

SB 2947

RELATING TO
RENEWABLE HYDROGEN

LATE TESTIMONY



Bill von den Hurk, President
Dove Roff, Executive Director

HADA testimony in STRONG SUPPORT of
SB2947
RELATING TO RENEWABLE HYDROGEN

Presented to the Senate Committee on Transportation and Energy
and the Senate Committee on Economic Development, Environment, and Technology
at the public hearing to be held
2:45 p.m. Tuesday, February 16, 2016
in Conference Room 229, Hawaii State Capitol

Chairs Inouye and Wakai, Vice Chairs Gabbard and Slom, and Members of the
Committees:

The Hawaii Automobile Dealers Association, on behalf of the 68 franchised new-car dealers in the State of Hawaii, who employ 4,215 men and women across the state and who account for almost 15% of the state's retail economy, respectfully submits testimony in STRONG SUPPORT of SB 2947, Relating to Renewable Hydrogen.

Once 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 of the The Hawaii Clean Energy Initiative.

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.

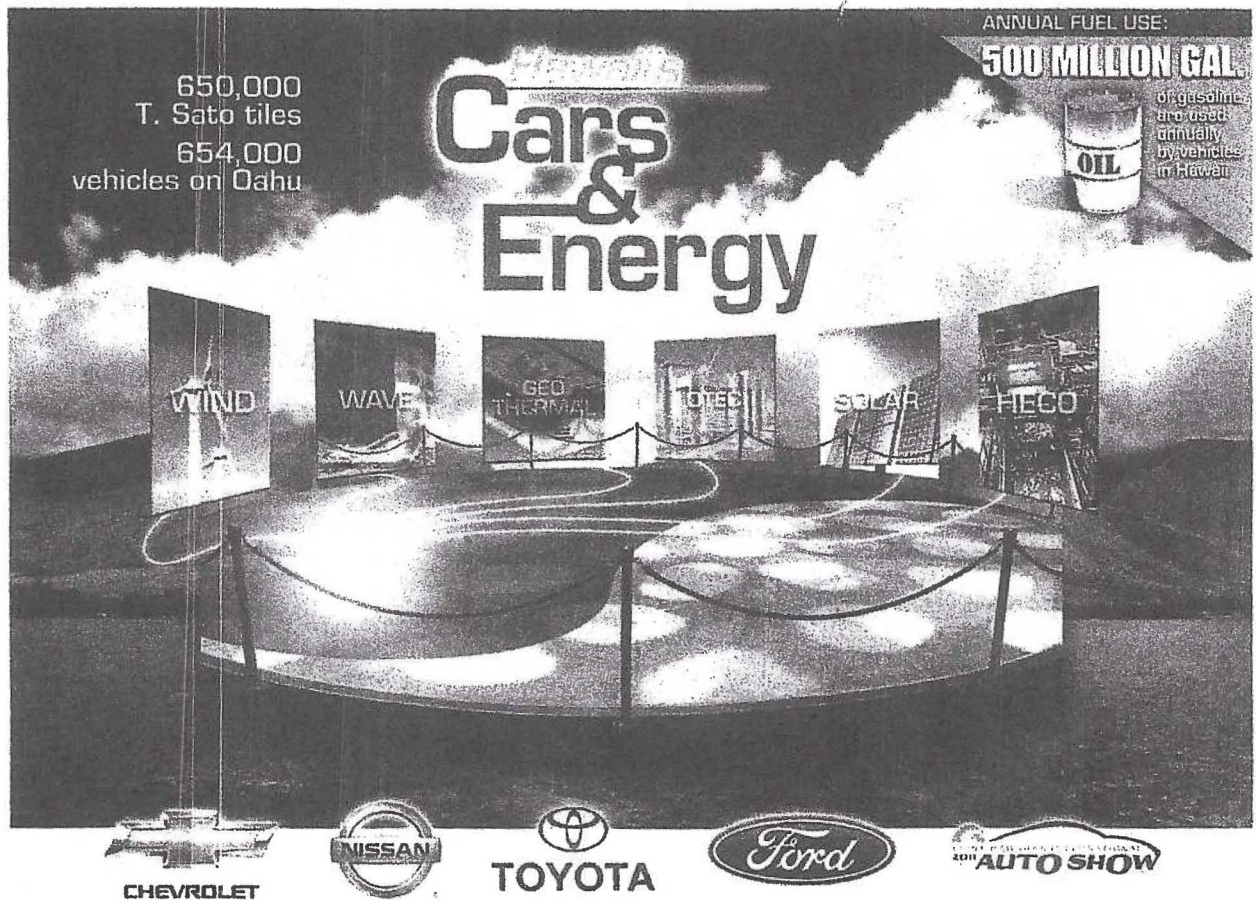
There's a biblical verse that says "to whom much is given, much is required."

