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Comments to Docket 20-TRAN-04
CEC Light Duty Multi-user Dwelling (MUD) Infrastructure Pre-Solicitation Workshop
Comments
7.13.21

Ecology Action would like to thank CEC Staff and Commissioners for the focus on investment in cracking the code on equitably scaling MUD charging deployment in this underserved market. Innovations are needed in all aspects of the customer journey including site host outreach, site qualification, system design, technology selection, match requirements, payment settlement approaches and tenant training. Each of these elements, as currently practiced, contributes to the current MUD EVSE market failure that California is experiencing. Consequently, any scalable solution must address these together.

Ecology Action is a 50-year-old non-profit based in Santa Cruz, California that specializes in designing and implementing new energy and EV programs that help serve hard-to-reach and underserved customers. The majority of our work for the past two decades has focused on delivering turnkey energy efficiency solutions to small and medium businesses (SMB) including retrofit in more than 15,000 SMBs and 650 low-income MUDs. Over the last three years, Ecology Action has invested significantly in understanding and solving the MUD EVSE market failure. Under contract with two CCAs we have conducted market testing and demonstration of new solutions to rapidly scale EVSE deployment in the MUD market. Our comments here are informed by our market engagement and the realities in the field.

We are extremely encouraged that the solicitation will allow awardees to address multiple market barriers¹ simultaneously that have hindered adoption to date. However, improvements to several aspects of the solicitation could help maximize the impact of CEC's investments in this area.

General Observations

A core theme of our comments here is to assure that the solicitation rewards efforts in innovation that stimulates scaling, and that the solicitation does not forego innovation in order to favor approaches that may provide immediate wins but that will not be scalable. Making rules that try to assure immediate production from innovation dollars can impede long term gains in equity and vehicle adoption

¹ [Innovations in Electric Vehicle Charging for Multi-unit Dwellings](#): Ecology Action; Community Innovation On-Ramp Grant Final Project Report, November 4, 2020, pg. 24.

for California. Our comments attempt to highlight where we see the risk of this solicitation falling short of that outcome.

Technology Requirements

Utilizing low power level-1 (L1) and automatically load managed (ALM) L2, provides more EV mileage than the average daily driving need for CA drivers, while often being able to be added to a building without need for expensive service or panel upgrades. This is in contrast to providing the “Cadillac” EVSE solution which is more than is necessary to stimulate EV ownership. To assure wise use of funds we encourage the CEC to require bidders to present their plans for both cost control and future proofing installed systems for eventual service upgrades, additional EV drivers and potential cost savings from technologies like bi-directional EV charging.

In our work we have found that for MUD charging the simplest solution is often best for both the driver and the property owner. To this end we strongly discourage requiring J1772 adapters for L1 equipment. This unnecessarily excludes an important class of new smart charging technology that is rightsized to MUD Equity market needs. For example, these new smart outlets provide networked charging at very low cost and they allow consumers to bring their own charging cords, which are now standard equipment with every EV. Utilization of these kinds of new technologies along with programmatic solutions are essential to scaling affordable charging for equity communities. It’s important to note here that Ecology Action is vendor agnostic and seeks the best solution for the customer.

Program Match Requirement:

Unlike energy efficiency or water efficiency, there is no return on investment on EV charging. MUDs are indeed businesses and as such MUDs need a financial motivation to engage. Therefore, any solution must be both free and hassle free. In fact, PG&E discontinued the match requirement in its EV Charge Network program for MUD properties in DAC communities due to the participation barrier it created.

Match from the MUD operator:

Typically, only luxury and premium properties are capable of providing an out-of-pocket match for charging. If match is required this will skew installations toward those already willing to pay and would constitute funding free-riders, and by definition these are not the “hard to reach” target CEC seeks to serve. We find that whether a property is large or small, luxury or affordable it will pass along any incurred costs (match) to the tenant. This can negate the economic benefits of driving electric which would be particularly burdensome for lower-income tenants. Requiring even a token match will complicate the process of getting owners to participate and portends anemic market uptake, especially in the equity market where there is already less money available. Ecology Action’s research findings on this are included in a previous filing to this proceeding.

Match from Other Funding Agencies (e.g., CCA, Utility, Air Districts)

One of the core reasons that the MUD market is failing is current EVSE incentive funding rules differ significantly by agency and many run counter to the needs and capability of the MUD market. These include requirements around power levels, connector types, networking, public access, application time windows, and throughput thresholds. The unique opportunity provided by this solicitation is to design the solution from the market's perspective and move away from the past incentive program rules that have been central to the MUD market failure. Requiring match will mean that implementer would have to adhere to multiple sets of program rules, necessarily defaulting to the strictest rules, which will in turn negate the opportunity for true innovation.

For example, one metropolitan air district requires electricity throughput thresholds be met and also requires that chargers be shared or open to the public. Further, the mismatch of timelines of funding availability, hyper competitive incentive reservation processes and the stop-and-start timing of incentive programs together make it currently nearly impossible to stack (match) program dollars on a given property. This dynamic makes stacking incentives for program match an especially unscalable, bespoke proposition at best.

