vehicle. So consumers can save money—today—by switching to an EV. Second, a growing fleet of EVs can help to balance renewable energy on the electric grid. This can lower the cost of electricity for everyone.

University of Hawai‘i Engineering Professor, Matthias Fripp, has created a quantitative model of the state’s transition to renewable energy. He has calculated that a 100% renewable transportation system, with smart EV charging to match renewable electricity generation, can be expected to **save utility consumers approximately \$150 million per year in fuel and electricity costs.**<sup>6</sup>

Blue Planet Foundation has evaluated recent projections for electricity rates in Hawai‘i, comparing them to a World Bank estimate of the long-term trend for increasing oil prices, under a variety of transportation scenarios. This comparison indicates that we can expect electricity to remain the cheaper fuel option through 2045, and that the potential aggregate benefit in fuel savings is on the order of several billion dollars.



## Is 100% Clean Transportation by 2045 Possible?

Much like in the electricity sector, many factors will influence the pace of the state’s transition to clean energy. While some of those factors remain unknown (as is expected for a 30-year planning horizon), several important factors are apparent today:

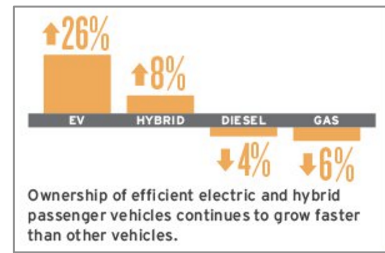
### 1. The Rise of Battery Electric and Fuel Cell Vehicles

While familiar clean transportation options (like biofuels, walking, biking, public transit, etc.), and emerging technologies (like hydrogen) will undoubtedly play an important role, we expect the emergence of electric vehicles (EVs) to quickly and radically shift the state’s transportation energy landscape.

<sup>5</sup> For example, auto executives recently polled by KPMG identified EVs as the top trend in the car market between now and 2025.

<sup>6</sup> See M. Fripp, *Effect of Electric Vehicles on Design, Operation and Cost of a 100% Renewable Power System* (Apr. 2016).

In Hawai'i, the growth rate of EV sales has far outpaced other fuel options. On a more global scale, important factors such as the cost of producing batteries for electric cars has fallen dramatically, from around \$1,000 per kWh to less than \$200. As we enter the second generation of modern EVs, a steadily increasing variety of models are coming onto the market with lower prices, larger batteries, and longer driving ranges. Nearly every major auto manufacturer is investing heavily in battery electric and/or hydrogen fuel cell electric vehicles, and views zero emission vehicles as the long-term solutions for transportation fuels.



Hawai'i is particularly well-suited for the this acceleration of EV adoption because electric batteries perform well in our year-round warm climate. Our island geography often restricts the distances we need to drive, making range anxiety less of an issue compared to other locations. Hawai'i is already in the top three states by proportion of registered vehicles that are electric, and we have the second highest ratio of electric charging stations to population of any state.

## 2. Transportation will Become More Multi-modal, Networked, Autonomous

The future of transportation in Hawai'i is likely to include more efficient land use that reduces travel demand and travel distances, significant improvements in mass transit, bicycling and pedestrian infrastructure, and new mobility alternatives such as autonomous taxis and other networked 'mobility as service' options. These changes are likely to shift a sizable percentage of Hawai'i's trips from personal automobiles to alternative modes and to significantly reduce transportation energy use.

With sufficiently transformative policies, the small sector of gasoline vehicles can be a small fraction of the total ground transportation sector (around 6%).

## 3. Biofuels are a Near-Term and Long-Term Option

Hawai'i is home to one of the leading pioneers of biofuel production, Pacific Biodiesel. Today, the state is producing commercial quantities of biofuels using local feedstocks.

In a report commissioned by DBEDT in 2010, the consultant firm Black & Veatch Corporation performed an analysis of the potential for biofuel production in the state of Hawai'i. The report found that the maximum theoretical capacity of biofuel production in the state was equal to the equivalent of 848 million gallons of "green gasoline" or 779 million gallons of "green diesel" per year (see chart below). This is around 2.5 times the total amount of gasoline and diesel used in ground transportation in Hawai'i today.

