

LATE

**HOUSE COMMITTEE ON
FINANCE**

February 25, 2013

House Bill 450, HD1 Relating to Hydrogen Fueling Stations

Chair Luke and members of the House Committee on Finance, I am Rick Tsujimura, representing General Motors LLC (GM). GM is in strong support of House Bill 450, HD1 which seeks to establish a hydrogen fueling station demonstration project.

GM has a long history of hydrogen fuel cell vehicle development and demonstration. Our development work started in 1965 and expanded into a large scale effort in the mid-1990s. To date, we have invested over \$2.5 Billion into the technology and now have systems capable of propelling automobiles with equivalent performance to conventional vehicles. We believe hydrogen and fuel cell technology are critical to the future of transportation as well as other sectors and remain committed to productionizing the technology. GM produced over 100 fuel cell vehicles in 2008 and to date the fleet has accumulated over 2.6 million miles. There remain two key elements to ultimately seeing fuel cell automobiles manufactured and utilized in high volume. Those elements are the hydrogen refueling infrastructure and the cost fuel cell technology and related on-board hydrogen storage. GM continues to conduct advanced research towards the cost issue and appreciates the State of Hawaii's interest in the infrastructure issue.

GM has had a significant presence in Hawaii since 2009 primarily related to hydrogen and its ability to be a key component in the solution to Hawaii's energy challenges. In 2010, GM and Hawaii Gas established The Hydrogen Initiative with ten other entities. In 2011, GM delivered 16 hydrogen fuel cell vehicles to the military for a multi-year demonstration of the technology. In 2012, GM opened a Fuel Cell Vehicle Service Center at 515 Kamakee Street, Honolulu. The military has hydrogen refueling at Joint Base Pearl Harbor Hickam and by the end of the year will also have established fueling at both Schofield Barracks and Kaneohe Marine Corps Base. However, vehicle fueling has been a continual challenge with issues ranging from equipment reliability, to the high cost of importing hydrogen to the access time for fueling.

HB 450, HD1 has the potential to provide access to hydrogen fueling to non-military users which could result in an acceleration of the deployment of additional fuel cell vehicles to Hawaii. Once a critical mass of hydrogen use is established, other applications like buses, stationary fuel cells and fork lifts would also accelerate and begin to reduce Hawaii's petroleum import requirements.

In conclusion, we fully support the proposal HB 450, HD1 and would be happy to provide additional information upon request.

Thank you for the opportunity to present this testimony.

LATE

February 24, 2013

Members of the 27th Legislature
Hawaii State Capitol
415 S. Beretania St.
Honolulu, HI 96813

Aloha Members of the 27th Legislature,

Please consider this testimony in support of House Bill 450 HD1, relating to the Hydrogen Fueling Stations Demonstration Project.

This measure will allow the State of Hawaii to strategically position itself at the forefront of this new energy technology, thereby making Hawaii an attractive business locale for leaders of industry and injections of capital.

From my estimation, this will provide meaningful advances in sustainability and energy security. I respectfully urge the legislature to support this important bill.

Regards,



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HADA testimony in STRONG SUPPORT
of HB 450, HD1
Relating to Hydrogen Fueling Stations

Presented to the House Committee on Finance
At the hearing to be held
3:30 p.m. Monday, February 25, 2013
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 Chairs Nishimoto and Johanson, and Members of the Committee:

No longer twenty or thirty years away, mass-production of hydrogen fuel cell vehicles is on the near horizon, with some vehicles available as early as 2015 according to a Toyota projection. Other auto manufacturers plan to roll out their vehicles shortly thereafter in 2017.

In our association's continuing support of the State's clean energy goals, HADA offers the association's STRONG SUPPORT of HB 450, HD1 –a bill which proposes that the State provide funding to help establish a hydrogen fueling station demonstration project in Hawaii.

HADA applauds legislative leaders for consideration of this measure which will allow the new vehicles and the new fueling facilities to arrive on relatively the same time line in Hawaii—creating a chicken and the egg concomitant rollout of hydrogen fuel cell product and the hydrogen fueling stations.

A February 4, 2013 *Automotive News* story by David Sedgwick and Gabe Nelson reports that “the biggest barrier to the technology may be the lack of fuel stations.”