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.

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 2030 goal of the Hawaii Clean Energy Initiative.

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 1.4 acre Ft. Armstrong location, using federal land, is centrally located and easily accessible to a large portion of the federal government's 541-vehicle fleet which would be eligible to be purchased or leased hydrogen fuel cell electric vehicles.

The federal study showed that 5-nines hydrogen (.99999 pure hydrogen) could be produced and dispensed at a cost of approximately \$13 / kilogram of hydrogen gas. In an HFCECV 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 for approximately the \$4.8 million in state funding proposed in this bill, with operating costs and debt reduction paid through positive cash flow revenues over 15 years. The financial plan relies on the sale of downtown covered parking under the photovoltaic cells.

GSA however 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

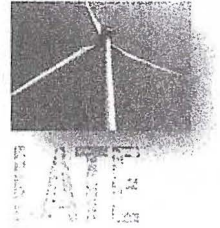
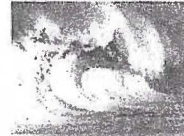
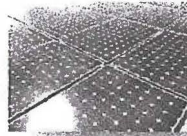
- 3) City and County officials here in Honolulu could adopt HFCEVs into their fleets
- 4) Worldwide automakers to open up the Hawaii HFCEV market by providing help with infrastructure and providing vehicles

It should be noted that the State of Hawaii owns land on Lagoon drive that could also provide an excellent location for a hydrogen production and fueling facility.

On a final note: HADA dealers have encouraged use of the state's barrel tax (\$1.05 / barrel) for its intended purpose—which includes fostering the development of renewable energy—so as to meet the goals of the Hawaii Clean Energy Initiative. Currently, some 65% of the barrel tax is placed the State's General Fund.

For the foregoing reasons, the Hawaii Automobile Dealers Association **STRONGLY SUPPORTS** HB2947 and encourages all members of the committees to support passage of the bill.

Respectfully submitted,
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**SENATE COMMITTEES ON TRANSPORTATION & ENERGY AND ECONOMIC
DEVELOPMENT, ENVIRONMENT, & TECHNOLOGY**

February 16, 2016, 2:45 P.M.

Room 229

(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 2947

Aloha Chairs Inouye and Wakai, Vice Chairs Gabbard and Slom, and members of the Committees:

Blue Planet Foundation supports SB 2947, which authorizes the director of finance to issue general obligation bonds in the sum of \$3,000,000 or so much thereof as may be necessary for fiscal year 2016-2017 for the development of an electrolysis process hydrogen production, storage, and dispensing facility.

S.B. 2947 provides funding to initiate hydrogen production and dispensing, critical infrastructure required to support the fleet vehicle upgrades planned by the DOT near the Honolulu International Airport to establish the State's first hydrogen production, compression, storage and dispensing facility.

As we move closer to 100% renewable electricity, there is expected to be significant need for curtailment, peak shaving and energy storage. The development of a hydrogen fuel cell vehicle fleet within the state would allow for large amounts of excess renewable electricity to be stored in the form of hydrogen which could then offset imported fossil fuels for the ground transportation sector. This would help the state meet its energy goals for both the electricity and ground transportation sectors.

Thank you for this opportunity to testify.

LATE

Kaala Coleman

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 15, 2016 10:47 PM
To: TRE Testimony
Cc: hawaiiifishingfanatic@gmail.com
Subject: *Submitted testimony for SB2947 on Feb 16, 2016 14:45PM*

SB2947

Submitted on: 2/15/2016

Testimony for TRE/EET on Feb 16, 2016 14:45PM in Conference Room 229

Submitted By	Organization	Testifier Position	Present at Hearing
Don Aweau	Individual	Support	No

Comments:

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