TN \# 68826
DEC. 112012

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 12-ALT-02
1516 Ninth Street
Sacramento, CA 95814-5512

## Attn: Commissioner Carla Peterman <br> Lead Commissioner on Transportation

Dear Commissioner Peterman,
My name is Richard Teebay. I am employed by the County of Los Angeles and, with Patricia Kwon of the South Coast Air Quality Management District, serve as Co-Chair of the Southern California Association of Governments' (SCAGs) PlugIn Electric Vehicle (PEV) Coordinating Council. I am also a member of the Los Angeles Economic Development Corporation's e-Mobility Task Force. I am writing you today as a private citizen and not as a representative of my employer, the PEV Coordinating Council, or the LAEDC's e-Mobility Task Force. Thank you for allowing me to submit my comments.

I have been actively involved in creating and recreating an EV infrastructure plan within the region. I applied for, and the County has received, two grants. One grant will fund the installation of 48 Level 2 EVSE, primarily County worksites by June 30, 2013. The second grant will largely fund the installation of another 72 EVSE at other sites by December 31, 2013.

I own and drive a Nissan LEAF. In my first 15 months, I have driven my LEAF more than 17,000 miles. I have yet to charge my LEAF at a County facility.

The cooling, heating, and lighting of the County's $2,600+$ buildings ( $50+$ million square feet) are responsible for about $36 \%$ of the County's green house gas emissions. The County operates a combined fleet of 14,000 vehicles and consumes more than 14 million gallons of various fuels each year. The County's fleets are responsible for about $11 \%$ of its green house gas emissions. The County has about 101,000 employees. The typical employee has an average commute of 24 miles one way. The County's employees' commute represents $32 \%$ of its green house gas emissions (a Scope 3 emission) - almost three times that of our combined fleets. Our employee commute is the County's second highest source of green house gas emissions. A colleague from Alameda County made a presentation showing that their employees' commute was $40 \%$, and the largest single source of that County's green house gas emissions. This
really drives the point that Electric Miles can eliminate criteria pollutants and cut green house gas emissions by two thirds.

I was in complete disbelief when 1 heard Mr . Lowenthal of Coulomb Technologies, now ChargePoint, ask for millions of the limited AB 118 funding to "fix" the "inter-operability" problem which he and others created. There aiready ARE solutions. But these solutions do not include ChargePoint, which maybe why he and others seek this funding.

I waited for my LEAF. I wanted my LEAF. I don't remember wanting or waiting to get ChargePoint and/or BLINK memberships and their accompanying RFIDs. And I have never been fond of fees and transaction charges.

There is a great need for charging at the workplace and in multi-family housing. In communities such as San Francisco and Santa Monica, more than 75\% of the housing units are multi-family.

Dr. Rajit Gadh, (gadh@winmec.ucla.edu) Director of the UCLA SMART GRID Consortium (which consists of UCLA, USC, Cal Tech, JPL, LADWP and Southern California Edison), has developed multiplex technology that permits several vehicles to share a charger, just like electric forklifts in a warehouse setting share a single charger. This technology allows up to four vehicles to recharge and does not require that someone move or shuttle the vehicles. This would be an ideal solution at many workplaces and at many multi-family developments. The devices are currently undergoing UL Listing certification. Funding to assist with the certification and/or deployment of solutions such as Dr . Gadh's would provide far greater value.

Ask anyone who owns and/or drives an EV regularly. All of us like free charging. But we really HATE some of the systems that are currently out there. Many systems charge only by the hour, and their costs are high. I saw one presentation where the provider showed that the "right" price point was $\$ 2.50$ per hour. If you drive a plug-in hybrid (Prius, Volt, C-MAX, Fusion, etc.) or a current generation LEAF, your vehicle has a 3.3 kWh on-board charger. At $\$ 2.50$ per hour, you are paying $\$ 0.75$ per $k W h$ - the equivalent of $\$ 12$ per gallon gasoline. If you drive a Ford Focus EV or a BMW Active-e, you are paying between $\$ 0.347$ to $\$ 0.375$ per $\mathbf{k W h}$ - the equivalent of $\$ 6$ per gallon gasoline. If you drive a Prius or a Volt, you will learn quickly to say "No Thanks" and drive gasoline miles. To add insult to injury, some EVSE (such as ECOtality's BLINK) continue to incur costs by the hour, even when the vehicle has stopped charging.

