



Written Statement of
Robbie Melton
Executive Director & CEO
High Technology Development Corporation
before the
House Committee on Finance
Wednesday, February 22, 2017
2:00 p.m.
State Capitol, Conference Room 308

In consideration of
HB1579 HD1
RELATING TO ENERGY.

Chair Luke, Vice Chair Cullen, and Members of the Finance.

The High Technology Development Corporation (HTDC) **strongly supports** HB1579 HD1 that authorizes the issuance of special facility revenue bonds pursuant to part III of chapter 206M, HRS, and appropriates funds to the Hawaii High Technology Development Corporation for the purpose of constructing an electrolysis hydrogen production, storage, and dispensing facility to be managed by the Hawaii Center for Advanced Transportation Technologies.

Vehicle manufacturers, including Toyota, Hyundai, and Honda are currently in production of hydrogen fuel cell electric vehicles (HFCEVs), and some of those vehicles are already on Oahu. Hydrogen production and fuel cell technology have matured, become less expensive, more reliable, smaller and lighter than the equipment from just five years ago.

The Hawaii State Department of Transportation has recognized the maturity in hydrogen technology and has committed to converting its fleet of rental car shuttle buses to HFCEVs. HCATT has agreed to support them with design and stand up of their support infrastructure. HTDC and HCATT look forward to working with DoT to lead the way for future State and County fleets powered by renewable energy produced in Hawaii rather than using fossil fuel purchased abroad.

HTDC defers to the Attorney General's office on proper method of financing. We support this initiative as long as it does not replace our priorities requested in the Executive Budget. Thank you for the opportunity to offer these comments.



**TESTIMONY OF
THE DEPARTMENT OF THE ATTORNEY GENERAL
TWENTY-NINTH LEGISLATURE, 2017**

ON THE FOLLOWING MEASURE:

H.B. NO. 1579, H.D. 1, RELATING TO ENERGY.

BEFORE THE:

HOUSE COMMITTEE ON FINANCE

DATE: Wednesday, February 22, 2017 **TIME:** 2:00 p.m.

LOCATION: State Capitol, Room 308

TESTIFIER(S): Douglas S. Chin, Attorney General, or
Randall S. Nishiyama, Deputy Attorney General

Chair Luke and Members of the Committee:

The Department of the Attorney General provides the following comments regarding this bill.

This bill may not achieve its purpose, which is to authorize the issuance of an unspecified amount of special facility revenue bonds pursuant to part III of chapter 206M, Hawaii Revised Statutes (HRS), and to appropriate such funds for fiscal year 2017-2018 to the High Technology Development Corporation. The purpose of the appropriation is for the development and construction of an electrolysis hydrogen production, storage, and dispensing facility to be managed by the Hawaii Center for Advanced Transportation Technologies.

We note that special facility revenue bonds contemplate that the special facility revenue bond proceeds will be used to finance a "special facility." Section 206M-41, HRS, defines a "special facility" as "one or more buildings, structures or facilities, and the land thereof located in an industrial park for the high technology industry" (emphasis added). We understand that the proposed facility is to be constructed on Department of Transportation property and not in a high technology industrial park. Consequently, it appears that special facility revenue bonds cannot be used to finance the proposed project.

To implement this project, we suggest the revenue bonds under part III of chapter 39, HRS, be authorized to be issued by the High Technology Development Corporation. We suggest the bill be revised as follows:

SECTION 1. The high technology development corporation, with the approval of the governor, is authorized to issue [~~special facility~~] revenue bonds in the sum of \$ or so much thereof as may be necessary and the same sum or so much thereof as may be necessary is appropriated for fiscal year 2017-2018 for the development and construction of an electrolysis hydrogen production, storage, and dispensing facility to be managed by the Hawaii center for advanced transportation technologies.

SECTION 2. The [~~special facility~~] revenue bonds authorized pursuant to section 1 of this Act shall be issued in the name of the high technology development corporation and in accordance with part III of chapter [~~206M,~~] 39, Hawaii Revised Statutes.

SECTION 3. The sum appropriated shall be expended by the high technology development corporation of the department of business, economic development, and tourism for the purposes of this Act.

