

DAVID Y. IGE  
GOVERNOR



**Testimony by:**  
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DIRECTOR

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JADE T. BUTAY  
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IN REPLY REFER TO:

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

February 8, 2017  
11:00 a.m.  
State Capitol, Room 423

**H.B. 738**  
**RELATING TO FUEL CELL ELECTRIC VEHICLES**

House Committees on Transportation and Labor & Public Employment

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The Department of Transportation (DOT) **supports** H.B. 738 which amends the definition of electric vehicles to include fuel cell electric vehicles and grant procurement priority for fuel cell electric vehicles for State and County vehicle purchases.

The DOT believes the incentives of this bill promote sustainable transportation and helps the State meet its energy goals.

Thank you for the opportunity to provide testimony.

DAVID Y. IGE  
GOVERNOR



SARAH ALLEN  
ADMINISTRATOR  
MARA SMITH+  
ASSISTANT ADMINISTRATOR

**STATE OF HAWAII  
STATE PROCUREMENT OFFICE**

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Honolulu, Hawaii 96810-0119  
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TESTIMONY  
OF  
SARAH ALLEN, ADMINISTRATOR  
STATE PROCUREMENT OFFICE

TO THE HOUSE COMMITTEES  
ON  
TRANSPORTATION,  
LABOR & PUBLIC EMPLOYMENT,  
AND  
HOUSING

Wednesday, February 8, 2017, 11:00 a.m.

HOUSE BILL 738  
RELATING TO FUEL CELL ELECTRIC VEHICLES

Chairs Aquino, Johanson and Brower; Vice-Chairs Quinlan, Holt and Nakamura; and members of the committees, thank you for the opportunity to submit testimony on House Bill 738. The State Procurement Office (SPO) has no position on this bill.

Thank you.



Brian Kitagawa, President  
Dave Rolf, Executive Director

## **HADA Testimony**

### **In STRONG SUPPORT of HB 738**

#### **RELATING TO FUEL CELL ELECTRIC VEHICLES**

Presented to the House Committee on Transportation, the House Committee on Labor and Public Employment, and the House Committee on Housing at the public hearing 11 a.m. February 8, 2017 in conference room 423, Hawaii State Capitol

Chairs Aquino, Johanson, Brower and Vice Chairs Quinlan, Holt and Nakamura,

**I am David Rolf, speaking on behalf of the dealer members of the Hawaii Automobile Dealers Association, who own and operate the 70 franchised new- car dealerships in the State of Hawaii, who are in STRONG SUPPORT of HB 738, Relating to Fuel Cell Electric Vehicles.**

The bill includes fuel cell electric vehicles in the definition of electric vehicles for purposes of parking exemptions, HOV lane use, registration, and required parking spaces in places of public accommodation.

HADA dealers continue to ardently support of the goals of the Hawaii Clean Energy Initiative and the adoption of renewable energy vehicles.

Hawaii continues to maintain its ranking as one of the top states in percentage of renewable energy electric vehicles sold compared to internal combustion vehicles.

Initiatives, created by the legislature, like the use of High Occupancy Vehicle lanes with only one occupant, and the provision of limited free parking at designated public sites has encouraged the adoption of these electric vehicles.