<b>Table 1-6. Maximum Theoretical Hawai'i Biofuel Production Potential.</b>					
<b>Feedstock</b>	<b>Biofuel</b> 10 <sup>12</sup> Btus/yr	<b>Ethanol</b> million gal/yr	<b>Green Gasoline</b> equivalent million gal/yr	<b>Green Diesel</b> equivalent million gal/yr	<b>Green Jet Fuel</b> equivalent million gal/yr
Energy Crops	101	1,202	786	722	751
Cellulosic Wastes	8	95	62	57	59
Total:	109	1,297	848	779	810

*Source: DBEDT (2010). "The Potential For Biofuels Production in Hawaii"*

The report also concluded that "...it should be quite achievable for biofuels produced from in-state resources to displace 20 percent [over 50 million gallons] of the gasoline and diesel fuel needed for vehicle transportation in Hawai'i. This could be accomplished using about 10 percent of available agricultural land for energy crop production to supply the required biomass feedstock."

In short, local biofuels are a viable option for powering significant portions of the transportation sector.

DATE: March 09, 2020

TO: Senator Laura H. Thielen  
Chair, Committee on Government Operation

Senator Glenn Wakai  
Chair, Committee on Energy, Economic Development, and Tourism

Senator Lorraine R. Inouye  
Chair, Committee on Transportation

FROM: Curt Augustine

RE: **H.B. 2699, H.D.2 – Relating to the Environment**  
**Hearing Date: Tuesday, March 10, 2020 at 2:50 p.m.**  
**Conference Room: 225**

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Dear Chair Thielen, Chair Wakai, Chair Inouye, and members of the joint committees:

On behalf of the Alliance for Automotive Innovation (“Alliance”) we submit these comments supporting the intent of H.B. 2699, H.D.2, but expressing concerns with section 3 and section 4 of the bill which establish a 2045 goal for all passenger cars in the state to be gasoline-free alternative fuel vehicles.

The Alliance for Automotive Innovation is the singular, authoritative and respected voice of the automotive industry. Focused on creating a safe and transformative path for sustainable industry growth, the Alliance for Automotive Innovation represents the manufacturers producing nearly 99 percent of cars and light trucks sold in the U.S. Members include motor vehicle manufacturers, original equipment suppliers, technology, and other automotive-related companies and trade associations.

The Alliance supports efforts to transition public fleets and public fleet procurement preferences in favor of zero emission vehicles. Government support for zero emission vehicles, charging infrastructure, and alternative fuel deployment is essential to the overall transition to cleaner transportation. As leaders in transportation planning, state agencies can facilitate these opportunities for fleet electrification.

However, automobile manufacturers are concerned that sections 3 and 4 of this measure establish a statutory timeline for the transition to alternative fuel vehicles based upon the unrealistic goal of achieving 100% gasoline-free passenger cars on Hawaii’s roads by the end of 2045. California, with the most aggressive clean



transportation goals in the country, contemplates about 50% of its fleet being powered by fossil fuel in 2050. This bill contemplates the entire fleet of all passenger vehicles in Hawaii to be fossil fuel-free by the end of 2045.

In order to meet the 100% goal by the end of 2045, it would require that by 2033, at a minimum, all passenger cars sold in the state would have to be alternative fuel vehicles, because the average life of a vehicle is 12 years, and can be much longer in Hawaii. Gasoline-powered vehicles will still be part of Hawaii's vehicle mix for years to come. Even California does not contemplate 100% of its vehicles to run on alternative fuels.