SECTION 4. The authorization to issue [~~special facility~~] revenue bonds under this Act shall lapse on June 30, 2022.

Thank you for the opportunity to testify on this matter.

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 18, 2017 5:05 PM
To: FINTestimony
Cc: wao-hsl@WeAreOne.cc
Subject: Submitted testimony for HB1579 on Feb 22, 2017 14:00PM

HB1579

Submitted on: 2/18/2017

Testimony for FIN on Feb 22, 2017 14:00PM in Conference Room 308

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|--|---------------------------|---------------------------|
| Joseph Kohn MD | We Are One, Inc. - www.WeAreOne.cc - WAO | Comments Only | No |

Comments: Please modify this bill, If not, then please kill this bill. It is important to support hydrogen research, but not this bill. Renewable hydrogen can and should play a role in the renewable energy arena in Hawai`i. But virtually all hydrogen production in the U.S. (95%) is made from fossil fuel. HRS §196-10 calls for “the State's transition to a renewable hydrogen economy”, thru “hydrogen demonstration projects.” The law was deliberate. Both renewable and fossil fuel derived hydrogen pilot projects could be used to help us transition to a renewable hydrogen future. This bill continues the myth that we can use dirty fuel as a bridge fuel to a clean future. The bill should either be modified or killed. SECTION 1. The high technology development corporation, with the approval of the governor, is authorized to issue special facility revenue bonds in the sum of \$ or so much thereof as may be necessary and the same sum or so much thereof as may be necessary is appropriated for fiscal year 2017-2018 for the development and construction of an electrolysis hydrogen production, storage, and dispensing facility, GENERATED ONLY BY RENEWABLE ENERGY, to be managed by the Hawaii center for advanced transportation technologies. Mahalo

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HOUSE COMMITTEE ON FINANCE

Feb. 22, 2017, 2:00 P.M.

Room 308

(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF HB 1579 HD1

Aloha Chair Luke, Vice Chair Cullen, and members of the committee:

Blue Planet Foundation **strongly supports** HB 1579 HD1 which would authorize the issuance of special revenue bonds and appropriate funds to the Hawaii High Technology Development Corporation for the purpose of constructing an electrolysis hydrogen production, storage, and dispensing facility.

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.

We also believe 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 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.

We believe that there are two major barriers to the development of a hydrogen transportation sector in Hawaii: 1) a lack of available hydrogen vehicles on the market, and 2) a lack of hydrogen fueling infrastructure.

We expect that over the next 10 to 20 years, automobile manufacturers will supply the vehicles. Therefore, the critical barrier the state can help to overcome is on the infrastructure side. This bill would help to kick off the development of the necessary infrastructure and will therefore help advance the hydrogen transportation sector in Hawaii.

Thank you for the opportunity to testify.

SanHi Government Strategies

a limited liability law partnership

Gary M. Slovin
Mihoko E. Ito
R. Brian Tsujimura

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DATE: February 21, 2017

TO: Representative Sylvia Luke
Chair, Committee on Finance
Submitted Via Capitol Website

RE: **H.B. 1579, H.D.1 – Relating to Energy**
Hearing Date: Wednesday, February 22, 2017 at 2:00 p.m.
Conference Room: 308

Dear Chair Luke and Members of the Committee on Finance:

On behalf of the Alliance of Automobile Manufacturers (“Alliance”) we submit these comments on H.B. 1579, H.D.1. 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.

The Alliance strongly **supports** the development of hydrogen as a fuel for motor vehicles, and remains ready and willing to assist in the pursuit of hydrogen as a feasible alternative fuel for Hawaii. We recognize the State has difficult choices to make on the allocation of funds, and as a participant to the hydrogen implementation working group, the Alliance also recognizes the work DBEDT, the Department of Transportation, HCATT, and other public and private sector participants have done to advance hydrogen for Hawaii. While industry has made and continues to make a significant investment in hydrogen, the Alliance also recognizes the importance of government support for infrastructure projects like a hydrogen fueling station. In 2016, the Legislature approved \$1.25 million for the design of a hydrogen fueling station, and this bill would bring it to fruition.

Thank you for the opportunity to testify on this measure.

