



## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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Statement of  
**LUIS P. SALAVERIA**  
**Director**  
Department of Business, Economic Development, and Tourism  
before the  
**HOUSE COMMITTEE ON TRANSPORTATION**

Wednesday, February 3, 2016  
10:30 a.m.  
State Capitol, Conference Room 309

in consideration of  
**HB 2080**  
**RELATING TO FUEL CELL ELECTRIC VEHICLES.**

Chair Aquino, Vice Chair LoPresti, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports House Bill 2080, which amends the definition of electric vehicles to include fuel cell electric vehicles (FCEV), and grants procurement priority for fuel cell electric vehicles for State and County vehicle purchases.

DBEDT understands it is important to treat hydrogen FCEVs similarly to electric vehicles since both have zero tailpipe emissions and the potential to utilize renewable energy sources. Including FCEVs into the definition of “electric vehicles” is an actionable step that sends a signal to the industry that Hawaii is interested in the deployment of advanced transportation technologies and the development of hydrogen fueling infrastructure.

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 those matters.

Thank you for the opportunity to provide these comments regarding HB 2080.



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  
Karlie Asato, Hawaii Government Employees Assn  
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  
Mark Glick, Hawaii State Energy Office, DBEDT  
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  
Ashley Kaono, Ofc of US Representative Tulsi Gabbard  
Jim Kelly, Kauai Island Utility Cooperative  
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  
Sharon Moriwaki, UH Public Policy Center  
Tim O'Connell, US Dept of Agriculture  
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  
Rick Reed, Hawaii Solar Energy Assn  
Cynthia Rezendes, Ofc of US Representative Mark Takai  
Rick Rocheleau, UH Hawaii Natural Energy Institute  
Will Rolston, Hawaii County, Research & Development  
Riley Saito, SunPower Systems  
Scott Seu, Hawaiian Electric Companies  
Joelle Simonpietri, US Pacific Command Energy Ofc  
H. Ray Starling, Hawaii Energy  
Ben Sullivan, Kauai County  
Lance Tanaka, Par Hawaii, Inc.  
Maria Tome, Public Utilities Commission  
Alan Yamamoto, Ofc of Senator Mazie Hirono

Testimony of Mitch Ewan  
Chair, Transportation Working Group  
Hawaii Energy Policy Forum

to the  
House Committee on Transportation

February 3, 2016 at 10:30 am in Conference Room 309

## IN SUPPORT OF HB 2080, Relating to Fuel Cell Electric Vehicles

Chair Aquino, Vice-Chair LoPresti, and Members of the Committee,

I am Mitch Ewan, 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 2080 clarifies that fuel cell powered vehicles are "electric vehicles" that use a fuel cell to convert hydrogen gas and oxygen into electricity to charge onboard batteries and power one or more onboard electric motors to propel the vehicle.

The Forum supports this measure that would provide fuel cell electric vehicles with the same "market pull" incentives as those enjoyed by battery electric vehicles, i.e., parking fee exemptions and HOV lane use. It also directs all state and county agencies, when purchasing new vehicles, to consider fuel cell electric vehicles.

The Forum supports HB 2080, and respectfully urges passage of the bill.

Thank you for the opportunity to testify.

*This testimony reflects the position of the Forum as a whole and not necessarily of the individual Forum members or their companies*

**HOUSE COMMITTEE  
ON  
TRANSPORTATION**

February 3, 2016

House Bill 2080 Relating to Fuel Cell Electric Vehicles

Chair Aquino, Vice-Chair LoPresti, members of the House Committee on Transportation,  
I am Rick Tsujimura, representing General Motors LLC (GM).

GM requests an amendment to House Bill 2080 Relating to Fuel Cell Electric Vehicles.  
GM respectfully requests that the definition in the proposed amendment be amended to read as follows by the deletion of the phrase "to charge onboard batteries":

"Fuel cell electric vehicle" means a zero-emission electric vehicle that uses a fuel cell to convert hydrogen gas and oxygen into electricity to power one or more onboard electric motors to propel the vehicle."