Even if a given jurisdiction were able to deploy a somewhat unrestricted pool of match funds that align well with the innovative nature of this solicitation, there is a significant risk that the vast majority of installations would be concentrated in that limited geography. We anticipate that scalable matching will be viable in subsequent phases of funding when the innovations generated from this solicitation are socialized with other funders that in turn modify their rules to work for MUD properties.

We would ask that the CEC consider the following as an alternative:

- Require bidders to propose how they will test the market's tolerance for match and report on that as a deliverable. This will be valuable information in subsequent funding cycles for establishing workable matches from property operators.
- Have all implementers report on total average cost per port and total average cost per property to better understand apples to apples outcomes for various approaches.

Letters of Commitment

In "incentive only" programs like BAAQMD's Charge! Program and the CALeVIP program, letters of commitment are indeed needed to justify reserving incentive dollars for a specific site. It is our understanding that CEC is seeking a different kind

of mass deployment approach here, one where it empowers public purpose entities to find, screen and evaluate, and then serve hard-to-reach customers. Applicants proposing on-site charger installations will need the first months of the program to locate and enroll suitable participants. Because of the considerable time and effort required to find hard-to-reach MUDs (they are, after all, hard-to-reach), we strongly recommend against requiring letters of commitment as part of the proposal. Doing so will create three unintended consequences.

First, it is not uncommon to have to engage with 15 income qualified MUD operators to yield just one participating site. Finding ways to improve this low close ratio is truly one of the core innovations that this solicitation should be seeking to fund. Compressing all customer acquisition activity into the short bidding phase would not allow for awardees to experiment and innovate effectively.

Second, if the pre-bid commitment requirement remains, bidders would be inclined to obtain commitments from the easiest targets which would primarily be larger, corporate-owned MUDs where one decision maker can commit many properties. This would pass over harder-to-reach, lower income, smaller, independently owned properties which we know are critical to the success of this solicitation.

The third is customer focused. CEC plans to award three contracts. Say there are nine entities bidding, all of which would be required to conditionally promise EVSE installations to MUD operators. Since only three bidders would win, this means that roughly 66% of those EVSE installation promises could never be fulfilled. When two thirds of the conversations in which we engage MUD operators bear no fruit, as an industry we risk losing their attention and trust. This would not show well on the CEC or the industry.

In lieu of letters of commitment we would ask the CEC to consider the following:

- Requiring implementers after program launch to nominate the candidate sites to CEC staff for review. This could become part of the program scope.
- Scoring consideration based on the soundness of the plan put forth to identify, qualify and implementing projects commensurate with a proposed goal.
- Scoring consideration based on how well the proposed program design will meet equity goals.

Geography:

We applaud the CEC's intent in designating Program Areas to assure funds are reasonably well distributed within California. However, the geographic breakdown proposed in the draft solicitation creates an important limitation in the ability of a given pilot concept to be proven in all three of the dominant California population settings: rural, urban and semi-urban.

We understand that there is no restriction to submitting the same program concept in more than one area. However, this is potentially problematic because many program concepts need a fairly significant minimum budget to test adequately (e.g. \$3M is needed to adequately test a direct installation approach). With overall budgets for MUD at \$8.5M it is unlikely that CEC would dedicate two contracts for the same program concept to one entity at the scale needed (\$6M in this example). Of course one option would be for the applicant to submit two identical smaller proposals in separate Project Areas (e.g., \$1.5M in each). This presents a double jeopardy situation for the implementer because if only one region is awarded, there would be insufficient budget to adequately test and prove-out the concept.

Potential solutions we would ask the CEC to consider for this solicitation include:

- Adding one or more Bay Area Counties to the Central California Area. For example, adding San Mateo, Santa Clara and/or Alameda County would allow all three project areas to include a representative balance of the three major population settings.
- Allowing the boundaries of the solicitation's Project Areas to be flexible and overlapping to the extent that there is a rationale that the requested flexibility is needed to fully prove out a program concept and reach the appropriate properties.

Applicant eligibility

We strongly encourage that the CEC require bidders to be vendor agnostic and as such certify that they do not have a financial interest in promoting or avoiding a given type of software or charging technology. Such financial interest could shift the focus of the use of these funds away from what's most beneficial to the property owners and drivers to what's most profitable for vendors. While profit motive is a powerful and important element needed to animate the market ultimately, financially interested companies are not appropriate as primary recipients for this public purpose work.

Evaluation Criteria Weighting

To align with the goals of innovation, we recommend that the evaluation criteria put more weight on team qualifications and the soundness of the solutions logic model as it pertains to replicability, scalability and acceleration of vehicle ownership, particularly in equity communities. Correspondingly for all of the points previously raised we would suggest reducing the emphasis on the readiness of projects at the time of bidding and focus on the overall potential of the project to create new scalable solutions to overcoming the market barriers in MUD EV charging, especially for underserved communities. This in turn will bring about the desired acceleration of the EV market for all MUD properties.

Thank you again for the opportunity for Ecology Action and other stakeholders to weigh in on this important solicitation. We appreciate all of the time and effort that staff has put in to make this possible, working to create a program that will bridge the key gap in MUD EV adoption.

Sincerely

/s/

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