



November 3, 2009

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 09-ALT-1
1516 Ninth Street
Sacramento, CA 95814-5512

DOCKET	
09-ALT-1	
DATE	NOV 03 2009
RECD	NOV 03 2009

Docket No: 09-ALT-1
Subject: 2010-2011 Investment Plan

The California Electric Transportation Coalition (“CaETC”) thanks you for the opportunity to comment on the *Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program* for the 2010-2011 funding cycle. CaETC is a non-profit association with a board of directors that includes: Southern California Edison, Sacramento Municipal Utility District, San Diego Gas & Electric, Pacific Gas & Electric, and the Los Angeles Department of Water and Power. California is likely to be a major focus of initial mass marketing of a new generation of EVs that have the potential to provide significant environmental and economic benefits. We strongly support the CEC’s effort to update the *Investment Plan* to reflect the changing needs of California transportation industry. In general, CaETC’s assessment of the current plan’s numbers is that they are within range. It is still early to more accurately predict the number of electric and plug-in hybrid electric vehicles, the amount and location of needed infrastructure and the cost of that infrastructure for the next funding cycle. We expect more clarity by mid-2010 at the earliest. We have the following comments for your consideration in shaping this *Investment Plan* as it relates to the Electric Drive section and provide direction for continued assessment of the industry for future activities.

- CaETC agrees with your vehicle projection numbers and, therefore, the need for roughly 5,000 upgraded and 2,000 new charging stations. The problem with the data, however, is that we do not know at this point whether the \$12 million set aside for infrastructure will pay for 2,000 new stations at \$4,500 a piece or only 1,000 at \$9,000 a piece. If the latter is

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A non-profit association
promoting cleaner, healthier air
through the development and use of
zero-emission electric vehicles,
hybrid electric vehicles,
electric mass transit buses and rail.

the case, the allocation for electric infrastructure is in fact too low. CalETC members have been both in the planning stages and out in the field on infrastructure upgrade and development projects. There is a lot of debate and variability in installation costs. Appendix A provides a set of examples from a variety of sources. The variables include location, charger equipment, labor costs etc. CalETC recommends the CEC closely track proposed projects for cost and possibly adjust its projections and allocations accordingly, including projects from the current *Investment Plan*. The CEC would also need to maintain the flexibility it has in the current *Investment Plan* to do this as long as sufficient public notice is given when funds are adjusted.

- Since there is no prioritization outlined for charging installation in either the *Investment Plan* or by the State at this time, the CEC will also want to track the locations for proposed projects and assess whether these are strategically located and determine whether there is unmet need. The concern is that as the State ramps up to vehicle penetration, it would be unfortunate if infrastructure dollars were unevenly distributed. Getting charging stations out there is important but not to the detriment of one sector. In particular, we are looking at the opportunities for home and multi-unit charging because of their higher value, off-peak charging benefit. To remedy this CalETC recommends the CEC conduct a mid-term funding cycle workshop to present an analysis of funded projects and take stakeholder comment.
- For clarification purposes, CalETC believes is also beneficial to define infrastructure location terms in this *Investment Plan*. For example, is home installation the same as a residential multi-unit or is there a difference between commercial and public charging. We believe these terms are being used interchangeably and there is value to putting them into defined boxes for tracking and assessment purposes.
- The language in the Infrastructure section regarding what is eligible is fuzzy. It should be clarified that level I and II charging will be funded and that both public and home infrastructure is eligible.

Finally, we want to bring to your attention the activities of the CPUC which is engaged in a rulemaking where most if not all of the pressing issues impacting electric transportation infrastructure policy are currently being debated. The *Order Instituting Rulemaking to Consider Alternative Fuel Vehicle Tariffs, Infrastructure and Policies to Support California's Greenhouse*

Gas Emissions Goals (“OIR”) is currently seeking responses to questions related to residential, commercial and public charging and infrastructure policy, legal issues related to ownership and operation of infrastructure, codes and standards, electric system impacts, tariff related issues, incentives and education and outreach, to name just a handful. So far 19 utilities, vehicle manufactures, infrastructure service providers and manufactures, environmental organization, ratepayers groups and others stakeholders have filed responses to 42 far reaching questions which tallies up over 500 pages. CalETC encourages the CEC coordinate with the CPUC and the ARB in this proceeding especially as it relates to and potentially impacts the Alternative and Renewable Fuel and Vehicle Technology Program and the AB 118 Investment Plan.

Thank you for the opportunity to provide these comments. Please call should you have any questions.

Sincerely,

California Electric Transportation Coalition



Julee Malinowski-Ball

Interim Executive Director

JMB/kmg

Attachment (Appendix A)

APPENDIX A

Historical Average Infrastructure Installation Cost – SMUD

Level 2 Residential installations averaged	\$4000 per charger
• Charger (Inductive with \$500 incentive)	\$1900
• Installation labor	\$1177
• Permits	\$ 150
• Other Mat’ls and freight	\$ 572
• Tax	\$ 193

Level 2 Commercial installations average	\$6300 per charger
• Charger (Inductive w/o incentive)	\$2480
• Installation labor	\$2287
• Permits	\$ 77
• Other Mat’ls and freight	\$1497

Inductive charging hardware shown for reference

- 88 residential installations

- 62 commercial installations

Conductive EVSE was approximately \$1,000 per unit less

Nut Tree Village, City of Vacaville, 2008

The cost breakdown for installing one small-paddle inductive charger was as follows:

Inductive Charger	\$5,600
Pedestal	\$1,103
Shipping and Handling	\$220
Sales Tax	\$494.35
Total for Equipment	\$7,417.35
Installation Cost	\$16,375.90
Total Cost of Installation	\$23,793.25

PG&E Electric Vehicle Charging Station Costs, 1998 - 2009

Elec Vehicle Chargers	1998 L.C.	1998 Stockton	1998 Merced	1999 Modesto	1999 Bkrsfld	2009 Hwy 80	Total	Average
No. of Units	6	4	2	2	5	16	35	-
Labor	\$13,935	\$3,485	\$1,220	\$4,280	\$3,030	\$27,560	\$53,510	\$1,529
Capital	\$18,815	\$11,061	\$5,144	\$5,650	\$13,850	\$68,500	\$123,020	\$3,515
Total Dollars	\$32,750	\$14,546	\$6,364	\$9,930	\$16,880	\$96,060	\$176,530	\$5,044
Unit Cost	\$5,458	\$3,637	\$3,182	\$4,965	\$3,376	\$6,004	-	-

Average Total cost per 1998/1999 EVSE installation = \$4,235 (labor = 32%, capital = 68%)

Average Total cost per 2009 EVSE installation = \$6,004 (labor = 29%, capital = 71%)