The California Air Resources Board (ARB) believes the state of California's 2050 GHG reduction targets can be met if, in the light-duty market, 100% of new vehicles sold in the state in 2050 are plug-in hybrid electric vehicles (PHEVs), battery electric vehicles, or hydrogen fuel cell vehicles. California's goal, in and of itself a challenging one, is seen as attainable by 2050, five years after the 2045 goal for Hawaii that is set out in this bill. Even if ARB's projection is met, millions of gasoline and diesel vehicles would still be on California's roads in 2050, since any used car or truck, as well as any PHEV sold in 2050 and beyond, would still require gasoline or diesel to run.

No state has ever proposed a goal as aggressive as this. Establishing such an unrealistic goal for our state, and requiring state agencies to develop actionable strategies to meet this goal, could have the unintended consequence of burdening low-income working people and families who cannot afford the higher prices of new electric vehicles.

For these reasons, we respectfully request that sections 3 and 4, as well as the purpose language under section 1, be amended to remove the 2045 date for all private light-duty motor vehicles.

The Alliance is very interested in continuing to dialogue with the Department of Transportation, the State Energy Office, and any other stakeholders to set reasonable goals for the transportation sector.

Thank you for the opportunity to submit these comments.

**HB-2699-HD-2**

Submitted on: 3/9/2020 2:38:02 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Nanette Vinton	Individual	Support	No

Comments:

Aloha Senators Thielen, Inouye, Wakai, Taniguchi, and Harimoto,

I am writing in **support** of HB2699 which establishes clean ground transportation goals for state agencies.

As a longtime EV owner and clean energy advocate, I am pleased that the state is taking steps to transition toward a 100% clean transportation fleet by 2035, as well as 100% clean transportation goal for the entire state by 2045.

Ground transportation consumes about a third of our imported fossil fuel and contributes a significant amount of carbon emissions. Electric vehicles are not only more efficient than fossil fuel vehicles, but they are also proven to be more cost-effective to maintain and operate. While the bill presents other alternatives for clean energy vehicles (fuel cell, hybrid EVs, fuel economy leaders, and other), EVs should be the logical choice, considering the similar cost structures of each alternative. There are more and more EV models now in a price range that can be afforded by a larger demographic.

However, while I applaud the state for setting these goals, the state also needs to take a more proactive and favorable stance on incentivizing the installation of the charger infrastructure needed to support this transition to a 100% clean transportation economy.

Respectfully submitted,

Nanette Vinton

Mililani, HI



# SIERRA CLUB OF HAWAI'I

## SENATE COMMITTEES ON GVO, EET, and TRS

March 10, 2020      2:50 PM      Room 225

In **SUPPORT** of **HB2699 HD2**: Relating to the Environment

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Aloha Chair Thielen, Chair Wakai, Chair Inouye, and members of the committees,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawai'i **supports HB2699**, which seeks to reduce and ultimately eliminate carbon-based ground transportation in the Hawaiian Islands.

We support adopting a clean transportation target to align with existing clean energy and carbon neutrality by 2045 goals. Since adopting the 100% renewable energy goal, the state has made considerable progress in fostering collaborative efforts to reform electricity policy. Because the transportation sector accounts for two-thirds of the state's fossil fuel consumption, more focus must be placed on ground transportation to truly achieve energy independence in Hawai'i. Reducing ground transportation reliance on fossil fuels also helps to reduce air and water pollution, increase our energy independence, and cut the carbon emissions that contribute to climate change.

Sierra Club supports the approach in HB2699 to stagger goals for clean ground transportation, beginning with state agencies by 2035 and all light-duty vehicles in Hawai'i by 2045. This bill is also consistent with commitments made by the four counties, who in December 2017 signed proclamations to commit to 100% clean ground transportation by 2045. We support the State Legislature's efforts to pass a law to solidify these existing county commitments. We do note that it will also be important to provide funding to the agencies, as well as adopt other EV charging infrastructure and vehicle incentives to help make this transition and achieve these goals.

Thank you very much for this opportunity to provide testimony in **support of HB2699**.

Mahalo,

Jodi Malinoski, Policy Advocate

**LATE**

**HB-2699-HD-2**

Submitted on: 3/9/2020 4:42:14 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Diane Ware	Individual	Support	No

Comments:

Dear legislators, one and all,

i am very concerned about Climate Crisis at our shores and doorsteps.

