

Written Statement of
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Executive Director & CEO
High Technology Development Corporation
before the
HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT & BUSINESS
Tuesday, April 2, 2013
10:30 a.m.
State Capitol, Conference Room 312
In consideration of

**HCR 212 REQUESTING THE HIGH TECHNOLOGY DEVELOPMENT
CORPORATION TO ESTABLISH HYDROGEN FUELING STATION
DEMONSTRATION PROJECT.**

Chair Tsuji, Vice Chair Ward, and Members of the Committee on Economic Development and Business.

The High Technology Development Corporation (HTDC) **supports the intent** of HCR 212 relating to hydrogen fueling stations.

HTDC manages the Hawaii Center for Advanced Transportation Technologies (HCATT) which organizes public/private partnerships between the federal government and private industry to develop advanced low- and zero-emission vehicles centered on electric drive technologies.

Through HCATT, HTDC already has (1) a demonstration project for hydrogen fuel station at Joint Base Pearl Harbor-Hickam, and (2) an entity and a program that can handle any related projects in hydrogen fuel or in renewable energies. HCATT is poised to consider additional demonstration projects **given sufficient funding**. HCATT and HTDC's funding streams are such that we are unable to take on any unfunded mandates.

With most major automakers targeting 2015 for initial commercial sales of their fuel cell vehicles, demonstration facilities can be a catalyst to attract manufacturers. For example, General Motors, in cooperation with HCATT has applied for a National Fuel Cell Bus grant from the USDoT. The Hydrogen bus, if Honolulu is selected, is projected to arrive for operation in late 2014.

Thank you for this opportunity to provide comments on HCR 212.

**HOUSE COMMITTEE ON
ECONOMIC DEVELOPMENT AND BUSINESS**

April 2, 2013

HCR 212 Requesting the High Technology Development Corporation to Establish a Hydrogen
Fueling Station Demonstration Project

Chair Tsuji and members of the House Committee on Economic Development and Business, I am Rick Tsujimura, representing General Motors LLC (GM).

General Motors (GM) would like to express support for HCR 212 which requests the High Technology Development Corporation (HTDC) to establish a hydrogen fueling station demonstration project. This proposal comes at a critical time, as we enter a transformational period. We are witnessing an unprecedented shift toward more fuel efficient automotive technologies that also utilize increasingly diverse energy resources. While standing at this intersection, we can either choose now to take deliberate action to improve Hawaii's future, or we can let this opportunity pass, doing nothing to improve the situation. The State made an excellent start down this pathway with its support of the Hawaii Hydrogen Fund.

A hydrogen demonstration project would help establish Hawaii as a sustainable energy leader, transforming Hawaii's energy ecosystem into a model for other governments around the globe. Hawaii captured the attention and support of the Federal Government and various global industries. Other countries like Germany, Korea, Japan, and the Scandinavian countries are attempting to address similar problems. The solutions that Hawaii successfully develops and demonstrates today will become proven concepts and best practices for other states and countries around the globe.

Hydrogen represents a crucial link for diversifying Hawaii's energy infrastructure. It will help unlock alternative energy solutions for Hawaii's residents and can ultimately free Hawaii from its dependence on imported fossil fuels. Hydrogen represents an "energy currency" that can capture available renewable energy resources, store energy for extended time periods, load-shift to efficiently match supply and demand, and provide a conduit between the energy complex, the electrical grid, and the transportation sector. In 2010 GM, Hawaii Gas, and ten other government, academic, and industrial partners formed the Hawaii Hydrogen Initiative (H2I). This group is chartered with the single purpose of identifying and implementing hydrogen solutions that satisfy Hawaii's Clean Energy Initiative. GM, the U.S. Department of Energy, the National Renewable Energy Laboratory (NREL), The Hawaii Natural Energy Institute (HNEI), and the University of California at Irvine conducted a two year computer modeling effort to quantify the effectiveness of hydrogen as a component to Hawaii's energy ecosystem. This study confirmed that hydrogen and fuel cell technology can be implemented economically, with the goal of displacing large quantities of fossil fuel imports and utilizing Hawaii's renewable energy resources for vehicle propulsion.

GM initiated Defense Department partnerships to deploy Hawaii's first Hydrogen Fuel Cell Electric Vehicle (FCEV) fleet. In 2011, sixteen (16) Chevrolet Equinox Hydrogen Fuel Cell Electric Vehicles were deployed. These vehicles are now operating daily on Oahu and are contributing important data to GM's more than 2.6 MILLION miles of accumulated fleet operation. GM established one low-capacity refueling station at its Fuel Cell Vehicle Service

Center at 515 Kamakee Street, Honolulu. The Defense Department is completing installation of hydrogen refueling stations at Joint Base Pearl Harbor, Hickam and the Schofield Barracks and Kaneohe Marine Corps Base.

Unfortunately, these stations are only accessible by military vehicle users. Future efforts must expand hydrogen fuel availability beyond the boundaries of military bases, so other users can experience this important technology and current users can achieve unencumbered use of the vehicle fleet. Ideally, future stations should be integrated into more comprehensive energy infrastructure plans that span across energy and transportation sectors; plans that incorporate renewable energy resources, stationary power, grid back-up and distributed power generation needs, while at the same time providing effective hydrogen refueling access for light duty and commercial vehicles. This can add new opportunities for Hawaii to:

- leverage additional wind energy with improved flexibility to stabilize the grid,
- maximize new wind energy investments by avoiding wind energy curtailment,
- integrate landfill and waste water gas recovery efforts to provide viable transportation fuels,
- introduce clean hydrogen fuel cell bus options for mass transportation,
- integrate distributed power generation systems for added grid security,
- drive new investments into Hawaii, where stakeholders can concentrate technology demonstrations within one region (Hawaii) & create synergies to maximize likelihood of achieving positive results,
- deploy clean hydrogen fuel cell powered forklifts and aircraft tugs into crucial markets where economics can already support these technologies, and
- create new Hawaii jobs by shifting Hawaii's energy complex from its reliance on imported fossil fuels to localized renewable energy production with substantial value added from within the state.

These opportunities and their ability to help address Hawaii's energy challenges are why we believe HCR 212 is important to Hawaii's future. It means Hawaii will be taking its energy future into its own hands. By deliberately establishing strategic hydrogen infrastructure investments, Hawaii will be much better positioned to unlock its own renewable energy resources. We are willing to work with you to answer your questions about these promising technologies and how they may be used to solve Hawaii's energy challenges.

Thank you for the opportunity to present this testimony.

edbtestimony

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, March 30, 2013 9:01 AM
To: edbtestimony
Cc: tabraham08@gmail.com
Subject: Submitted testimony for HCR212 on Apr 2, 2013 10:30AM

HCR212

Submitted on: 3/30/2013

Testimony for EDB on Apr 2, 2013 10:30AM in Conference Room 312

Submitted By	Organization	Testifier Position	Present at Hearing
Troy Abraham	Individual	Support	No

Comments: I support urgent passage of this bill to promote clean alternate energy usage in Hawaii

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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