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

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 20, 2017 2:04 PM
To: FINTestimony
Cc: panther_dave@yahoo.com
Subject: Submitted testimony for HB1579 on Feb 22, 2017 14:00PM

HB1579

Submitted on: 2/20/2017

Testimony for FIN on Feb 22, 2017 14:00PM in Conference Room 308

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|---------------------|---------------------------|---------------------------|
| Dave Kisor | Individual | Oppose | No |

Comments: The very idea that fossil fuel is a bridge to renewable is unbelievably unconscionable and has to be the brain child of the fossil fuel industry, who stands to make a lot of money at our expense. But what else is new? We can easily take sea water, distill it and heat it using Fresnel (pronounced Frael – it's French) lenses to generate steam for electricity to separate the hydrogen from the oxygen. There are a number of ways to generate the electricity for separating the water molecules the fossil fuel industry will oppose because they do not use their fuels, causing them to whine like wounded babies. Would you either modify the bill so it will NOT give fossil fuel free reign to pollute their way into the renewable future OR just kill HB1579. I'm not opposing this legislation so much for myself, but for the future generations who have already been left with a marginally livable world, especially when you consider the 220 foot rise in sea level that is expected in the next 70 years after the Antarctic and Greenland ice has melted. Mahalo.

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From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 19, 2017 7:12 AM
To: FINTestimony
Cc: ttravis12@mac.com
Subject: Submitted testimony for HB1579 on Feb 22, 2017 14:00PM

HB1579

Submitted on: 2/19/2017

Testimony for FIN on Feb 22, 2017 14:00PM in Conference Room 308

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|---------------------|---------------------------|---------------------------|
| Thomas Travis | Individual | Comments Only | No |

Comments: Hydrogen can be produced when renewable sources (wind and solar) are being curtailed. Using oil based fuels to produce hydrogen actually takes more oil based fuel than using the oil based fuel directly. Either kill or modify this bill. Hydrogen produced by renewables makes sense, but by oil based fuel does not.

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From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 18, 2017 9:45 PM
To: FINTestimony
Cc: katc31999@gmail.com
Subject: *Submitted testimony for HB1579 on Feb 22, 2017 14:00PM*

HB1579

Submitted on: 2/18/2017

Testimony for FIN on Feb 22, 2017 14:00PM in Conference Room 308

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|---------------------|---------------------------|---------------------------|
| Kat Culina | Individual | Oppose | No |

Comments:

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From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 18, 2017 3:27 PM
To: FINTestimony
Cc: redahi@hawaii.rr.com
Subject: Submitted testimony for HB1579 on Feb 22, 2017 14:00PM

HB1579

Submitted on: 2/18/2017

Testimony for FIN on Feb 22, 2017 14:00PM in Conference Room 308

| Submitted By | Organization | Testifier Position | Present at Hearing |
|---------------------|---------------------|---------------------------|---------------------------|
| B.A. McClintock | Individual | Oppose | No |

Comments: Renewable hydrogen can and should play a role in the renewable energy arena in Hawai`i. But virtually all hydrogen production in the U.S. (95%) is made from fossil fuel. This bill continues the myth that we can use dirty fuel as a bridge fuel to a clean future. Please, either modify this bill or kill it.

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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Brian Kitagawa, President
Dave Rolf, Executive Director

HADA testimony in STRONG SUPPORT of
HB 1579
RELATING TO ENERGY

LATE

Presented to the House Committee on Finance
at the public hearing to be held
2 p.m. Wednesday, February 22, 2017
in Conference Room 308, Hawaii State Capitol

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

Chair Luke, Vice Chair Cullen 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 clean, renewable energy for the ground transportation sector. HB1579 provides special facility revenue bond funding for the development and construction of an electrolysis hydrogen production, storage, and dispensing facility to be managed by the Hawaii Center for Advanced Transportation and Technologies (HCATT).

Re: Hydrogen Fueling Station

One international carmaker already has a hydrogen fuel cell electric vehicle operating in Hawaii and other carmakers are preparing to put hydrogen fuel cell electric vehicles into production. Hawaii has already become a leader in this clean renewable fuel vehicle sector because of legislative foresight years ago in setting goals for renewable fuel adoption in the ground transportation sector through the adoption of goals as part of the the Hawaii Clean Energy Initiative (HCEI).