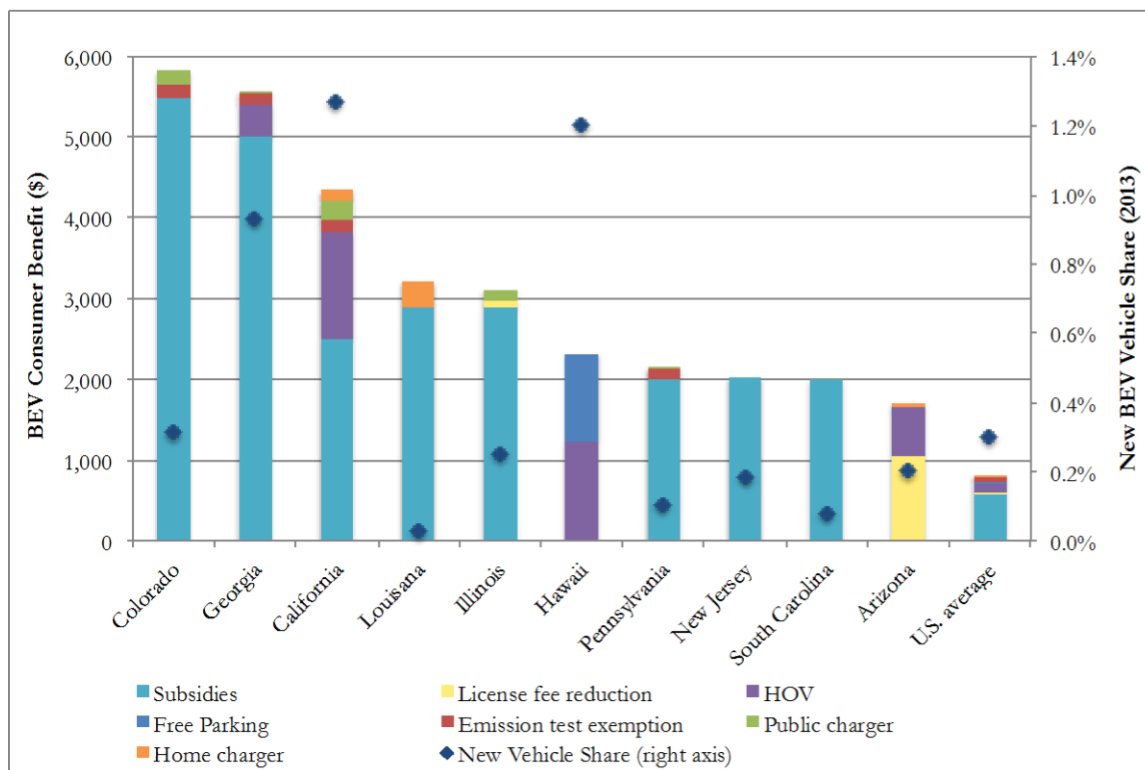
HADA believes Hawaii’s high electric vehicle adoption rate provides a model for a similarly high Hydrogen Fuel Cell Electric Vehicle adoption rate, if similar public policy provisions like use of HOV lanes and free parking incentives are provided to HFCEV purchasers.

An April 2015 study by the University of Hawaii, Economic Research Organization, “Factors Affecting EV Adoption: A Literature Review and EV Forecasts for Hawaii” shows the value of HOV lane use and free parking incentives in creating high adoption rates for electric vehicles.

### Policy Mechanisms

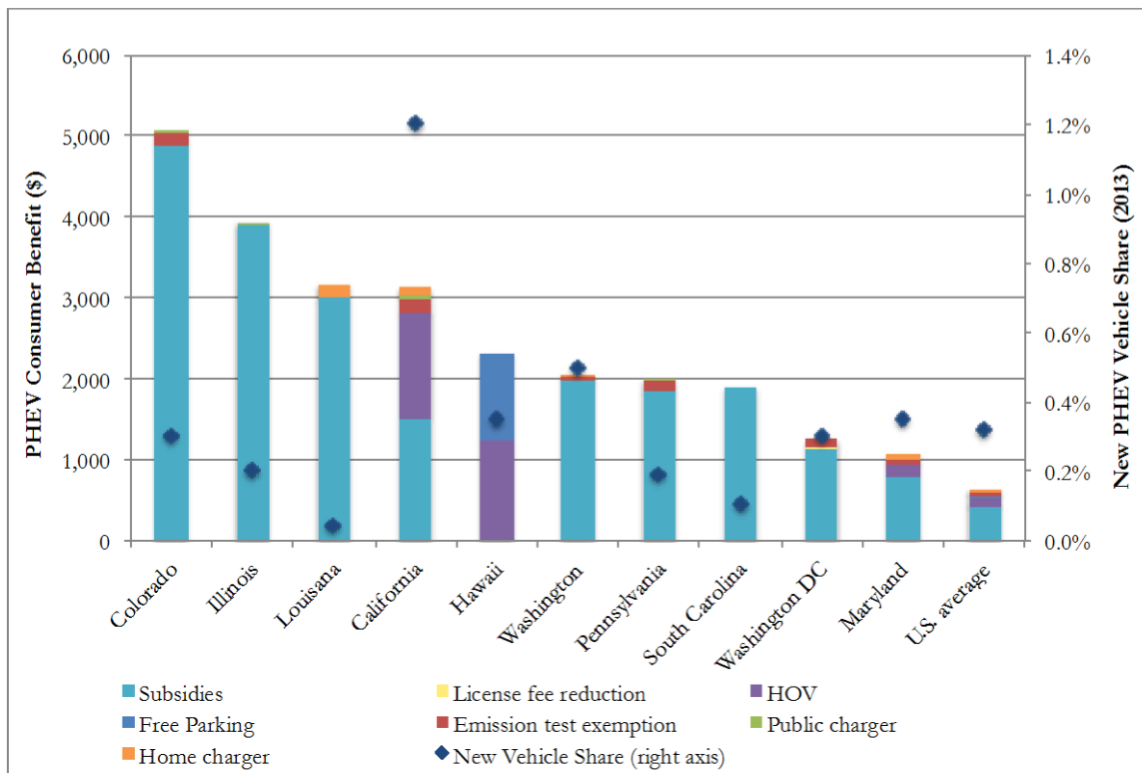
Policy mechanisms available to support EV adoption include *subsidies and other incentives, supporting infrastructure build-up and raising awareness.*