HB 450, HD1 which you are considering, seeks to remove this barrier for Hawaii.

The *Automotive News* story adds that “each hydrogen station costs \$1 million to \$1.5 million to build.” (Source: Catherine Dunwoody, California Fuel Cell Partnership).

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Continuing our quote from the *Automotive News* story :

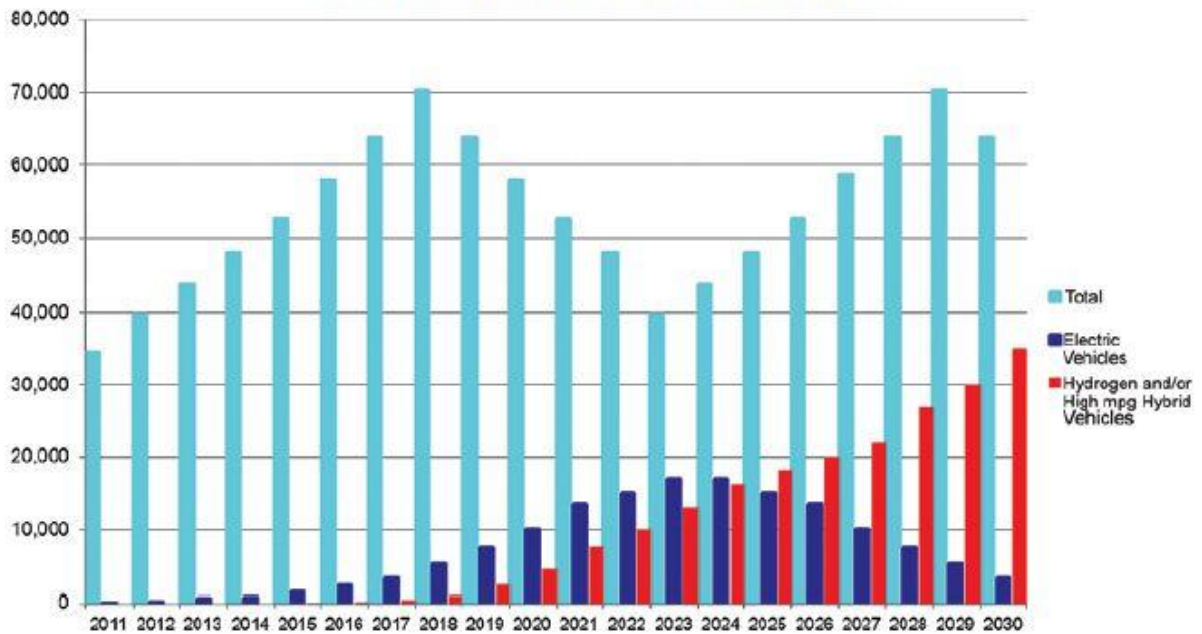
- “...(California’s) energy commission has earmarked \$28.6 million for new facilities.
- Toyota and BMW last month announced a fuel cell production alliance, and last week Daimler, Ford, and Nissan said they would join to develop a line of affordable fuel cell cars for sale as early as 2017.
- ‘We can’t deploy them (HFC vehicles) to consumers unless they have a place to refuel,’ said Steve Ellis, Honda’s U.S. Manager of sales and marketing for fuel cell vehicles.’”

(Source: *Automotive News* “Fired up for fuel cells,” Feb. 4, 2013)

HADA developed the following uptake rate of renewable fuel vehicles which is needed to meet the goals of the Hawaii Clean Energy Initiative.