The definition currently provided in the bill would require that all the electricity be captured by a battery, which is not the case for General Motors vehicles.

With this change we can support the measure. Thank you for the opportunity to present this testimony.



Bill van den Hurk, President  
Dave Rolf, Executive Director

HADA testimony in STRONG SUPPORT of  
HB2080  
RELATING TO ELECTRIC VEHICLES; FUEL CELL ELECTRIC VEHICLES

Presented to the House Committee on Transportation  
at the public hearing to be held  
10:30 a.m. Wednesday, February 3, 2016  
in Conference Room 309, Hawaii State Capitol

by the Members of the Hawaii Automobile Dealers Association  
Hawaii's franchised new car dealers

Chair Aquino, Vice Chair LoPresti, and Members of the Committee:

I am David Rolf, representing the members of the Hawaii Automobile Dealers Association, Hawaii's franchised new car dealers, who have remained strong in their support of the transition to renewable energy for use in vehicles in Hawaii. The association supports the measured and considered transition to renewable fuels proposed in House Bill 2080.

This bill is one of the key Hawaii "Signal Bills" with regard to the successful adoption of hydrogen fuel cell vehicles in public and private transportation.

The bill includes fuel cell electric vehicles in the definition of electric vehicles for the purposes of parking exemptions, HOV lane use, registration, and required parking spaces in places of public accommodation and it grants procurement priority for fuel cell electric vehicles for state and county vehicle purchases.

The hydrogen fuel cell electric vehicle is an electric vehicle that uses a fuel cell to convert hydrogen gas and oxygen into electricity to charge onboard batteries and power one or more onboard electric motors to propel the vehicle.

Such vehicles, because they are zero emission vehicles (ZEVs), can help Hawaii fulfill the goals of the Hawaii Clean Energy Initiative in the ground transportation sector—which are to reduce fossil fuel use by 40% through use of renewable fuels and 30% by efficiencies by 2030.

There's a biblical verse that says "to whom much is given, much is required."

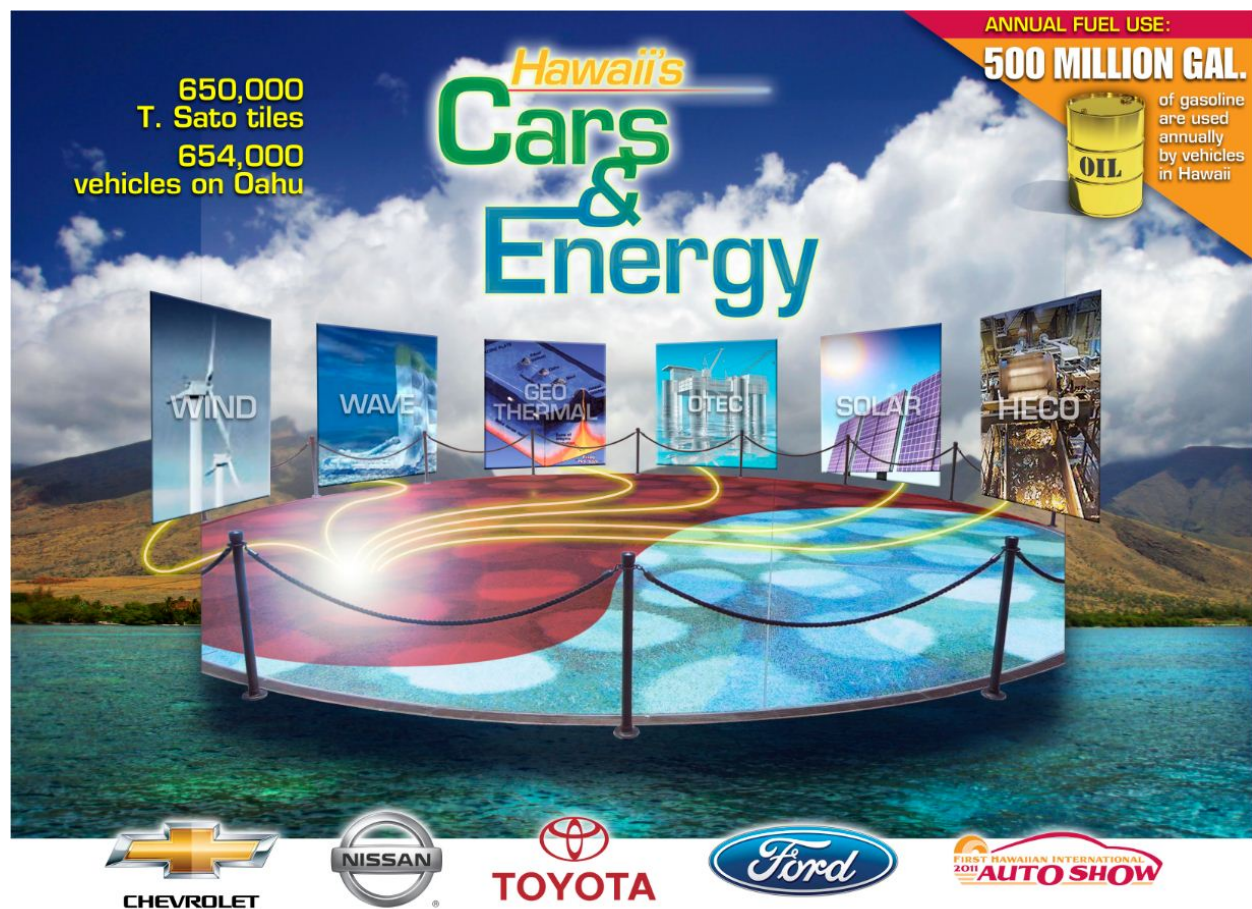
Certainly, Hawaii has been given much in the form of clean energy resources for the production of renewable fuels.