Gallagher and Muehlegger (2011) use national HEV sales data per capita to assess the impacts of incentives such as access to HOV lanes, tax credits, sales tax rebates, and gas prices. They found that gas prices and tax incentives significantly impact sales, where the rebate has a larger effect than the credit. They found that access to HOV lanes is significant in some states.



Source: Recreated from Jin et al. (2014).

**Figure 7. PHEV Consumer Benefit and EV Market Share by State**



Source: Recreated from Jin et al. (2014). 17

Jin et al. (2014) found that the most valuable state incentives are direct subsidies, though access to HOV lanes is also notable. Hawaii is found to rank sixth in regards to EV incentives, where they are valued at about \$1,200 for HOV lane access and about \$1,000 for free parking at metered stalls (for BEVs).

Many carmakers are preparing to shift to hydrogen fuel cells. “....automakers are increasingly betting the future of green cars on hydrogen fuel cell technology.” --Charles Fleming LA Times story 11/18/14

One HADA member already has brought in a hydrogen fuel cell electric vehicle for sale to the general public.

Public policy initiatives like providing HOV lane use for HFCEVs and providing limited free parking, like that offered to EV owners in Hawaii, will provide much needed incentives for the purchase of the renewable energy Hydrogen Fuel Cell Electric Vehicles needed to meet the goals of the Hawaii Clean Energy Initiative.

For the aforementioned reasons, the Hawaii Automobile Dealers Association respectfully requests the committees' support for passage of HB 738.

Respectfully submitted,

David H. Rolf Hawaii Automobile Dealers Association

1100 Alakea St. Suite 2601 Honolulu, Hawaii 96813

Tel: 808 593-0031

**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, February 6, 2017 5:31 PM  
**To:** TRNtestimony  
**Cc:** rjames9@hawaii.edu  
**Subject:** \*Submitted testimony for HB738 on Feb 8, 2017 11:00AM\*

**HB738**

Submitted on: 2/6/2017

Testimony for TRN/LAB on Feb 8, 2017 11:00AM in Conference Room 423

| <b>Submitted By</b> | <b>Organization</b> | <b>Testifier Position</b> | <b>Present at Hearing</b> |
|---------------------|---------------------|---------------------------|---------------------------|
| Rachel James        | Individual          | Support                   | No                        |

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email [webmaster@capitol.hawaii.gov](mailto:webmaster@capitol.hawaii.gov)

Testimony in STRONG SUPPORT of  
HB738  
Relating to Fuel Cell Electric Vehicles

Presented to the House Committee on Transportation and Labor & Public Employment  
at the public hearing to be held on Wednesday, February 8, 2017 at 11:00 a.m.  
in Conference Room 423, Hawaii State Capitol

Aloha Chair Aquino, Chair Johanson, Vice Chair Quinlan, Vice Chair Holt, and Members of the Committees:

I would like to testify in strong support of HB738 that includes fuel cell electric vehicles (FCEV) in the definition of "electric vehicles" for purposes of parking exemptions, HOV lane use, registration, and required parking spaces in places of public accommodation.

I support the goals of the Hawaii Clean Energy Initiative and the adoption of renewable energy vehicles. I personally have installed a photovoltaic system on my residential rooftop, and drive a plug-in electric hybrid vehicle, which qualifies under the definition of an "electric vehicle." This designation was an important factor in my decision to purchase this car, and I strongly believe that with FCEV's, likewise, it will be an important factor to spur adoption. By including hydrogen fuel cell vehicles into the definition electric vehicles, the State of Hawaii can incentivize another clean transportation option with virtually no impact to taxpayers.

Hawaii continues to maintain its ranking as one of the top states in percentage of renewable energy electric vehicles sold compared to internal combustion vehicles. Initiatives, created by the legislature, like the use of High Occupancy Vehicle lanes with only one occupant, and the provision of limited free parking at designated public sites has encouraged the adoption of these electric vehicles.

