

Remarks of Catherine Dunwoody, Executive Director, California Fuel Cell Partnership  
March 19, 2012

Senate Transportation Committee hearing "AB 32 Implementation: Light Duty Vehicles and Their Fuels"

Good afternoon Mr. Chairman and members of the committee. Thank you for the opportunity to speak today.

Hydrogen fuel cell electric vehicles (FCEVs) are real and ready for market launch in California. Customers are driving FCEVs and fueling at public hydrogen stations today. These are full-size, all-electric drive vehicles that have zero tailpipe emissions. Customers drive 200-400 miles before refueling, and they refuel in less than 5 minutes. Customers love these "no compromise" zero-emission vehicles. The only thing they need is more hydrogen stations. Today we are at a crucial juncture. Automakers are preparing for market launch starting in 2015. California needs an initial network of hydrogen stations to give customers the confidence to purchase or lease fuel cell electric vehicles.

In the mid- 2000s, California led with investments in infrastructure to build the "hydrogen highway." Automakers and station providers participated in the world's largest fuel cell and hydrogen demonstration program. Over the past 10 years, automakers collectively invested over \$9 billion. During that time, real-world data from the Department of Energy's validation program proved performance, durability, and reliability. DOE's research and development with industry showed more than 80% cost reduction in fuel cells, with high volume system costs now approaching conventional vehicles. DOE showed hydrogen from natural gas can cost \$2-\$4/gasoline gallon equivalent at volume, and will cut greenhouse gas emissions by 50% compared to gasoline vehicles on a well to wheels basis. But perhaps most importantly, real-world customers have validated the appeal and market potential.

Ten years of customer experience showed us that hydrogen stations must be community focused. Unlike some fuels that can be provided “one car at a time” or that are primarily used in fleets, customers must know that hydrogen will be available at retail stations. Rather than build stations across the state, the California Fuel Cell Partnership Roadmap identifies a minimum number of hydrogen stations needed to give customers confidence they can fuel their cars as conveniently as they do today while minimizing the up-front investment needed to launch the market.

Based on market data and modeling, the roadmap establishes stations in early market “clusters,” plus connectors and destinations, so that customers can reach a station within 6-minutes. This minimum coverage enables market launch, but it will be necessary to grow the network to 100 stations as more vehicles enter the market. 100 stations will build supply capacity and give businesses confidence they can profitably sell hydrogen as a vehicle fuel, thus spurring continued private investment.

California is not alone. Japan, Germany, Korea, and the UK have infrastructure plans and have secured commitments from their governments and other market participants. Automakers need a world market to drive volumes and build robust supply chains. We share learnings and closely coordinate with our international colleagues so that interoperability and safety standards are harmonized.

A hydrogen station operator recently told me “We are done building demonstration stations. We have learned what we need to know, and we will now build retail stations.” Businesses that sell fuel are eager to offer what their customers need, and independent analysis shows

hydrogen will be a profitable business. Incentives bridge the gap between demonstrations and a self-sustaining market.

The key to success is close coordination and shared commitment among all market participants.

No individual market participant will act alone. All must have confidence that California will implement a complete deployment plan and sustain investments through the early market ramp up. Year-to-year funding commitments do not give automakers and station providers the certainty they need. Legislative language such as that contained in SB 11 provides certainty that the State is committed, which will give automakers and station providers the confidence they need to invest and launch the market.

Thank you.