The demographics indicate that the typical buyer of a Nissan LEAF has a household income of $\$ 150,000+$ per year and at least a bachelor's degree. And, yes, we can do math.

The County will be charging employees who use its EV infrastructure. There are two reasons: If the County fails to recovery its energy costs for charging, it could be seen as a gift of public funds. If some employees were allowed to recharge their vehicles at no cost, other employees might ask why they couldn't fuel their personal vehicles at County facilities. A key issue in selecting the EVSE and its system was to make the EVSE accessible and affordable. If recovery rates are too high, employees won't use them. If they aren't going to be used, why install them at all? Currently, METRO, with AB 118 Funding, is installing EVSE managed through Greenlots software. The County is exploring two other open systems: e-Port from USA Technologies (a credit card reader) and Liberty-Plugins' Hydra R, a revenue grade device. If you have a cell phone, you can access a Liberty Plug-in controiled device (provided that the EVSE is not restricted to fleet vehicles and/or is for employees only. (The Liberty Plug-in solution is being installed at Sacramento State University. San Diego Gas and Electric is negotiating a contract for a Hydra solution, and Southern California Edison has also expressed interest in the Hydra product.)

Mr. Lowenthal of ChargePoint began his presentation by complimenting you and your staff by saying that funding has been wisely allocated and spent. I plead with you demonstrate that wisdom again. Please do not invest $A B-118$ 's limited EV Infrastructure dollars in the inter-operability issue. Many of the other companies listed on the slide, Eaton, GE, Schneider, etc. are very well funded. Eaton and Schneider currently offer models with either the ChargePoint or the Liberty-Plug-ins solution. The Eaton, Clipper Creek, and others, are also available with e-Port's credit card reader.

Finally, Liberty Plug-ins is a Santa Barbara based firm.
When I prepared the bid specifications for the County's EVSE Master Purchasing Agreement, which the State of California is piggybacking, I identified more that 40 EVSE providers. I knew that there would be a natural consolidation. Siemens withdrew from the commercial market last month. I believe that more manufacturers will follow. Please let the market determine which solution (unique RFIDs cards, credit card readers, pay-by-phone, etc.) ultimately thrives.

The firms opting for the unique RFID card solution have created this problem. We shouldn't have to give them millions to fix a problem they created.

Please require that newly funded EVSE use a more universal payment system, such as a credit card reader, pay-by-phone, etc.

Please consider funding multiplexing solutions - especially for multi-family, workplace, airports, etc.

As an EV driver and a private citizen, thank you again for letting me provide comments on the Investment Plan.

Sincerely,


Richard F. Teebay



## MLLTIPLIERS




| Now | Electric Vehicle Simulator / EVSE Tester | N | N | EVSETESTB | \$858 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Now | Wi.Fi Network Hub - Cellular | Y | N | 91C5369G01 | \$1,749 |
| New | Wi-Fi Network Hub - Ethernet | N | N | 94C5369602 | R849 |
| Now | Extra Keytobs Pre-orogrammed for use wilh RFID Basic only | N | N | 91C5385601 | \$12 |
| Now | Exira Keyfobs (not programmed, can be used with R-10 Basic ar User) | N | N | 91.C5385H01 | \$10 |

* Price indudes one time activatuon fee Monthly service fee ard card processing fees stili apply,

The orgoing service and card processing lees are as ollows to be set up under agreement whth ard made payable to USA Technologies:

* $20 \%$ to $2.5 \%+\$ 0.10$ for the processing of each ceedir or debt card
trinssacton (regandless of Vise, MC, Disc, AMEX)
- $\quad \$ 9.95$ per month per card reader, which includes the cellular
telecormurikations (ATBT), automatic deposits of card proceeds ic a bank account (EFF), sales, accounting and reconclliation reporting
(USALive) and the customerfilling support heyp desk.