I believe Hawaii's high electric vehicle adoption rate provides a model for a similarly high FCEV adoption rate, if similar public policy provisions like use of HOV lanes and free parking incentives are provided to hydrogen FCEV purchasers. Producing hydrogen from water using a renewable source of electricity like solar helps Hawaii become more self-reliant and reduces our dependency on imported oil.





**HOUSE COMMITTEE ON TRANSPORTATION, and  
HOUSE COMMITTEE ON LABOR AND PUBLIC EMPLOYMENT**

Feb. 8, 2017, 11:00 A.M.

Room 225

(Testimony is 1 page long)

**TESTIMONY IN SUPPORT OF HB 738**

Aloha Chairs Aquino and Johanson, Vice Chairs Quinlan and Holt, and members of the committees:

Blue Planet Foundation **strongly supports** HB 738 which would include fuel cell electric vehicles in the definition of "electric vehicles" for purposes of parking exemptions, HOV lane use, registration, and required parking spaces in places of public accommodation and grants procurement priority for fuel cell electric vehicles for state and county vehicle purchases.

Blue Planet Foundation is a leading advocate for the development of clean energy and clean transportation in Hawaii and believes that hydrogen vehicles can play a pivotal role in helping to eliminate fossil fuel use for ground transportation.

Blue Planet Foundation also believes that since hydrogen is an energy storage medium, developing a hydrogen transportation sector will help the state meet its energy goals for the electricity sector by providing a means to store energy during periods when renewable energy production exceeds the electricity demand on the grid.

Capturing renewable energy that might otherwise be curtailed (or wasted) as hydrogen for transportation will not only reduce gasoline imports, but it will also allow energy companies to utilize more of the energy their projects produce, enabling them to set cheaper power purchase agreements with utilities and reduce electricity costs for consumers.

The vehicles targeted in the bill use fuel cells to convert hydrogen to electricity which then powers an electric motor, and therefore, they are in fact driven by electricity. We believe that the definition change is appropriate and that doing so and establishing a higher procurement priority for hydrogen vehicles for state and county vehicle purchases will help to speed the development of this sector.

We believe that the benefits of developing a hydrogen transportation sector are greater than the costs of providing the benefits described and therefore strongly urge the committees to pass the bill.

Thank you for the opportunity to testify.

# SanHi Government Strategies

a limited liability law partnership

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DATE: February 7, 2017

TO: Representative Henry Aquino  
Chair, Committee on Transportation

Representative Aaron Johanson  
Chair, Committee on Labor and Public Employment

*Submitted via Capitol Website*

RE: **H.B. 738 – Relating to Fuel Cell Electric Vehicles**  
**Hearing Date: Wednesday, February 8, 2017 at 11:00 a.m.**  
**Conference Room: 423**

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Dear Chairs Aquino and Johanson and Members of the Joint Committees:

The Alliance of Automobile Manufacturers (“Alliance”) would like to express **support** for H.B. 738. The Alliance is a trade association of twelve car and light truck manufacturers including BMW Group, Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of North America, and Volvo Car USA.

H.B. 738 would include in statute a definition of fuel cell electric vehicle for purposes of encouraging early adoption of fuel cell electric vehicles. Automobile manufacturers have invested heavily in the research and development of hydrogen technology, and the Alliance is very supportive of efforts to increase the availability of passenger fuel cell electric vehicles in Hawaii.

Thank you for the opportunity to submit testimony in support of this measure.

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Gary M. Slovin  
Mihoko E. Ito  
R. Brian Tsujimura  
C. Mike Kido  
Tiffany N. Yajima  
Matthew W. Tsujimura

Testimony of Rachel James  
Student, Energy Justice Program  
University of Hawaii at Manoa, William S. Richardson School of Law

Wednesday, February 8, 2017  
11:00 AM  
RM 423

Measure: H.B. No. 738

Title: RELATING TO FUEL CELL ELECTRIC VEHICLES

Dear Chair Aquino, Chair Johanson, Vice Chair Quinlan, Vice Chair Holt and Committee Members,

Thank you for welcoming my engagement in the consideration of House Bill 738. I am in strong support of the passage of this bill.

I commend Chair Aquino for introducing this measure. Its submission is an acknowledgement of the leadership Hawaii has evidenced in the advancement of fuel cell technology adoption and is a natural progression in line with Hawaii's leadership in renewable energy infrastructure development.

