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HADA testimony in STRONG SUPPORT of
HB 1579 HD1
RELATING TO ENERGY

Presented to the Senate Committee on Economic Development, Tourism, and Technology
and the Senate Committee on Transportation and Energy
at the public hearing to be held
2 p.m. Wednesday, March 17, 2017
in Conference Room 414, Hawaii State Capitol

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

Chairs Waikai and Inouye, Vice Chairs Taniguchi and Dela Cruz and Members of the Committees:

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 HD1 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.

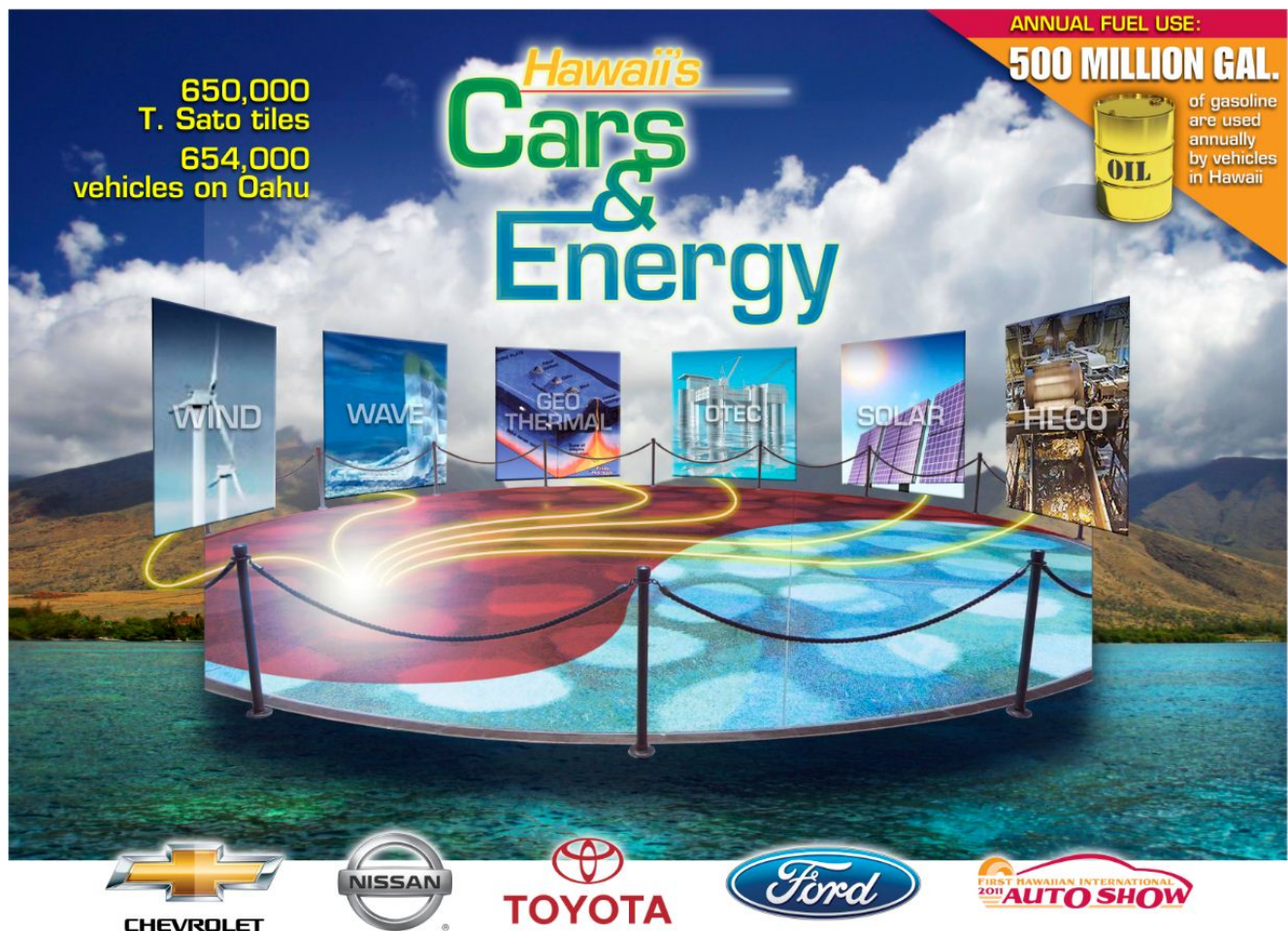
A bill in this year's legislative session proposes to extend that goal for renewable energy in the ground transportation sector to 100% by 2045.