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.

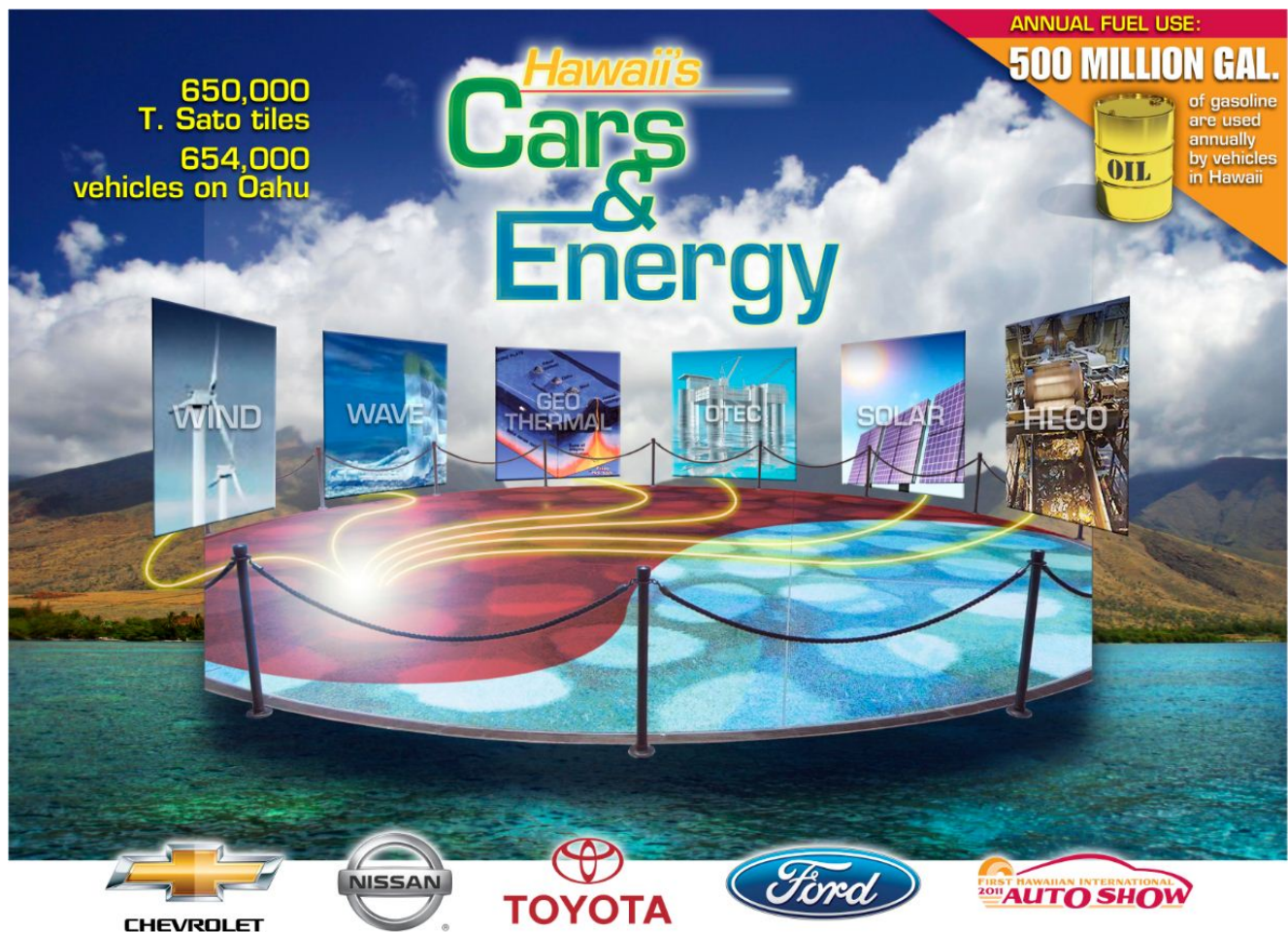
A bill in this year’s legislative session proposes to extend that goal for renewable energy in the ground transportation sector to 100% by 2045.

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.

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.