Hawaii, in fact, has been chosen by the U.S. Department of Energy for a focus on the development of hydrogen fuel cell electric vehicles. The State of California and an East Coast corridor around Boston are the two others areas in the country which have been chosen.

One international automaker already has a hydrogen fuel cell electric vehicle offered in Hawaii.

It will be up to state, and local governments, auto dealers, private investors and the auto driving public in Hawaii to send a signal to all the world's automobile manufacturers that Hawaii has prepared well for the transition to hydrogen.

Our renewable energy resources are there for all to see. Here's the chart from the auto show:



Hawaii has abundant, some would even say, a "first in the world" level of resources for energy production from renewable sources-- wind, wave, sun, geothermal, ocean thermal, and even has significant capabilities for waste-to-energy production.



Once these resources are harnessed and used for productive purposes like propelling public and private transportation, then Hawaii's 500-million-gallon annual consumption of gasoline—illustrated in the upper right hand corner of the graphic—will, along with the reduction in consumption from efficiencies being produced for gasoline engines--reduce our Hawaii gasoline consumption by 70%, to 150 million gallons, the goal of the Hawaii Clean Energy Initiative.

Hawaii is iconic for its pristine environment. Beautiful Diamond Head is one of the most recognizable landmarks in the world. Just ask those in China or any place in the world.



We thus have a unique opportunity to show the world what has been produced by the people in Hawaii working together.

