

November 10, 2014

California Energy Commission

**DOCKETED**

**14-ALT-01**

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To: California Energy Commission's Docket Office  
Dockets Office, MS-4  
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From: Ron Bingaman, President  
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RE: Docket No. 14-ALT-01; 2015-2016 Investment Plan Update.

Via: Email: [docket@energy.ca.gov](mailto:docket@energy.ca.gov).

Attn: Charles Smith and Staff

I am contacting the California Energy Commission (CEC) Dockets Office with a recommendation to include funding grants in the 2015-2016 Investment Plan for facilities to produce fuel hydrogen that is both renewable and also has a total zero carbon footprint. The hydrogen fuel produced should use only electricity from renewable resources, i.e. solar, wind, hydro, & geothermal that does not have any carbon footprint related to, or associated with, it being produced from any petroleum based produces. In addition, the substrate (feedstock) used to produce the hydrogen should also be carbon free. Using renewables such as biogas or ethanol is a vast improvement compared to using petroleum based products but there is still a carbon component when the overall process is considered that includes what the hydrogen is made from and the energy used to create the hydrogen. "Green" Hydrogen produced with a zero carbon footprint would provide for the maximum benefit to reduce green house gasses.

California is clearly taking the initiative and leads the country is transforming its transportation industry to provide for a substantial reduction in the production of greenhouse gases which helps to drive global warming. A facility that could supply totally green hydrogen on a commercial wholesale scale into the California fuel hydrogen supply chain would be of great benefit to California in achieving a totally carbon free fuel.

Comments from the hydrogen vehicle manufacturers at the recent California Fuel Cell Partnership Board of Directors meeting also brought to light a potentially serious issue. Specifically, a commercial hydrogen production plant went off line in the Los Angeles area and was not able to provide hydrogen fuel to one or more area retail stations. As such, the auto company received a number of complaints from its customers that fuel was not available and accordingly, a number of their leased vehicles were returned and the leases canceled. It would be import to structure any grant offering for a totally green hydrogen production wholesale facility to include provisions with a disaster recovery component, i.e. hydrogen being produced from two or more Company sites to prevent total outages in the supply chain. It is critical that during the initial roll out of this emerging market fuel hydrogen will always be available when needed by the customers.

Recently in other renewable categories including biogas and ethanol, grants have been made available strictly for the production of the product itself and not linked to any retail dispensing site. In a similar manner, grants provided for the production of zero carbon hydrogen at a commercial wholesale scale would be of great benefit to California. This totally "green" hydrogen would be available to retail dispensing stations and help to ensure availability of product and would support each station to reach and/or exceed their benchmarks relating to the percentage of renewable hydrogen dispensed at each station.

In closing, I urge the consideration of assigning funds as part of the 2015-2016 investment plan for grants to fund wholesale production facilities for 100% green hydrogen. Ideally funds would be sufficient to provide grants for a least one facility in the L.A. area as well as another facility in the Sacramento / San Francisco area.

Key points would include:

- 1) All power used to run the facility and power the hydrogen generation equipment would be from renewable carbon free sources.
- 2) The substrate/feedstock used to produce the hydrogen should be totally carbon free.
- 3) There would be a minimum of two Company sites that would produce hydrogen to ensure product availability.
- 4) Distribution network to make product available to any regional area Hydrogen fueling station.

Please do not hesitate to contact me with any comments or questions.

Best regards,

Ron Bingaman