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26 July 2010

Siting/Dockets Unit
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Submission for 09-ALT-1:

Please file the attached with reference to the recent Advisory Committee meeting regarding the AB118 Investment Plan.

Thank you! Yours truly,

Paul B. Scott

Paul B. Scott, CSO

Comments regarding 2010-2011 Investment Plan

Paul B. Scott, ISE Corporation
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The Gulf of Mexico disaster clearly shows the cost of petroleum dependency. Further, the federal government does not offer an alternative, rather they are more in the mode of aiding and abetting, finding compromises between the various interests. While there are demonstrated alternatives in gaseous fuels and electric drive, it is clear that the USDOE, long a captive of traditional, business as usual interests, will not risk alienating its big business constituency.

California, with AB32 lighting the way, offers some hope – and the investment plan is more important then ever.

ISE, a California Corporation which has led in hybrid electric and gaseous fuel applications to heavy duty vehicles, is committed to clean transportation by means of electric drive. It has found it impossible to grow in the current environment, and just this week laid off 40% of work force. Thus we are more than ever committed to supporting the pathway of the CEC, and offering what we intend to be constructive comment to the end of a program which will grow the industries that are essential to vehicle technology development, renewable fuels and alternatives to the national insanity of sending money outside the USA, at $1.6B per day, to buy petroleum. However:

- It is important to clarify that the move to bio-fuels, while supportive in that it can make a dent in petrol use, is also a means that the oil firms are using in maintaining the liquid fuel infrastructure. The only <u>long term</u> answer is to go to gaseous fuels, and/or electric drive. The only way to get to 80% CO2 emissions, again, is to gaseous (hydrogen) with electric drive. The discussion of heavy duty vehicles, pg 33, makes mention of the advantages of hydrogen fueled buses, and the choice by the ARB to defer application of the ZEB rule. ISE has, as a result, decided to no longer pursue the hydrogen fueled bus programs in which it pioneered. There is no significant fuel cell bus business in California, or in the USA, and no commitment by agencies to support that business. A careful reading of that section suggests there is little support by CEC staff as well.
- Gaseous fuels are essential, as there is no battery technology in sight that will allow battery electrics to have the range capability, hence even the optimistic prognostications suggest at most a 6-10% LDV market share penetration in this decade.[1] Although it is of assistance in reducing petroleum imports, the present state of the battery technology, and the prognostications of battery experts for the future[2], suggest that there is no chance that we will ever get to 80% reductions by BEV or PHEV technologies. Thus the need for the AB118 monies to go for those programs that truly offer major long term opportunities.

The Plan acknowledges the need for natural gas and hydrogen fuel investments. We urge that the funding allocation be shifted so that there is a clear message that the stated importance is backed up by an "urgent need" funding priority.

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[1] We find is curious, at best, that the CEC chooses to support propane applications at all, as this is (I believe) a petroleum derivative fuel. Last I have seen, the Exxons and such are well funded, and likely able to fund developments for their products.

[2] As presented, for instance, at the AABC (American Automotive Battery Conference).