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PCE Comments on CTP Investment Plan Update, Urgent Need to Focus on Lower-Cost and Scalable EV Charging Solutions, 24-ALT-01

Additional submitted attachment is included below.

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California Energy Commission
Docket Office
715 P Street
Sacramento, CA 95814-5512
Docket@energy.ca.gov

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Re: Peninsula Clean Energy Comments on 2024-2025 Investment Plan Update for the Clean Transportation Program, Docket No. 24-ALT-01, California EV Charging Programs Urgently Need to Focus on Lower-Cost and Scalable Solutions

Dear Director Rasool and Advisory Committee members,

Peninsula Clean Energy (PCE), the not for profit Community Choice Aggregation (CCA) program for San Mateo County and the city of Los Banos, appreciates the opportunity to provide comments to the California Energy Commission (CEC) staff following the June 7, 2024 public meeting of the Advisory Committee for the Clean Transportation Program (CTP) where staff presented an overview of the draft version of the 2024-2025 Investment Plan for the Clean Transportation Program (Plan). The CEC should adopt crucial changes to the CTP now to refocus a greater share of incentives on EV charging solutions that are rapidly scalable, particularly as the state enters a deficit environment.

PCE's evidence-based EV charging philosophy is based on "right-sizing" charging equipment for actual EV driver needs to reduce costs and enable more EV charging to be installed within limited budgets. This means that we are able to provide more charging access, at a lower cost per charging port, all while limiting or completely avoiding grid or service capacity upgrades. PCE's self-funded EV Ready Program[1] has led to the installation of over 1,000 EV chargers in the community we serve, two-thirds of which have been installed at multi-family properties such as apartments and condominiums. The EV Ready Program has at an average cost of about $5,000 per charger, multiple times less expensive than similar programs that support light duty and multi-family EV charging.

[1] https://www.peninsulacleanenergy.com/ev-ready/

California Is Not on Track to Meet EV Charging Targets on Time

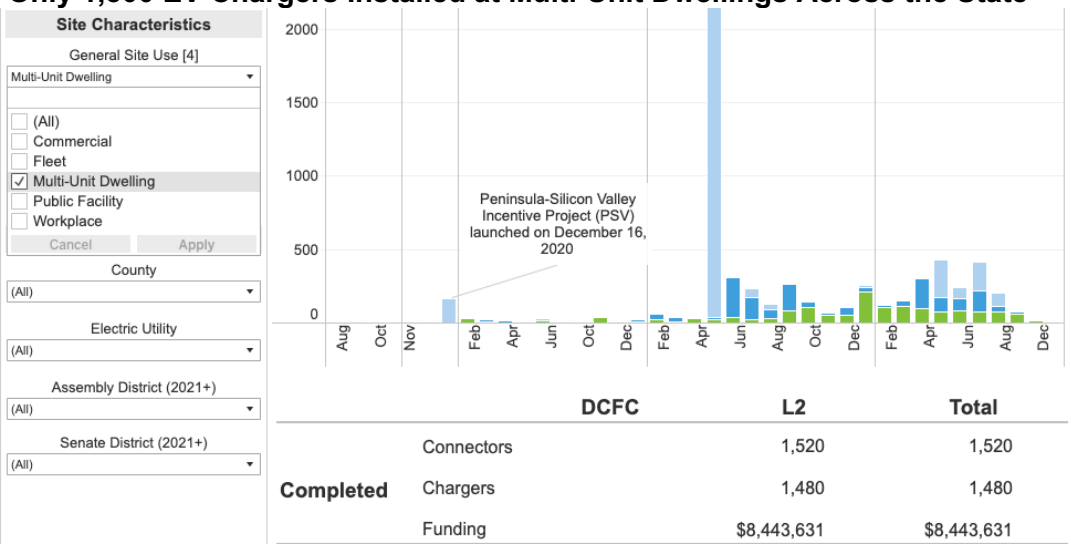
California has made tremendous progress in growing the EV charging landscape to where it is today, in part due to the efforts of various CTP programs. Yet it is critical to recognize now that the strategies used to achieve current levels of EV charging are insufficient to ensure the state achieve the 1.1 million EV chargers needed by 2030. Per the AB 2127 analysis[2] included in the June 7 Advisory Committee presentation, California has only installed 10% of the charging needed by 2030, equal to about 100,000 chargers out of the state target of 1.1 million chargers that need to be installed in the next 5 years. To achieve this target would require the installation of about 200,000 EV chargers each year until 2030, more than all the EV chargers currently installed in California. Missing this crucial EV charging target risks that the state will fail to ensure an inclusive and equitable transition to zero-emissions vehicles, will fail to prepare to meet the infrastructure needs to support the Governor's Executive Order to eliminate new gas vehicle purchases by 2035,[3] and fail to reduce emissions quick enough to meaningfully mitigate catastrophic climate change. Major changes in how the state incentivizes EV charging are needed now to significantly accelerate the deployment of this critical infrastructure at scale and within budget constraints.