In alignment with the state's acknowledgment of renewable energy capabilities and leadership, it follows that encompassing the variance in types of electric vehicles would similarly serve as the state's acknowledgment of current options available for renewable energy in transportation.

As a state, we have collectively committed to reflect our economic and environmental values in our laws. Act 97 has been instrumental in attracting a diversity of talent and technology to the state. This diversity creates increased opportunities not only in the job market, but in industry development as well. This directly impacts the options for aspiring professionals who would like to live and work in Hawaii.

The Act also evidenced Hawaii's awareness of the technological capabilities available today in renewable energy. As a state, we declared that not adopting those technologies to support a sustainable economy and environment would be unacceptable.

Similarly, I believe the bill should pass to continue to propel the state forward on its environmental and economic goals.

As an Energy Justice Program Fellow at the William S. Richardson School of Law, I am often encouraged by the unique approach to legislating that Hawaii has taken over the years. I am encouraged by the direction that this legislature has taken in the introduction of HB738 as it reflects the legislature's intent to remain relevant and proactive in a time when technology is advancing at such rapid rates.

I look forward to the passage of this bill and thank you for this opportunity to provide comments.

Mahalo,

Rachel James  
William S. Richardson School of Law  
Energy Justice Program Fellow  
JD Candidate, Class of 2019



COLLEGE OF SOCIAL SCIENCES  
**HAWAII ENERGY POLICY FORUM**  
UNIVERSITY OF HAWAI'I AT MĀNOA

**Hawaii Energy Policy Forum**

Jeanne Schultz Afuvai, Hawaii Inst. for Public Affairs  
Hajime Alabanza, Hawaii Solar Energy Association  
John Antonio, US Dept of Agriculture  
Karlle Asato, Hawaii Government Employees Assn  
David Bissell, Kauai Island Utility Cooperative  
Joseph Boivin, Hawaii Gas  
Warren Bollmeier, Hawaii Renewable Energy Alliance  
Michael Brittain, IBEW, Local Union 1260  
Albert Chee, Chevron  
Elizabeth Cole, The Kohala Center  
Kyle Datta, Ulupono Initiative  
Mitch Ewan, UH Hawaii Natural Energy Institute  
Jay Fidell, ThinkTech Hawaii  
Carl Freedman, Haiku Design & Analysis  
Matthias Fripp, REIS at University of Hawaii  
Ford Fuchigami, Hawaii Dept of Transportation  
Justin Gruenstein, City & County of Honolulu  
Dale Hahn, Ofc of US Senator Brian Schatz  
Michael Hamnett, SSRI at University of Hawaii  
Senator Lorraine Inouye, Hawaii State Legislature  
Randy Iwase, Public Utilities Commission  
Brian Kealoha, Hawaii Energy  
Darren Kimura, Energy Industries  
Kelly King, Sustainable Biodiesel Alliance  
Kal Kobayashi, Maui County Energy Office  
Representative Chris Lee, Hawaii State Legislature  
Gladys Marrone, Building Industry Assn of Hawaii  
Stephen Meder, UH Facilities and Planning  
Joshua Michaels, Ofc of US Representative Colleen Hanabusa  
Sharon Moriwaki, UH Public Policy Center  
Ron Nelson, US Pacific Command Energy Office  
Jeffrey Ono, Division of Consumer Advocacy, DCCA  
Stan Osserman, HCATT  
Darren Pai, Hawaiian Electric Companies  
Melissa Pavlicek, Hawaii Public Policy Advocates  
Randy Perreira, Hawaii Government Employees Assn  
Fredrick Redell, Maui County Energy Office  
Rick Rocheleau, UH Hawaii Natural Energy Institute  
Will Rolston, Hawaii County, Research & Development  
Peter Rosegg, Hawaiian Electric Companies  
Riley Saito, SunPower Systems  
Scott Seu, Hawaiian Electric Companies  
Joelle Simonpietri, UH Applied Research Lab  
Ben Sullivan, Kauai County  
Terry Surlis, Hawaii State Energy Office, DBEDT  
Lance Tanaka, Par Hawaii, Inc.  
Maria Tome, Public Utilities Commission  
Kirsten Turner, Ofc of US Representative Tulsi Gabbard  
Alan Yamamoto, Ofc of US Senator Mazie Hirono

Testimony of Mitch Ewan  
Co-Chair, Transportation Working Group  
Hawaii Energy Policy Forum  
to the  
House Committees on Transportation and Labor