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:

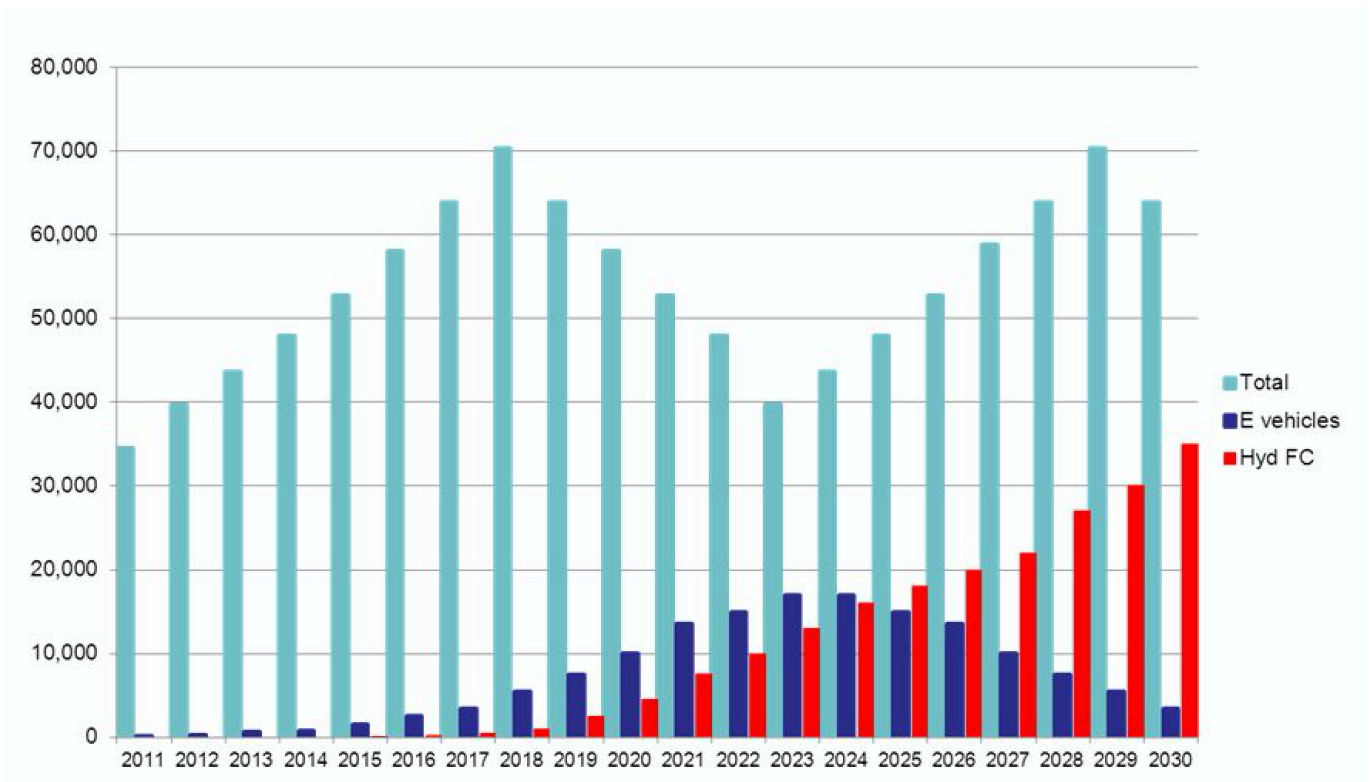
- 1) GSA could move forward to facilitate the lease or purchase of HFCEVs for the GSA fleet in Honolulu
- 2) DAGS could move forward with their inventory of State vehicles and the move toward HFCEVs
- 3) City and County officials here in Honolulu could adopt HFCEVs into their fleets
- 4) Worldwide automakers 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 HD1 and encourages all members of the committee to support passage of the bill.

Respectfully submitted,

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