EV Charging at Multi-Family Housing Has Been Particularly Challenging

Deploying EV charging at scale at multi-family housing is a necessary component for an equitable transition to EVs for all Californians. Providing EV charging where multi-family residents live, where they are certain that they will be able to access as soon as they need it, is critical to encouraging EV adoption among this segment of Californians. Unfortunately, multi-family residents have been drastically underserved by existing CTP programs, in part because of program requirements. The CALeVIP program, a major light-duty EV charging program funded by the CTP, has produced only 1,500 EV chargers at multi-family properties across the entire state over the past 4 years at a cost of over $8 million in incentives funding.[4] A major factor in this underperformance is that the CALeVIP program incentives are only available for at multi-family projects that (a) install Level 2 charging equipment, and (b) only install the chargers in shared parking spaces. These prescriptive requirements force site hosts to install EV charging at much higher power levels than what is actually needed. As detailed further below, Level 1 charging is sufficient for most daily driving needs. In addition, the shared charging requirement triggers the need for new ADA upgrades, often leading to reduced parking count to accommodate access aisles, etc., creating another barrier to participation for property owners and one which is often a deal breaker. As a result, the CALeVIP program hasn't yielded the charging at multi-unit dwellings that is much needed.

[2] https://efiling.energy.ca.gov/GetDocument.aspx?tn=256726&DocumentContentId=92542, slides 15-16
[3] https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf
[4] https://calevip.org/rebate-statistics

Table 1: CALeVIP Rebate Statistics,
Only 1,500 EV Chargers Installed at Multi-Unit Dwellings Across the State



		DCFC	L2	Total
Completed	Connectors		1,520	1,520
	Chargers		1,480	1,480
	Funding		$8,443,631	$8,443,631

Source: https://calevip.org/rebate-statistics

CTP Program Requirements Often Lead to Overspending for EV Charging

California Energy Commission CTP programs often require host properties to install overpowered and unnecessarily high-cost EV charging, leading to overly inflated project costs and unnecessary pressure on the electrical grid. As mentioned previously, the CALeVIP program requires that EV charging at multi-family housing only be shared Level 2 chargers, which have an average cost of about $10,000 each[5], and power output of approximately 7 kW. By contrast, PCE's EV Ready Program has an average install cost of about $2,500 per outlet when installing Level 1 receptacles for EV charging at multi-family housing, allowing for 4X more charging to be installed at the same price as 1 charger in the CALeVIP program. Unfortunately, CALeVIP is not the only CTP program that requires projects to utilize charging solutions that are more expensive and more powerful than what is actually needed to encourage EV adoption.

The CTP recently released a grant funding opportunity (GFO-23-606[6]), consisting of $30 million to assist local governments electrify their fleets. However, the program requires overbuilt and overly costly infrastructure in two ways. First, in order for an agency to be eligible for funding, it requires them to install at least 100 chargers, which is vastly more charging than is needed for all but the largest government fleets. In Peninsula Clean Energy's GovEV program,[7] which provides technical assistance and funding to local government fleets, EV charging projects are frequently designed so that one charger can serve 3 or more vehicles, minimizing the overall number of chargers