Here’s a HADA-produced chart showing Hawaii’s renewable energy resources which are available to harness for the draining of the 500 million gallon gasoline barrel that represents the current gasoline consumption in the ground transportation sector in Hawaii.



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 2030 goal of the Hawaii Clean Energy Initiative, and could continue to move the state toward a goal of 100% renewable fuel usage in the ground transportation sector by 2045.

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.

To begin the journey toward the Hawaii Hydrogen Economy, initial hydrogen production and fueling station infrastructure needs to be put in place.

The U.S. Department of Energy, with Hawaii being one of its three areas of focus in the U.S. commissioned a 2014 study to show the economic viability of creating a hydrogen production station and dispensing station in Honolulu.

The federal study showed that 5-nines hydrogen (.99999 pure hydrogen) could produced and dispensed at a cost of approximately \$13 / kilogram of hydrogen gas. In a HFCEV a kilogram of hydrogen produces the vehicle mileage equivalent of approximately 2 gallons of gas.

The facility would use photovoltaic cells for the electrolysis process to produce hydrogen and could be constructed with state funding proposed in this bill, with operating costs and debt reduction paid through positive cash flow revenues over 15 years. The financial plan for the \$13/kilogram hydrogen relies on the sale of downtown covered parking under the photovoltaic cells.

GSA does not have the capability within its mission, to construct and staff hydrogen fueling stations for their fleet in Honolulu. However, if the state-funded fueling station project were to be built:

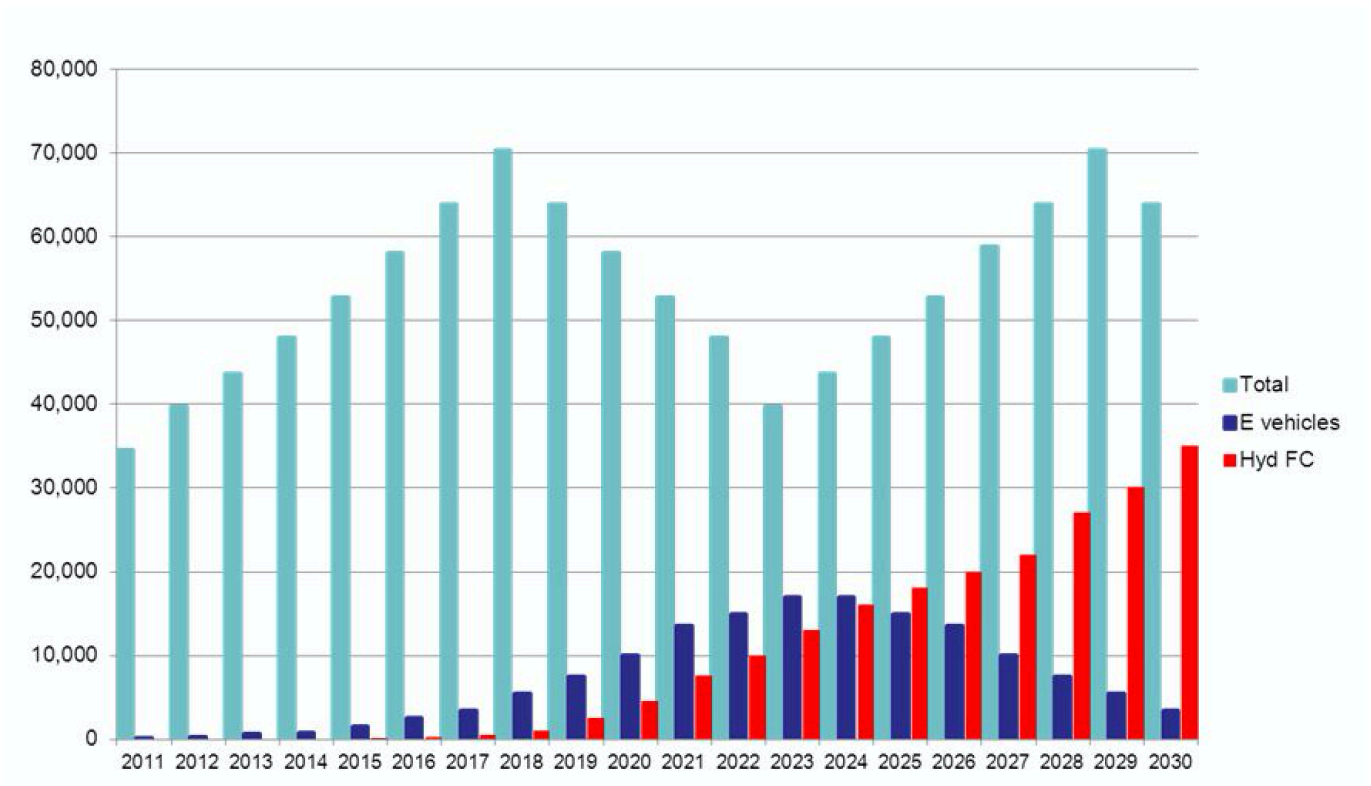
- 1) GSA could move forward to facilitate the lease or purchase of HFCEVs for the GSA fleet in Honolulu
- 2) DAGS could move forward with their inventory of State vehicles and the move toward HFCEVs
- 3) City and County officials here in Honolulu could adopt HFCEVs into their fleets
- 4) Worldwide automakers to open up the Hawaii HFCEV market by providing help with infrastructure and providing vehicles

