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Automotive Fuel Cell Cooperation

Chevron

Cal/EPA Air Resources Board  
California Energy Commission  
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U.S. Department of Energy  
U.S. Department of Transportation  
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AC Transit  
Air Liquide  
Air Products  
Ballard Power Systems  
CA Dept of Food and Agriculture  
ITS-UC Davis  
Linde North America, Inc.  
NFCRC-UC Irvine  
NREL  
Powertech Labs  
Praxair  
Santa Clara VTA  
SunLine Transit Agency

# DOCKET

11-IEP-1L

DATE NOV 30 2011

RECD. NOV 30 2011

November 30, 2011

California Energy Commission  
1516 Ninth Street  
Sacramento CA 95814-5512

Re: Docket No. 11-IEP-1L

Comments of the California Fuel Cell Partnership on Transportation Energy Forecasts and Analyses for the 2011 Integrated Energy Policy Report

CEC IEPR Staff:

The CaFCP would like to commend the Energy Commission staff on the work that has gone into the IEPR and offer the support of our staff and members to integrate hydrogen and fuel cell vehicles into the transportation energy forecasts. The following comments are related to the presentation titled "Perspective & Context of Historic Demand and Alternative Fuels" given at the Staff Workshop on the Role of Alternative Fuels in California's Transportation Energy Future on November 14, 2011.

## 1. Slide 21: The hydrogen dispensing station cost is excessively high

On slide 21 the "estimated average dispensing station cost excluding land" is documented as \$2,757,208 for a 24 kg/day hydrogen station. This cost is most directly comparable to a 240kg/day station as awarded by CEC, although the highest station cost awarded by CEC was less than this amount. The average cost of the hydrogen stations awarded by CEC in 2010 was \$1,853,619. Future station costs will be lower. Please correct the analysis to use current or future projected cost estimates.

Additionally, the "average quantity fuel dispensed per location 2010" for hydrogen is listed as 19,272 gge; however, the hydrogen stations awarded by CEC in 2010 are not yet built and operating. Please identify how 19,272 gge was calculated.

## 2. Slide 21: EER for FCVs needs to be updated

CARB is currently proposing an EER of 2.46 for FCVs in the amended LCFS regulations.

## 3. Slide 24: Cost per annual capacity misleading

The upper limit of the cost on slide 24 at \$314.75 for "Infrastructure Cost Per Annual Capacity Dollars per Gallon of Dispensed Fuel" appears to be based on \$2,730,973 for a 24kg/day station or a 240kg/day station with 10% utilization. The station capacity for this cost should be 240 kg/day, setting the upper limit at \$31.475. Using the 180 kg/day station costs as awarded by the CEC this number would further decline to \$25.33. Using projected future station costs would further reduce the numbers. Please correct the analysis.

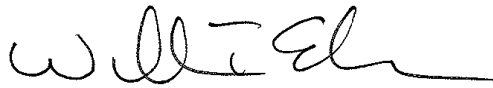
## 4. Slide 30: Incremental FCV cost is not justified

The incremental cost of fuel cell vehicles on slide 30 needs further elaboration and supporting documentation. An assumed \$50k incremental retail price is not supported by the research and analysis community nor by automaker statements.

The California Fuel Cell Partnership staff and members are available to support CEC staff with resources and information to update and refine the hydrogen and fuel cell vehicle analysis included in the IEPR. It would also be advisable for IEPR documents referencing hydrogen and other alternative fuels be vetted through CEC hydrogen and other alternative fuel divisions and experts before public release.

Thank you for the opportunity to provide comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bill Elrick', with a long horizontal flourish extending to the right.

Bill Elrick  
Technical Program Director  
California Fuel Cell Partnership