

DOCKETED

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Suggested modifications to Cal eVIP

Additional submitted attachment is included below.



December 14, 2019

California Energy Commission

Docket #17-EVI-01

RE: Block Grant for Electric Vehicle Charger Incentive Projects

Adopt a Charger, Inc. (AAC) is a 501(c)3 non-profit organization, based in California that has facilitated EV charging installations in 10 states. Our mission is to raise awareness of plug-in electric vehicles (PEV) by broadening EV charging infrastructure. Our unique approach matches a funding source with a high-profile destination like National Parks, State Parks, museums and universities. We solicit funding to install "free to the user" EV charging to encourage communication between the EV curious and actual owners, who have proven to be enthusiastic sales people for the new technology. AAC acknowledges that people need to be able to see cars plugged in to make the connection that these vehicles run on electricity.

AAC specializes in inexpensive, noncomplex, **reliable** solutions, where drivers simply pull up and plug in. There is no need for membership, RFID card or authorization of payment. Included in the project budget is 3 years' operation and maintenance. Typically, the only cost to the site host is the relatively insignificant cost of the additional electricity. Because these chargers are offered "free of charge" to the driver, we get high utilization and maximum exposure of PEV.

AAC is grateful to have received funding for projects from the CEC ARFVTP program. Most recently the grant to install up to 61 EVSE at 12 California State Parks. Prior to this grant, AAC worked with South Coast AQMD and LADWP to utilize CEC funding at Leo Carrillo State Beach, Malibu Creek State Park, Baldwin Hills Scenic Overlook, The Natural History Museum of LA County, the Getty Center, Getty Villa, LA Zoo, and 3 popular LADOT parking lots. AAC assisted the Golden Gate National Recreation Area with a CEC grant for Stinson Beach and Fort Mason. In addition, we assisted the Mendocino Land Trust with their CEC grant proposal for EV charging at 10 California State Parks. These projects provided insight that should be considered for upcoming solicitations.

The CEC has stated:

*"A **convenient, reliable** network of public electric vehicle charging stations (EVCS) will be critical to continue supporting the expansion of PEV ownership in California and ensure the goals of the ZEV Action Plan and Executive Order B-48-18 are realized".*

"AB 8 introduced the GHG benefit-cost score as a new element into the list of policies and scoring preferences for ARFVTP. It is defined as "...a project's expected or potential greenhouse gas emissions reduction per dollar awarded by the Commission to the project."15 F16 AB 8 also directs the Energy Commission to "give additional preference to funding those projects with higher benefit-cost scores."

The statute also calls for the Energy Commission to “develop and deploy technology and alternative and renewable fuels in the marketplace, without adopting any one preferred fuel or technology.” (1)

With these goals in mind, AAC offers the following recommendations to the Investment Plan Update:

- 1. Allow for the funding of non-networked EV charging, to keep costs down, increase the number of electric vehicle miles traveled (EVMT), and maximize the GHG benefit-cost score.**

Many key points were raised by the 2017 Rand Study, “Process and Outcome Evaluation of the Alternative and Renewable Fuel and Vehicle Technology Program” that support this viewpoint. According to the study, *“One of the barriers most frequently identified by survey respondents was insufficient consumer awareness.” (Page 89), “Charging station deployment sometimes had elements of outreach and awareness....and one could agree that their efforts contributed to raising public awareness simply by making EV support infrastructure” (page 95). (2)*

A fuel related barrier identified by the Rand study was that **“requirements for networked charging systems drives the cost up almost tenfold.”** (page 90) When charging is too expensive, driver’s do not plug in, utilization plummets dramatically decreasing EVMT and GHG reductions. We also miss an important opportunity for outreach and education. The County of Sonoma experienced a decrease of usage by 69% when a fee was introduced. (attachment A) According to industry expert Dave Packard, *“get the cost of charging as close to actual energy cost as possible. Adding on the layers of a network’s bureaucracy is going to raise the price, and then no one will use them. Based on the EV Project data, we can see that when it’s free, it’s used. When we start charging for it, it’s used a lot less (2).*

The Center for Sustain Energy California Plug-in Vehicle Owner Survey determined that the #1 reason reported (38%) for acquiring an EV was saving money of fuel costs. (4) The requirement for networking and the fees associated increase the cost of EV charging stations, the burden of which is passed on to the EV driver. Underutilized charging stations do not meet the CEC objectives of increasing eVMT and do not result in a favorable GHG benefit-cost score. Empty charging spots do not serve to raise awareness of PEV, and can build animosity with ICE drivers when prime parking spaces sit empty.