\* Transportation emits more greenhouse gases than any other sector of Hawaii's economy. More than two-thirds of the fossil fuel imported here is used for transportation.

\* The dates in this bill are ten years too late. Every vehicle in the state should be electric ASAP.

\* Honolulu is already committed to changing Oahu's fleet of vehicles to 100% renewable fuel sources by 2035. All four mayors have committed their counties to 100% renewable ground transportation by 2045.

\* The State's vehicle fleet needs to follow suit.

\* Private companies and Hawaii Electric Industries should be fully capable of providing the infrastructure needed to accommodate 100% EVs, costing the State very little.

For these reasons I urge you to support this measure. Time Is Of the Essence! Our Eath home is on Fire Now. Please Act for future generations!

Sincerely,

Diane Ware, 99-7815 Kapoha, Volcano 96785

**LATE**

**HB-2699-HD-2**

Submitted on: 3/9/2020 4:50:42 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Gary Miller	Individual	Support	No

Comments:

As an Electric Vehicle (EV) owner, I believe that the best way to help reach our clean ground transportation goals is through the adoption of renewable energy vehicles as soon as possible!!

I support HB2699 HD2.

Respectfully,

Gary Miller



Healthy Climate  
Communities

**LATE**

**Testimony in support of HB2699**

**Senate Committees on Government Operations;  
Energy, Economic Development, and Tourism; and Transportation**

**Hearing Tuesday March 10, 2020, 2:50pm**

Dear Chair Theilen, Chair Wakai, Chari Inouye and Committee members

I am writing in strong support of HB2699 which establishes clean ground transportation goals for State agencies.

This is consistent with our State clean energy and carbon neutral goals. It will also spur investment in infrastructure and a market which will set the stage for the private sector to follow.

As the State benefits from reduced fuel and maintenance costs, hopefully the State will take measures to reach the 100% renewable fleet earlier than required by this Bill.

Mahalo,

**Dr. Lisa Marten**

Executive Director  
HealthyClimateCommunities.org  
healthyclimate@hawaii.rr.com



**LATE**

## HB 2699, HD 2, RELATING TO THE ENVIRONMENT

MARCH 10, 2020 · SENATE GOVERNMENT OPERATIONS COMMITTEE, SENATE ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM COMMITTEE, AND SENATE TRANSPORTATION COMMITTEE · CHAIRS SEN. LAURA H. THIELEN, SEN. GLENN WAKAI, AND SEN. LORRAINE R. INOUE

**POSITION:** Support.

**RATIONALE:** IMUAlliance supports HB 2699, HD2, relating to the environment, which establishes clean ground transportation goals for state agencies on a staggered basis until achieving a 100 per cent light-duty motor vehicle clean fleet by 12/31/2035, and for all light-duty motor vehicles in the State by 12/31/2045.

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, like seawalls.

Furthermore, according to research conducted by Michael B. Gerrard from Columbia Law School, modern-day slavery tends to increase after natural disasters or conflicts where large numbers of people are displaced from their homes. In the decades to come, says Gerrard, **climate change will very likely lead to a significant increase in the number of people who are displaced and, thus vulnerable, to human trafficking.** While the Paris Climate Agreement of 2015 established objectives to limit global temperature increases and several international agreements are aimed at combating modern-day slavery, it is highly uncertain whether they will be adequate to cope with the scale of the problem that is likely to occur as a result of climate change.

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.

Therefore, **our state must take bold steps to address the worsening climate crisis, which is exacerbated by a transportation sector that is still too heavily reliant on fossil fuels, like oil and natural gas.** According to the U.S. Energy Information Administration, the burning of fossil fuels was responsible for 76 percent of U.S. greenhouse gas emissions in 2016. These gases contribute to the greenhouse effect and are a primary driver of the pending climate catastrophe.

