



## DOCKET

08-ALT-1

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February 27, 2009

Commissioner James D. Boyd  
Commissioner Karen Douglas, J.D.  
California Energy Commission  
Dockets Office, MS-4  
Re: Docket # 08-ALT-1  
Email: [docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)  
1516 Ninth Street  
Sacramento, CA 95814-5512

**Subject:** AB 118 Investment Plan - Advisory Committee Meeting

Dear Commissioner Douglas and Commissioner Boyd:

Last year, General Motors deployed the largest market test fleet of hydrogen-powered fuel cell electric vehicles in the world. The program, "Project Driveway", has given thousands of people the opportunity to drive a fuel cell electric vehicle while we collect important learnings that are critical to advancing the technology and readying the market. There are over 100 Chevrolet Equinox Fuel Cell Electric Vehicles in the demonstration fleet – the majority of these vehicles are operating in California.

Accomplishments of Project Driveway are compelling:

- More than 3,600 people have driven the vehicles (55,000 people have experienced the vehicle)
- Nearly 600,000 miles have been driven
- More than 7,200 fills (17,000 kg) at Hydrogen Fueling Stations
- Nearly 80,000 people have applied on the Project Driveway Web Site
- More than 1,200 First Responders have been trained in 8 cities
- Several Vehicles have already accumulated over 16,000 miles

GM is committed to developing drivable and practical vehicles that decrease dependence on petroleum and reduce emissions. And while we are aggressively pursuing a variety of propulsion solutions to meet these extraordinary transportation challenges, including E85 Flex Fuel, Hybrid and Plug-in Hybrid Electric Vehicle (PHEV) and Extended-Range Electric Vehicle (EREV) technologies, we are convinced there is a critical role for hydrogen fuel cell technology and a need to continue to support its development as we work hard to ready it for the market.

GM views hydrogen fuel cells as the ONLY known propulsion technology that simultaneously satisfies the following objectives:

- Zero emissions (water is the only tailpipe emission product)
- Petroleum Free
- High efficiency (twice the internal combustion engine)
- Scalable technology for a wide range of vehicles (from compact cars to larger family size vehicles)
- Fast refill capability (3 minute fuel fill is possible with the state-of-the-art 700 bar system)
- Automotive competitive range (300 mile range capability demonstrated)
- Reduced parts and simplified design for future automotive propulsion needs

As California and the country add to their installed renewable energy production capacity, improved energy buffering capability will become necessary. Hydrogen is a highly effective dense energy storage media, which creates strong synergies with ongoing wind and solar energy generation investments. California's investment in vehicle fueling stations can provide a template for transforming the California car park away from petroleum and onto renewable energy sources.

Hydrogen fuel cell vehicles now need to begin the transition from demonstration program to an early commercial market. Automakers collectively plan to place about 4,300 passenger vehicles in California by 2014, and 50,000 vehicles by 2017. For our customers to become early adopters and purchase these vehicles, they will require convenient and customer-friendly hydrogen fuel stations in early market locations. General Motors fully endorses the plan put forth by the California Fuel Cell Partnership for funding and deploying hydrogen fuel stations beginning in 2009.

According to the California Fuel Cell Partnership report, California needs to invest up to \$100 million through 2012 to support the early hydrogen fuel stations needed to fuel thousands of vehicles coming to California through 2014. Approximately \$40 million would be needed in 2009 and 2010 to fund and place the first 20 stations in early market communities in California.

Hydrogen and fuel cell vehicles will also bring jobs and create business opportunities in California. A 2008 U.S. Department of Energy report <sup>[1]</sup> projects that the United States will see 375,000-600,000 net new jobs from hydrogen fueled vehicle transportation, many from the high-tech sector, but also in automobile sales and service, construction of stations and manufacturing of equipment. Overall, the report projects that California could see up to 25,000 new jobs by 2050 compared to the all-gasoline scenario.

We are convinced that hydrogen fuel cell technology will be a viable transportation solution, but it requires, now more than ever, a sustained commitment. We support all efforts that continue to advance its development as we work hard to ready it for the market.

Sincerely,



Lawrence D. Burns  
Vice President  
General Motors, R&D and Strategic Planning

[1] Effects of a Transition to a Hydrogen Economy on Employment in the United States  
[http://www.hydrogen.energy.gov/pdfs/epact1820\\_employment\\_study.pdf](http://www.hydrogen.energy.gov/pdfs/epact1820_employment_study.pdf)