- 2. Stay flexible in your funding approach to allow for a variety of business models. Give site hosts “consumers choice” in their preferred method of delivery, to best suit their needs, and customize the approach for their unique circumstance.**

The Rand study points out, *“Methods of access and payment varied. Some systems were free, some used radio-frequency identification access cards that were linked to a payment account, some used smart phone apps that were linked to a payment account, and most also allowed the user to call a number and use a credit card directly.” A challenge with the latter approach is that several sites had no cellular connections (e.g., underground parking garages... A related challenge, encountered at a number of sites, is that even with cellular access, we were unable to reach anyone to conduct the transaction.*

Calls reached recordings indicating unavailability or were put on hold for extended durations. Multiple sites were initially providing free charging to attract users, with plans to convert to a

pay-per-charge system after some time period. For example, the Getty Center in Los Angeles elected to pay for electricity to its EVSEs for the first three years of operation, after which it would reevaluate payment options. Prior to installing EVSEs within its parking structures, Getty counted only seven employees who drove EVs. Seven months after installation of EVSEs, 26 employees drove EVs.

A general challenge with EVSEs in many settings is managing parking” (Page 106-107)

The 2017 Rand Study provided the example of the Getty Museum as being successful. The **total operating cost for 3 years offering fee-free charging to employees and public was around \$34,000.** After 1 year, there was 26 PEV drivers, and after 3 years there currently are over 80 employees charging at work. The Getty increased the number of EV parking spaces from 20 to 42 after the first year, and is planning to increase the number to 108 EVCS. They are also installing 2 DCQC to serve the security patrol vehicles, which have all been converted to electric as well as an all-electric passenger shuttle. If the Getty were liable for networking fees, they would be on the hook for \$54,000 - \$64,000 per year plus the cost of electricity. **The expansion would not have happened if the Getty were to bear the burden of this expense.** I have negotiated a deal for the Getty Center to trade low carbon fuel credits to pay for an adaptive load management system to mitigate demand charges. This arrangement would not be possible using the Cal eVIP program where the site host is not allowed access to the LCFs that they generate.

Staff's proposal is too expensive and there are lower cost alternatives. Currently, the strict eligibility requirements proposed by the Cal eVIP program make it impossible for Adopt a Charger to utilize State funding to expand an alternative business model that has proven successful at raising awareness of PEV, maximizing GHG reduction, and increasing eVMT. Most concerning is that AAC has been effective at installing EV charging in hard to commercialize locations, including disadvantaged communities and rural areas, where other business models do not make sense.

We are not on track to meet Governor Brown's ZEV action plan calling for 1.5 million cars on the road in California by 2025. It is very important that the CEC remain focused on policies that incentivize the adoption of plug-in vehicles. There was recently a lengthy effort which already examined the options for communications protocols for vehicle to grid, and the five State agencies declined to recommend any single protocol. The CPUC has declined to mandate ISO 15118 or even future-proofing of the EVSE because of the increased costs. CEC recommendations requiring ISO 15118 opposes the joint recommendations of the staffs at CPUC, CARB, GOBIZ and CAISO, who led the VGI communications protocol working group with CEC Staff, along with over 100 stakeholders from the private, public, and nonprofit sectors.

I encourage CEC staff to remain focused on the goal of selling plug-in vehicles. Overly complicated systems increase the potential for problems which make EVSE less reliable, and escalate the cost of operating and maintaining infrastructure. The added burden is passed on to the site host, making them less likely to install EVCS, or to the EV drivers making public charging more expensive than buying gasoline, introducing another barrier to the adoption of electric vehicles.

Thanks for considering my suggestions,

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Footnotes:

1. 2018-2019 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program
2. Rand: Process and Outcome Evaluation of the Alternative and Renewable Fuel and Vehicle Technology Program. By [Lloyd Dixon](#), [Tom LaTourrette](#), [David A. Galvan](#), [Charles A. Goldman](#), [Nidhi Kalra](#), [Christopher Nelson](#), [Flavia Tsang](#), [Paul S. Steinberg](#), [James Lyons](#), [Jerry Bowers](#), [Bob Katin](#)

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