It should be noted that the State of Hawaii also has land on Lagoon drive that could also provide an

excellent location for a hydrogen production and fueling facility.

The below graph shows the number of renewable energy vehicles (EVs and HFCEVs) “needed” to meet one of the goals of the Hawaii Clean Energy Initiative. (40% renewable energy in the ground transportation sector by 2030).

A cost-efficient source of hydrogen and sufficient hydrogen fueling stations will be needed to help Hawaii address this goal.



For the foregoing reasons, the Hawaii Automobile Dealers Association **STRONGLY SUPPORTS** HB1579 and encourages all members of the committee to support passage of the bill.

Respectfully submitted,

David H. Rolf for the Hawaii Automobile Dealers Association

1100 Alakea St. Suite 2601 Honolulu, Hawaii 96813 Tel: 808 593-0031

FIN-Jo

From: Stan Osserman <stan@htdc.org>
Sent: Tuesday, February 21, 2017 5:02 PM
To: Rodriguez, David J; FINTestimony
Cc: Marushige, Lynette H; Osserman, Stanley; Lee, Robert SK
Subject: RE: FIN Feb22 2:00 HB1579

Mahalo Dave!

LATE

Stan Osserman, Director

HCATT

(808)594-0100 (office)

(808)594-0102 (FAX)

531 Cooke St

Honolulu, HI 96813

www.htdc.org/hcatt.html

From: Rodriguez, David J [mailto:David.J.Rodriguez@hawaii.gov]
Sent: Tuesday, February 21, 2017 4:51 PM
To: FINTestimony@capitol.hawaii.gov
Cc: Marushige, Lynette H <lynette.h.marushige@hawaii.gov>; Osserman, Stanley <stanley.osserman@hawaii.gov>; Lee, Robert SK <robert.sk.lee@hawaii.gov>
Subject: FIN Feb22 2:00 HB1579

The DOT submits testimony for HB1579 HD1.

Aloha,

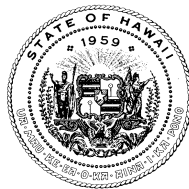
David J. Rodriguez

Special Assistant



(808) 587-2165

DAVID Y. IGE
GOVERNOR



Testimony by:
FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

LATE

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

IN REPLY REFER TO:

February 22, 2017
2:00 P.m.
State Capitol, Room 308

H.B. 1579, H.D. 1
RELATING TO ENERGY

House Committee on Finance

The Department of Transportation strongly **supports** H.B. 1579 which authorizes the issuance of special facility revenue bonds pursuant to part III of the chapter 206M, HRS, and appropriates funds to the Hawai'i High Technology Corporation for the purpose of constructing an Electrolysis Hydrogen Production, Storage, and Dispensing facility to be managed by the Hawai'i Center for Advanced Transportation Technologies.

The Electrolysis Hydrogen Production, Storage, and Dispensing facility strengthens Hawai'i's commitment to its growing clean energy sector and will provide hydrogen fuel to the State's fleet.

Thank you for the opportunity to provide testimony.