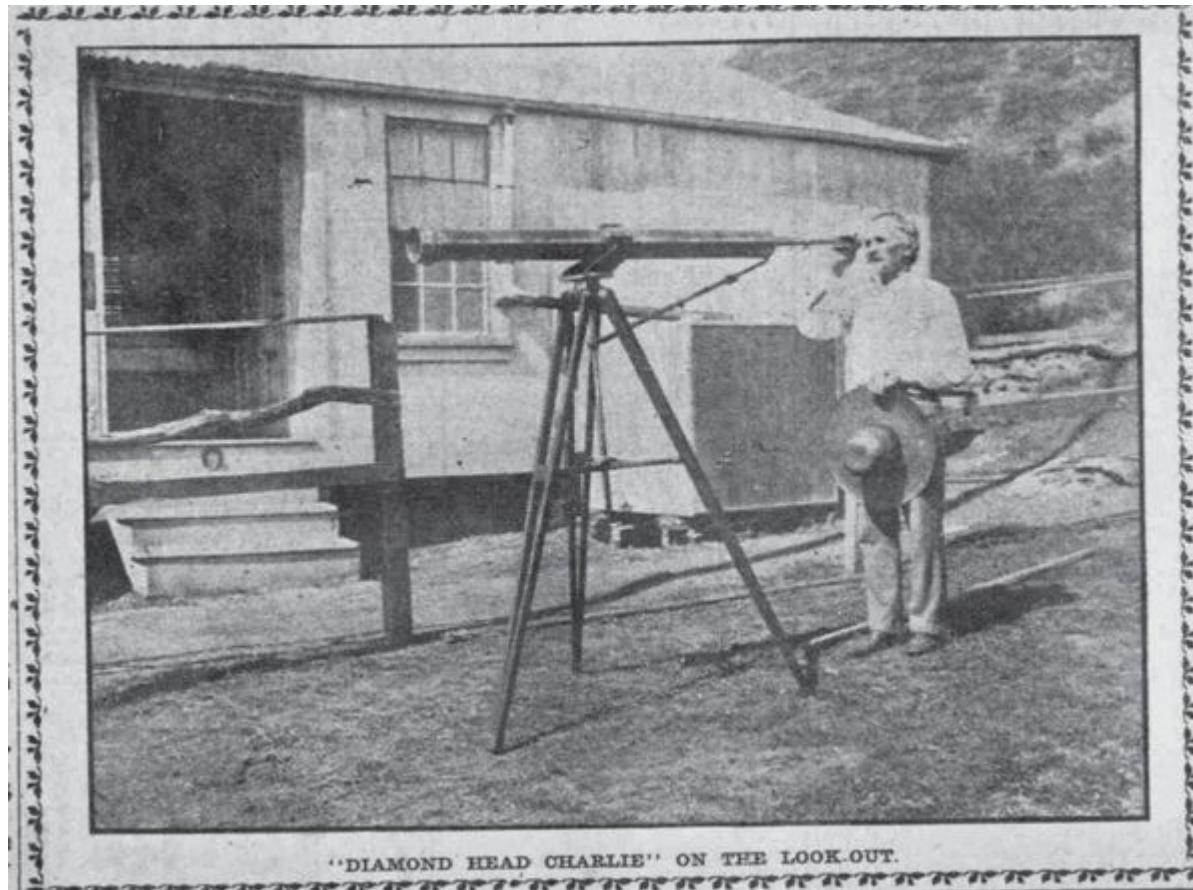
It is well known that president Obama has helped secure the World Conservation Congress event for Hawaii—to be held here, the first such event in America by the way, in the islands September 1-10, 2016. Some 8,000 to 10,000 people from around the world will attend.

**NEWS STORY: The International Union for Conservation of Nature (IUCN) Council has selected Hawaii, United States of America, as the host of the 2016 IUCN World Conservation Congress – the world's largest conservation event.**

We are working on the message Hawaii will have to tell these world leaders in conservation.

HB2080 includes hydrogen fuel cell electric vehicles in the category of electric vehicles—which are exempted from paying certain parking fees at State or municipal parking facilities for a specified period of time and are authorized to use the HOV lanes while having only one occupant in the vehicle. From the input we have received from electric vehicle purchasers these benefits of driving these renewable fuel vehicles play a large role in their decision to purchase such vehicles.

It is important to send a signal.



"Diamond Head Charlie" as John Charles "Charlie" Peterson was known, signaled approaching steam ships from his watch for arriving ships from Diamond Head from 1885 to 1907. The area he sent the message from was known as Telegraph Hill.

U.S. Department of Energy officials, who are considering encouraging a similar focus on hydrogen fuel cell electric vehicles for their GSA fleet in Hawaii say they have been looking "for a signal" from Hawaii officials that the State of Hawaii is making similar plans.

HADA representatives have attended meetings which have included State Department of Transportation officials and Department of Transportation Services officials from the City and County of Honolulu and other transportation officials around the state engaging in discussions relating to plans for adopting use of some hydrogen fuel cell electric vehicles—in busses, shuttle busses, and even rubbish trucks.