February 8, 2017 at 11:00 am in Conference Room 423

**IN SUPPORT OF HB 738, Relating to Fuel Cell Electric Vehicles**

Chair Aquino, Vice-Chair Quinlan, Chair Johanson, Vice-Chair Holt, and  
Members of the Committees,

I am Mitch Ewan, Co-Chair of the Transportation Working Group of the Hawaii Energy Policy Forum (Forum). The Forum, created in 2002, is comprised of over 40 representatives from Hawaii's electric utilities, oil and natural gas suppliers, environmental and community groups, renewable energy industry, and federal, state and local government, including representatives from the neighbor islands. Our vision and mission, and comprehensive "10 Point Action Plan" serves as a guide to move Hawaii toward its preferred energy goals and our support for this bill.

HB 738 clarifies that fuel cell electric vehicles are "electric vehicles" that use a fuel cell to convert hydrogen gas and oxygen into electricity --non-fossil fuels-- to charge onboard batteries and power one or more onboard electric motors to propel the vehicle. Fuel cell electric vehicles, because they are zero emission vehicles (ZEVs), can help Hawaii fulfill the goals of the Hawaii Clean Energy Initiative of reducing petroleum use in Hawaii's transportation sector, an important focus given that transportation accounts for two thirds of the state's overall energy mix.

Based on the foregoing, fuel cell "electric vehicles" should be granted the same state and county procurement priority and parking and HOV lane use incentives as other electric vehicles.

The Forum strongly supports HB 738, and respectfully urges passage of the bill.

Thank you for the opportunity to testify.



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

**LATE**

DAVID Y. IGE  
GOVERNOR

LUIS P. SALAVERIA  
DIRECTOR

MARY ALICE EVANS  
DEPUTY DIRECTOR

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813  
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Web site: [www.hawaii.gov/dbedt](http://www.hawaii.gov/dbedt)

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Statement of  
**LUIS P. SALAVERIA**  
Director  
Department of Business, Economic Development and Tourism  
before the  
**HOUSE COMMITTEES ON TRANSPORTATION, AND LABOR & PUBLIC  
EMPLOYMENT**  
Wednesday, February, 8th Date  
11:00 A.M.  
State Capitol, Conference Room 415  
in consideration of  
**HB738**  
**RELATING TO FUEL CELL ELECTRIC VEHICLES**

Chairs Aquino and Johanson, Vice Chairs Quinlan and Holt and Members of the Committees.

The Department of Business, Economic Development and Tourism (DBEDT) **supports** House Bill 738 which amends the definition of electric vehicles to include fuel cell electric vehicles (FCEV).

DBEDT acknowledges the appropriateness of including incentives of hydrogen FCEVs with electric vehicles (EV), since both are complementary electric drive technologies, releasing zero tailpipe emissions. As an electric drive vehicle FCEV have the potential to utilize renewable energy sources contributing to public policy benefits including the integration of renewables and the reduction of petroleum in ground transportation.

Including FCEVs into the definition of EV is an actionable step that sends a signal to industry that Hawaii supports the deployment of advanced transportation technologies. HB 738 is consistent with the U.S. Department of Transportation's Federal Highway Administration recent designation of routes that will serve as a national network of "alternative fuel" corridors spanning 35 states, including Hawaii's Oahu Electric Drive Corridor which incorporates FCEV and plug-in electric vehicles.

As this measure concerns State facility management and the regulation of high occupancy vehicle lanes, DBEDT respectfully defers to the Hawaii Department of Accounting and General Services and the Hawaii Department of Transportation on these matters. Thank you for the opportunity to provide DBEDT's position on HB 738.

**Testimony in SUPPORT of  
HB738  
Relating to Fuel Cell Electric Vehicles**



Presented to the House Committee on Transportation and Labor & Public Employment  
at the public hearing to be held on Wednesday, February 8, 2017 at 11:00 a.m.  
in Conference Room 423, Hawaii State Capitol

Aloha Chair Aquino, Chair Johanson, Vice Chair Quinlan, Vice Chair Holt, and Members of the Committees:

I am a 14-year old high school student, and at school we have many discussions on how young people can contribute to the environment. We are very concerned about pollution and global warming.

My mother showed me the hydrogen car and it was amazing that the only emission was water. I hope to see more of these on the road in Hawaii. I believe those cars should have all of the benefits that current electric cars have.

Therefore, I would like to testify in support of HB738 that includes fuel cell electric vehicles in the definition of "electric vehicles" for purposes of parking exemptions, HOV lane use, registration, and required parking spaces in places of public accommodation.