[5] https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program/california-electric-vehicle/calevip-0
[6] https://www.energy.ca.gov/solicitations/2023-12/gfo-23-606-charging-infrastructure-government-fleets
[7] https://www.peninsulacleanenergy.com/public-ev-fleets-program/

needed and thus reducing installation costs for these projects.[8] Second, the CEC fleets program required that, to be eligible for funding, DC fast chargers need to have a minimum of 150 kW power output. This level of charging is several times greater than what most government fleet vehicles actually need. Many of these vehicles, even larger medium and heavy-duty trucks, travel a limited number of miles per day and have ample daily down time to recharge at lower power levels. In PCE's GovEV program, Level 2 or lower-power 40 kW fast charging are often the recommended solutions for nearly all government fleet vehicles. Compared to what the CEC grant opportunity requires, these solutions provide more than sufficient charging power to meet the fleet vehicle needs, are much lower costs, and have a much smaller load impact for the grid. The CEC's overly prescriptive requirements in these programs are unnecessarily increasing project costs and thus producing fewer charging overall than what could otherwise be achieved through a more "right sized" and flexible approach.

To achieve the 1 million EV charging target, particularly in years when state budgets are limited, these programs need to emphasize lower cost and rapidly scalable EV charging solutions particularly for multi-family properties, and generally, more flexible solutions that encourage properties to right size their EV charging infrastructure. Adopting such a change would help CTP program dollars go further support California's ambitious EV charging goals.

The CTP Should Support Level 1 Charging, A Rapidly Scalable and Low-Cost Solution for Multi-Family Housing

Level 1 charging is a scalable solution for multi-family residents, meeting daily EV charging needs at a fraction of the price of other EV charging types. PCE research,[9] as well as others,[10] have shown that a Level 1 charge, providing about 60 miles of recharge overnight at 1.9 kW, meets the daily needs of over 90% of EV drivers. Recent coverage[11] of this approach has highlighted the key advantages of accelerating charging access for apartment residents, even in power-constrained properties, at low installation costs to property owners.

PCE encourages the Advisory Committee and CEC staff to investigate strategies utilized by other EV charging programs in California that have demonstrated potential to install greater number of EV charging at lower costs, including at multi-family housing. By contrast to the CALeVIP program, which has installed 1,500 chargers at multi-family properties across the entire state, PCE's EV Ready Program has installed over 600 chargers at multi-family properties over the same amount of time, including over 300 Level 1 outlets, just in San Mateo County which represents 2% of the statewide

[8] https://www.peninsulacleanenergy.com/san-carlos-case-study-ev-chargers-for-your-fleet-less-is-more/
[9] https://www.peninsulacleanenergy.com/wp-content/uploads/2021/09/Determining-the-Appropriate-Level-of-Power-Sharing-for-EV-Charging-in-Multifamily-Properties.pdf
[10] https://insideevs.com/news/709425/recurrent-ev-driving-distance-america/
[11] https://www.canarymedia.com/articles/ev-charging/access-to-slow-ev-chargers-could-speed-up-ev-adoption-among-renters

population. If this ratio of chargers to population were applied at a statewide level, it would equal 30,000 chargers installed at multi-family housing, 20 times more than what CALeVIP has installed.

Fortunately, the CTP has already begun to fund Level 1 charging through programs like the REACH 2.0[12] funding opportunity, which is providing over $40 million to address the shortage of EV charging at multi-family housing. Project awardees such as Ecology Action, GoPowerEV, and others are utilizing lower cost, “smart” Level 1 charging that include billing and access controls, allowing for more charging to be installed at lower costs, while avoiding lengthy service upgrades. The CTP should double down on these and other more scalable efforts.

The next 5 years are critical if California is to reach the 1.1M EV chargers needed. Given this urgent need and a budget shortfall, the CTP should shift focus to encourage more lower cost and rapidly scalable solutions, such as allowing for Level 1 charging at assigned parking spaces in multi-family housing properties, and generally, more right-sized approaches that avoid unnecessarily cost escalation through overly prescriptive program requirements.

Phillip Kobernick
Senior Transportation Programs Manager
Peninsula Clean Energy

[12] https://www.energy.ca.gov/solicitations/2023-04/gfo-22-614-reliable-equitable-and-accessible-charging-multi-family-housing-20