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Public Comments on EV charging deployment in Multi-Unit Dwellings as part of the 2020-2021 Investment Plan Update for the CTP

Additional submitted attachment is included below.

July 6, 2020

Ms. Patricia Monahan, Lead Commissioner on Transportation
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
Via: CEC Docket 19-ALT-01
Re: Public Comments on EV charging deployment in Multi-Unit Dwellings (MUD/MDU) as part of the 2020-2021 Investment Plan Update for the Clean Transportation Program

Dear Commissioner Monahan,

Ecology Action is pleased to submit comments on the CEC 2020-2021 Investment Plan Update for the Clean Transportation Program (CTP). Ecology Action is a 501(c)3 based in Santa Cruz, CA focused on reducing emissions at scale and has done extensive work with energy efficiency retrofits and EV infrastructure across California. Ecology Action is developing new programs in the EV infrastructure space targeted at widespread low power charging deployment in MUDs. We believe that the direct install model Ecology Action has developed for turnkey energy efficiency projects could be used to help significantly increase the success rate of EV infrastructure deployment programs and scale in a wide variety of MUD situations, which have traditionally been the most difficult deployment challenge. Unlocking these untapped carbon reductions for transportation electrification would be a major decarbonization win.

Vehicle electrification provides one of the most promising greenhouse gas (GHG) reduction strategies available today. However, without affordable home charging, many residents remain very unlikely to convert to an EV.[1] In fact, providing access to charging at home is the most influential way to encourage consumers to purchase EVs.[2] The current market for deploying EV-charging infrastructure in America, while successful in some sectors, is largely failing in multifamily properties, especially in low- and moderate-income communities.[3]

Economic factors and misaligned incentives are the primary market impediments. Multifamily charging installations, unlike energy or water efficiency retrofits, have little to no return on investment for the owner of the property, particularly in low- and moderate-income housing. As such, relatively little multifamily charging infrastructure has been installed, and companies in the private sector have avoided the market. The Lead Commissioner Report for the CTP specifically calls out this issue, "shared-use residential charging stations, which are predominantly used in multifamily housing, still face barriers that impede PEV adoption. Projects at multifamily housing have been historically underrepresented by applicants despite efforts to target incentives toward electric vehicle charging station installations at these locations."[4] For any charging solution to be scalable in this market, it must be both hassle-free and delivered at virtually no cost to the multifamily property owners. Ecology Action has conducted market testing on a turnkey direct install solution in the Bay Area that combines a very low-cost equipment

1 Hardman, S. et.al. 2018. "A Review of Consumer Preferences of and Interactions with Electric Vehicle Charging Infrastructure." Transportation Research Part D: Transport and Environment 62: 508–23, p. 517.

2 Ibid, p. 518.

3 Muller, M. "California Approves Novel Low-Income EV Charger Program | NRDC", September 12, 2019. https://www.nrdc.org/experts/miles-muller/california-approves-novel-lowincome-ev-charger-program.

4 Brecht, P. 2020. 2020-2023 Investment Plan Update for the Clean Transportation Program. California Energy Commission. Publication Number: CEC-600-2020-003, p. 37.

configuration with an end-to-end installation service package. The preliminary test validated our solution and it also uncovered several barriers that need additional research for market scalability. One of the key barriers is that many MUDs lack the technical capability to install enough EV charging. This is likely because 80% of MUDs in California have less than 20 units, are more than 20 years old, and have very limited available panel capacity. An additional barrier is the chicken-egg scenario where potential EV drivers won't purchase the vehicle prior to knowing that they can reliably charge at home. On another pilot project, we are pairing vehicle demand generation with MUD EV installation to determine if we can increase EV uptake at MUDs.

One of the core policy failures in MUD EV charging is that current program rules do not meet the very unique stakeholder needs that exist in that environment. MUDs have a residential charging need yet they exist in a for-profit business setting. To succeed at encouraging EV adoption, any charging solution must be unquestionably available and always convenient to the would-be EV driver, while at the same time it must not distract the property owner from its core business function. With modest program adjustments, the Energy Commission can support significant strides to rapidly scaling EV ownership in MUDs by aligning program rules with market needs. Specifically, three areas need to be addressed:

1) More program flexibility in CEC's CalEVIP program is needed to allow for lower power charging at MUDs – both L1 and non-individually networked low-power L2 EV charging stations (EVCS) should be included. Lower power charging will not only increase availability, it will reduce costs. It also allows for greater equity participation in low- and moderate-income MUD properties.
2) Currently CEC program funding requires sharing of EV charging, however EV drivers need to know that they will be able to access reliable and available charging before purchasing a vehicle. Most MUD properties have some form of assigned parking (our estimate is 80% of spaces), so this is also contrary to the policies of the MUD properties who need the lowest possible hassle to make the commitment to EV charging and do not want to arbitrate access to shared charging among tenants. MUDs are a special case which require a different scenario and a specific program modification allowing for assigned parking. Alternatively, a new CTP program could be established directed specifically at MUD EV infrastructure, but we believe that CalEVIP could be minimally altered to accomplish this goal, leveraging and increasing CalEVIP's MUD incentives. As an example, the Bay Area Air Quality Management District provides an additional $4,000 incentive per MUD EVCS to support their deployment.
3) It is important to recognize that additional program flexibility and larger targeted MUD incentives, especially in Disadvantaged Communities (DACs), are needed to succeed in MUDs. For example, the make-ready costs increase considerably if panel capacity is limited at MUD sites. Increasing the DAC incentive for MUD EVCS by at least $1,500 would further accelerate this critical deployment.

Understanding the needs of this unique part of the market can help California bridge the major EV ownership gap between single family residential and MUDs, and significantly increase EV access for all communities. We would be happy to meet with CEC staff to further discuss these issues and provide additional input to the CEC Clean Transportation Program 2020-2021 Investment Plan Update process.

Thank you for the opportunity to provide comments to help maximize emissions reductions.

Sincerely,

Mahlon Aldridge, Vice President – Strategy
Ecology Action