Electric /Hydrogen Vehicle Adoption Rate 2011-2030

Needed to meet goals of Hawaii Clean Energy Initiative

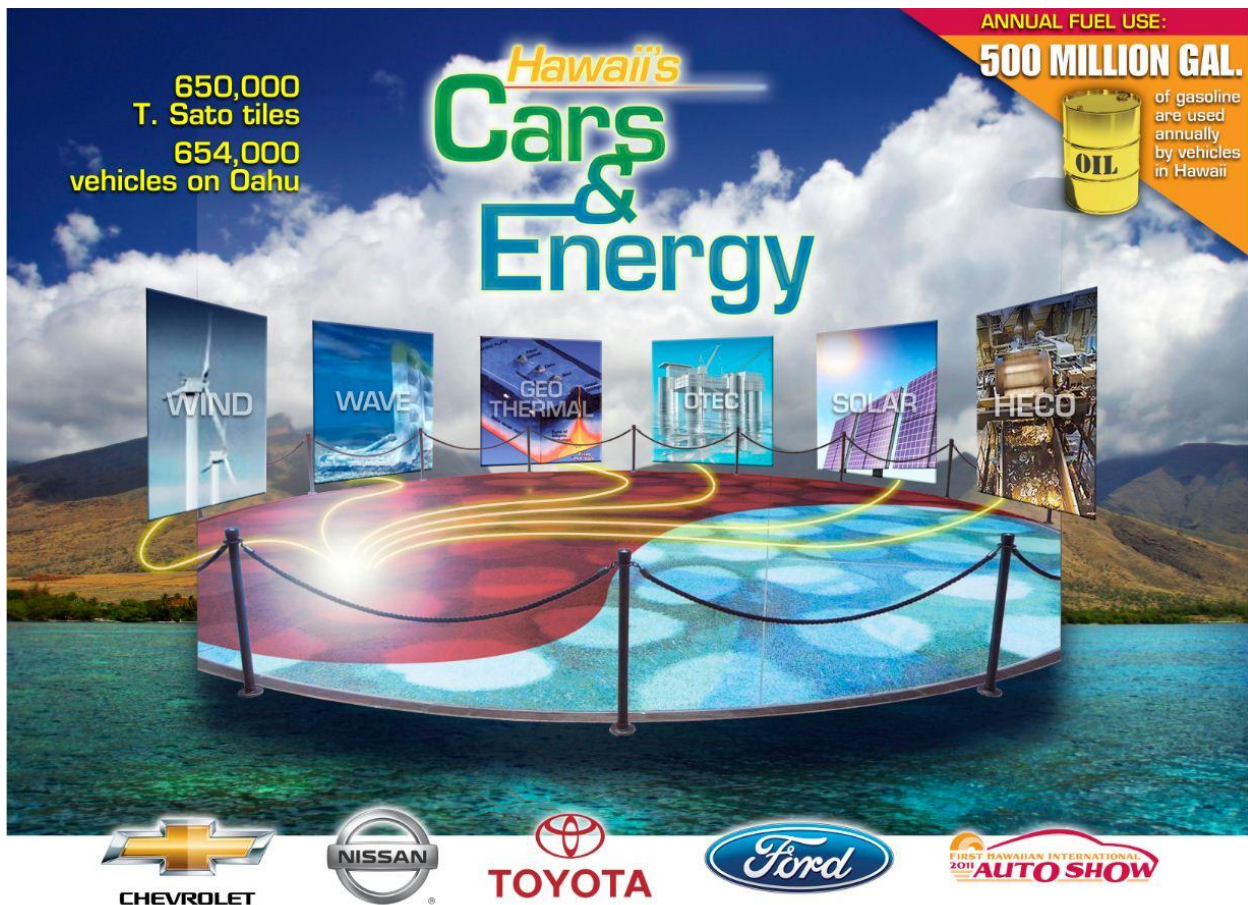


Source: HADA—Note: Blue (EV) and — (hydrogen fuel cell or high mpg hybrids) bars show projected component composition in total.

The hydrogen fuel cell car can be considered to be part what is known as the electrification of the car – a transformation to renewable energy that is taking place in the retail auto industry.

The electrolysis process utilizing Hawaii’s abundant renewable energy resources—separates hydrogen from its oxygen molecule to create hydrogen gas. In the fuel cell vehicle the hydrogen is reunited with oxygen creating an electric current that powers a car’s electric motor, with the by-product being H₂O from the tailpipe.

HADA produced the following chart to show how use of Hawaii’s abundant renewable energy resources in vehicles, along with fuel-efficiency in gas vehicles, can reduce fossil fuel usage on Hawaii’s roadways. Thereby draining the 500-million-gallon oil barrel, representing the state’s annual fossil fuel usage in transportation, to 150 million gallons a year, in a little under 20 years.



HADA respectfully asks the committee to pass HB450.

Respectfully submitted,
David H. Rolf, on behalf of the members of the Hawaii Automobile Dealers Association.
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