

October 25, 2007

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06-AFP-1	
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Tim Olson, Program Manager, AB1007
California Energy Commission
1516 Ninth Street
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Regarding: Comments to AB1007 October 24th workshop , docket
No. 06-AFP-1, State Alternatives Fuels Transportation Plan

Dear Commission members and fellow participants:

The last 18 months of work regarding AB1007 and the related venues of AB32 and 2007 IEPR have made outstanding progress towards our goals of securing sustainable energy resources, improving efficiency in use, and reducing greenhouse gas emissions.

The CEC workshops have been very effective and efficient in capturing public and stakeholder inputs. The October 24th AB1007 and the October 15-16th IEPR workshops, heard many comments, all of which are important issues with good basis, and were presented with little stakeholder bias. The participants are to be commended for their diligence in pursuing the universal goals.

Clearly the conclusion is that the goals we have been charter to accomplish will be extremely challenging.

The following are four issues that deserve further consideration:

- 1) **Prioritization:** Many stakeholder comments regarding the uncertain technical viability of many alternatives discussed in the last 18 months is a very serious issue. The commission has an extremely difficult task to prioritize development of alternatives, with the low-risk, near term and high benefit alternatives at the top of the list. Infrastructure requirements are a critical component in this analysis.
- 2) **Natural gas:** Natural gas has been considered in AB1007 proceedings as an alternative vehicle fuel, however supply risk assessment has been absent. This issue has been addressed in October 15th IEPR proceedings, and there is a risk management plan. There is an escalating demand for natural gas for electric power production, which is also considered as an alternative vehicle fuel. Natural gas in the future will pose supply and price volatility at least as serious as petroleum.

- 3) **Electric powered vehicles:** The physical reality regarding electric vehicles, a new proposed demand on the grid, is that when they are plugged in, a natural gas fired power plant will have increased output to meet the demand, at all hours of the day. (demand might be provided by coal fired, but ISO keeps grid flow information confidential). Displacing natural gas fired electric power with renewables carries significant risks and may provide limited quantity as discussed in IEPR workshops. For the indefinite future, electric vehicles are essentially power with natural gas. Night-time rate reductions and subsidies are all political money, and do not represent energy efficiency nor true carbon footprint.
- 4) **Hybrid's and electric plug-in hybrids:** The comparative efficiency and carbon footprint of conventional, hybrid, and plug-in hybrid vehicles presented in AB1007 proceedings is significantly inaccurate, and the analysis thereof remains out of the public domain. The best hybrid technology sold today offers a conversion efficiency of "fuel to mechanical power to the road" of about 40%. The average natural gas fired electric power production efficiency in California is 45% (TIAX data). If all additional plug-in efficiency losses are included, such as transmission, charging, discharging, electric motor and battery weight penalty, the efficiency and carbon footprint for a plug-in is considerably worse than a natural gas fueled hybrid, and "break even" compared to a gasoline powered hybrid. All of the CEC, CARB, EPRI and NREL analyses have not captured the efficiency of hybrid technology available today. It is clear that a dynamotor test facility will be necessary at either the CARB or CEC to resolve this issue, and further address imminent AB32 vehicle greenhouse gas emission control in a scientific and efficient manner.

Thank you for the opportunity to participate.

Sincerely,



Bob Giebeler

Senior member Institute of Electrical and Electronic Engineers, San Francisco Executive Committee

Copy:

James Boyd, CEC
Jeffrey Byron, CEC
Barbara Fry, CARB
Dan Kammen, UCB
Luke Tonachel, NRDC

Docket Optical System - docket no. 06-AFP-1

From: bob giebele
To: docket energy
Date: 10/25/2007 1:17 PM
Subject: docket no. 06-AFP-1
CC: Tim Olson , dan , Luke Tonachel , bob giebeler
Attachments: Tim Olson , dan , Luke Tonachel , bob giebeler

Hi Folks

Please find enclosed comments to AB1007 Oct 24 workshop, and sorry for being late!

Regards,,bob giebeler