Honolulu and Maui Counties recently announced lawsuits against fossil fuel companies for the role they have played in the climate crisis. Just like with tobacco and pharmaceutical companies, fossil fuel corporations are being held financial accountable for taking reckless actions that jeopardized public health. At the same time, we should work to **divest our state's transportation sector from contributing to global harm by taking steps to incentivize the public purchase of electric vehicles and ensure that government vehicles are part of Hawai'i's pathway toward reducing carbon emissions, ultimately bankrupting the businesses that have placed our planet in peril and helping to limit global warming below 1.5 degrees Celsius.**

For the sake of our overheating Earth, we cannot afford to wait.



**LATE**

**HB-2699-HD-2**

Submitted on: 3/9/2020 8:50:15 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Severine Busquet	Individual	Support	No

Comments:

**Dear Chairs Thielen, Wakai and Inouye, and members:**

**The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.**

**HB 2699 would lead the way for every vehicle in the state to be electric.**

**For these reasons, I strongly support HB 2699 HD2.**

**Thanks for your attention**

**Severine Busquet**

**Hawaii Kai, Honolulu**

**LATE**

**HB-2699-HD-2**

Submitted on: 3/9/2020 9:22:29 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Sherry Pollack	Individual	Support	No

Comments:

**LATE**

**HB-2699-HD-2**

Submitted on: 3/9/2020 9:32:01 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Robert King	Testifying for Pacific Biodiesel Technologies	Support	No

Comments:

Pacific Biodiesel supports this effort to lower GHG emissions for transportation in Hawaii. Beginning with the State fleet is an excellent start.

**LATE**

**HB-2699-HD-2**

Submitted on: 3/9/2020 10:26:54 PM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Andrew Richard Kass	Testifying for KauaiEV	Support	No

Comments:

Aloha Comitee Members,

I am writing in strong support od HB 2699. As an environmentalist, I believe we need to decarbonize immediately, and the state needs to lead by example. All our counties already comitted to 100% of their fleet powered by renewables by 2035, and it would be great if the state followed suit.

Mahalo

Andy Kass

302 Makani Rd,

Kapaa, HI 96746

**LATE**

**HB-2699-HD-2**

Submitted on: 3/10/2020 6:22:22 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Caroline Kunitake	Individual	Support	No

Comments:

Dear Chairs Thielen, Wakai and Inouye, and members:

As one of [350Hawaii.org](http://350Hawaii.org)'s 6,000 members, I strongly support HB 2699 HD2. The dates in this bill are ten years too late. But they're a start. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as quickly as possible.

The Climate Crisis is already a challenge. I cannot image what this global issue will be like for future generations. We need to take action now to change our behavior to move away from fossil fuels. Transportation consume may fossil fuels through the construction, shipping and driving of these vehicles. We need more electric cars in Hawaii to encourage everyday consumers to think about buying electric cars.

The transportation sector contributes more to the Climate Crisis than any other sector in Hawaii. More than two-thirds of the fossil fuel imported into the State is used for transportation.

The private sector should be fully capable of providing the infrastructure needed to accommodate 100% EVs.

Our four mayors have already committed to fully-electric fleets.

It's time for the State to step up. HB 2699 would lead the way for every vehicle in the state to be electric.

Mahalo,

Caroline Kunitake

**LATE**

**HB-2699-HD-2**

Submitted on: 3/10/2020 8:52:12 AM

Testimony for GVO on 3/10/2020 2:50:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Janet Pappas	Individual	Support	No

Comments:

Dear Chairs Thielen, Wakai and Inouye, and members:

As one of 350Hawaii.org's 6,000 members, I strongly support HB 2699 HD2. The State's vehicle fleet needs to be changed to electric vehicles (EVs) as soon as possible.

Transportation contributes more to the Climate Crisis than any other sector in Hawaii. Two-thirds of the fossil fuel imported into the State is for transportation.

Our four mayors have already committed to fully-electric fleets. Now the State needs to step up. Please pass HB 2699 this session and lead the way for every vehicle in the state to be electric.

Mahalo,

Jan Pappas

Aiea, Hawaii 96701