For the hydrogen fueling stations which are needed, to be financially self-supporting, there must be a base of hydrogen users—initially from federal, state and local government fleets, as the private vehicle adoption rate gets underway.

We think this bill will send a signal.

Such “signal” bills, if passed, will send a signal from the State of Hawaii to:

- 1) GSA to move forward. With the 1.4 acre Ft. Armstrong hydrogen fueling station helping to facilitate the lease or purchase of HFCEVs for the GSA fleet in Honolulu
- 2) DAGS to move forward with their inventory of State vehicles and the move toward HFCEVs
- 3) County officials across the state and City and County officials here in Honolulu to adopt HFCEVs
- 4) Worldwide automakers to open up the Hawaii HFCEV market by providing help with infrastructure and providing vehicles
- 5) Those attending the Sept. 1-10, 2016 World Conservation Congress here in Hawaii—the largest conservation event in the world—that Hawaii is leading in the transition to renewable fuels.

For the foregoing reasons, the Hawaii Automobile Dealers Association **STRONGLY SUPPORTS** HB2080 and encourages all members of the committee to support passage of the bill.

Respectfully submitted,

David Rolf

For the Hawaii Automobile Dealers Association

1100 Alakea St. Suite 2601

Honolulu, Hawaii 96813

Tel: 808 593-0031







Written Statement of  
**Robbie Melton**  
Executive Director & CEO  
High Technology Development Corporation  
before the  
**HOUSE COMMITTEE ON TRANSPORTATION**  
Wednesday, February 3, 2016  
10:30 a.m.  
State Capitol, Conference Room 309

In consideration of  
**HB2080**  
**RELATING TO FUEL CELL ELECTRIC VEHICLES.**

Chair Aquino, Vice Chair LoPresti, and Members of the Committee.

The High Technology Development Corporation (HTDC) **supports** HB2080 which amends the definition of electric vehicles to includes fuel cell electric vehicles (FCEV), and grants procurement priority for fuel cell electric vehicles for state and county vehicle purchases.

Since 1993 HTDC's Hawaii Center for Advanced Transportation Technologies (HCATT) program has been awarded more than \$40 million in federal funds matched by another \$23 million from private partners to develop advanced low emission and zero emission vehicles centered on electric drive technologies. In the past 5 years, HCATT has been focused on fuel cell electric vehicle demonstration projects.

HTDC understands it is important to treat hydrogen FCEVs similarly to electric vehicles, since both have zero tailpipe emissions and the potential to utilize renewable energy sources. Including FCEVs into the definition of electric vehicle is an actionable step that sends a signal to industry that Hawaii is interested in the deployment of advanced transportation technologies and the development of hydrogen fueling infrastructure.

As this measure concerns State facility management and the regulation of high occupancy vehicle lanes, HTDC respectfully defers to the Hawaii Department of Accounting and General Services and the Hawaii Department of Transportation.

Thank you for the opportunity to offer these comments.

**Servco Pacific Inc. testimony in SUPPORT of  
HB2080  
Relating to Fuel Cell Electric Vehicles**

Presented to the House Committee on Transportation at the public hearing to be held on Wednesday, February 3, 2016 at 10:30 a.m. in Conference Room 309, Hawaii State Capitol

Aloha Chair Aquino, Vice Chair LoPresti, and Members of the Committee:

Servco Pacific Inc. (Servco) supports this measure that would provide fuel cell electric vehicles with the already available incentives afforded to battery electric vehicles (i.e. parking fee exemptions, HOV lane use).

A Hydrogen Fuel Cell Vehicle (HFCV) is an electric vehicle which uses fuel cell technology to convert hydrogen and oxygen into electricity to power one or more onboard electric motors. The only emission of the HFCV is water. As the second state in the U.S. to do so, Servco has recently introduced the Toyota Mirai HFCV to Hawaii with plans for retail sales of the vehicle to start later this year.

Toyota started its fuel cell vehicle development in 1992 and demonstrated its first fuel cell vehicle at a parade in Osaka, Japan in 1996. The 2016 model year Toyota Mirai, which launched in Japan as a production vehicle in late 2014, has a driving range of 312 miles, refueling time of about 5 minutes and the driving experience and performance similar to gasoline engine vehicles. Hydrogen fuel cell vehicles provide Zero Vehicle Emissions with minimal compromise and lifestyle change.

Passing HB2080 will help to acknowledge hydrogen technology as a viable option for renewable fuel technologies and can help Hawaii fulfill the goals of the Hawaii Clean Energy Initiative (in the ground transportation sector) to reduce fossil fuel use by 40% through use of renewable fuels and 30% by efficiencies by 20130 thereby making a positive impact on current and future generations of Hawaii.

Servco supports HB2080 and encourages all committee members to support passage of the bill.

Thank you for the opportunity to testify.



**HOUSE COMMITTEE ON TRANSPORTATION**

February 3, 2016, 10:30 A.M.

Room 309

**(Testimony is 1 page long)**

**LATE**

**TESTIMONY IN SUPPORT OF HB 2080**

Aloha Chair Aquino, Vice Chair LoPresti, and Committee members:

Blue Planet Foundation supports HB 2080, which would include fuel cell electric vehicles in the state's definition of electric vehicles and grants procurement priority for fuel cell electric vehicles for public fleets.

As it is a policy of the state to eliminate imported fuels from the ground transportation and electricity sectors, we believe that fuel cell electric vehicles have the potential to help the state gain greater energy independence in both sectors. Hydrogen is a fuel which when combusted produces no green house gas emissions or other air pollutants. It can be produced from renewable sources of energy such as wind and solar.

As increasing amounts of renewable energy are added to Hawaii's electricity portfolio, it is anticipated that there will be an increasing potential for curtailed energy and increasing need for energy storage. Producing hydrogen from curtailed wind or solar power will be a cost effective way to capture that energy and then make it available for ground transportation.

Therefore fuel cell vehicles have the potential to increase the cost effectiveness of wind and solar power generation while at the same time displacing gasoline and diesel imports for ground transportation.

Given the tremendous potential economic and environmental benefits of fuel cell vehicles, we believe it is appropriate to incentivize them by granting them with public fleet procurement priority and allow them to enjoy the same benefits as battery electric vehicles.

Thank you for the opportunity to testify.

From: mailinglist@capitol.hawaii.gov  
Sent: Tuesday, February 02, 2016 6:04 PM  
To: TRNtestimony  
Cc: casey.nishimura@gmail.com  
Subject: Submitted testimony for HB2080 on Feb 3, 2016  
Attachments: Testimony Supporting HB2080.docx

**LATE**

**HB2080**

Submitted on: 2/2/2016

Testimony for TRN on Feb 3, 2016 10:30AM in Conference Room 309

Submitted By	Organization	Testifier Position	Present at Hearing
Casey Nishimura	Individual	Support	No

Comments: Aloha Chair Aquino, Vice Chair LoPresti, and Members of the Committee: I'm writing in strong support of HB2080 that would provide fuel cell electric vehicles with the already available incentives afforded to all-battery electric vehicles (i.e. parking fee exemptions, HOV lane use). This measure would go a long way to incentivize use of another clean transportation technology in Hawaii. With a 312-mile range and 5-minute refueling time, the Toyota Mirai is one example of a fuel cell vehicle that provides the same performance as a gasoline vehicle with no harmful emissions. In fact, the only emission is water. It is also worth noting that hydrogen can be extracted from water using clean and renewable sources of energy such as solar, ocean and wind. This means that hydrogen can be produced on-site at filling stations helping Hawaii become more self-reliant and reduce our dependency on imported oil. Hybrids, fuel cell and all-electric vehicles can make ideal partners in helping Hawaii increase efficiency and reduce carbon emissions in the transportation sector. Please support the passage of HB2080 and help acknowledge hydrogen fuel cell technology as one viable option for renewable fuel technologies in Hawaii. Mahalo for the opportunity to submit testimony.

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.

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