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Consumer Reports Comments on 2020-2023 Investment Plan Update for the Clean Transportation Program - July 2020

Additional submitted attachment is included below.

July 10, 2020

California Energy Commission
RE: Docket Number 19-ALT-01
1516 Ninth Street
Sacramento, CA 95814

Re: 2020-2023 Investment Plan Update for the Clean Transportation Program, Lead Commissioner's Report

Dear Commissioner Monahan and California Energy Commission staff,

Consumer Reports[1] supports the aims and goals outlined in this ambitious document. The Commission staff deserve praise for drafting a comprehensive and digestible plan that addresses competing priorities. Our comments address light duty vehicle charging infrastructure and the Recovery and Reinvestment fund.

Consumers in Multifamily Dwellings. We support the Investment Plan's stated commitment to funding charging infrastructure that targets consumers in multifamily dwellings. We urge the program to focus resources on this important demographic to ensure these consumers enjoy the benefits of electric vehicles, including convenient fueling. According to our consumer survey data, 72 percent say that charging an EV overnight at home 2 times per week for a full charge would be "completely" or "very" convenient.[2]

As staff noted in the report, "increased DC fast charging could be one solution to help address the lack of residential charging at multiunit dwellings." We respectfully note that public DC Fast Charging does not offer residents of multi-family dwellings the convenience of fueling at home. It is therefore unlikely to overcome the sense that fueling an EV is inconvenient, which remains a key barrier to adoption. While increased DC Fast Charging will remain a necessary part of a portfolio of solutions to this issue, other steps must be taken. Workplace charging, as noted in the report, could help, but also is unlikely to solve this problem.

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[1] Consumer Reports is an independent, nonprofit membership organization that works side by side with consumers to create a fairer, safer, and healthier world. For 80 years, CR has provided evidence-based product testing and ratings, rigorous research, hard-hitting investigative journalism, public education, and steadfast policy action on behalf of consumers' interests. CR has exposed landmark public health and safety issues and strives to be a catalyst for pro-consumer changes in the marketplace. From championing responsible auto safety standards, to winning food and water protections, to enhancing healthcare quality, to fighting back against predatory lenders in the financial markets, Consumer Reports has always been on the front lines, raising the voices of consumers.

[2] Consumer Reports & Union of Concerned Scientists, Electric Vehicle Survey Findings and Methodology, Sept 2019

To that end, we must highlight data in this chart.[3]

Table 7: Charging Connectors Funded by the Clean Transportation Program as of May 1, 2019

Status	Private Access	Shared Access	Shared Access	Shared Access	Public Access	Public Access	Total
	Residential (Single & Multifamily)	Fleets	Workplaces	Residential (Multifamily)	Public	Corridor/ Urban Metro	
Installed	3,936	155	531	357	3,236	452	**8,667**
Planned	0	228	0	0	15	214	**457**
Total	**3,936**	**383**	**531**	**357**	**3,251**	**666**	**9,124**

There are zero planned shared access charging connector projects for workplaces and residential (multifamily) beyond May 2019. What are the barriers to workplace and residential shared access charging projects? If cost remains an issue, staff should consider increasing funding to these projects. If awareness of the program is an issue, then staff should aggressively market the availability of these funds.

Additionally, CEC has found success partnering with local governments and community organizations for other projects, and it should take a similar approach to the issue of multi-family dwelling charging access. This could be especially beneficial where permitting and local parking minimums are an obstacle to shared charging infrastructure at multifamily dwellings.[4] Just as tying CALeVIP funding to utility permit streamlining, CEC should explore reserving funding to local governments that ease parking minimums and establish EV-ready building codes. If staff have taken steps to address the specific barriers associated with multifamily dwellings, we request that such design parameters be shared for comment.

Because residential multifamily charging is a "historically underrepresented" marketplace,[5] meeting the needs of this segment of the market is critical, considering lack of charging infrastructure is a key obstacle to EV adoption for multifamily dwelling residents.[6] Only about 14 percent of privately owned ZEVs were registered to residents of multifamily dwellings.[7]

This is especially important because, as Commission staff noted, in cases where multifamily dwelling residents live in low-income, disadvantaged communities or communities of color, widespread EV adoption has equity implications. Residents of low-income and disadvantaged communities are disproportionately burdened by harmful pollution impacts from the transportation sector, therefore it is critical to prioritize solutions for this segment of the population.

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[3] California Energy Commission, Lead Commissioners Report, 2020-2023 Investment Plan Update for the Clean Transportation Program, June 2020

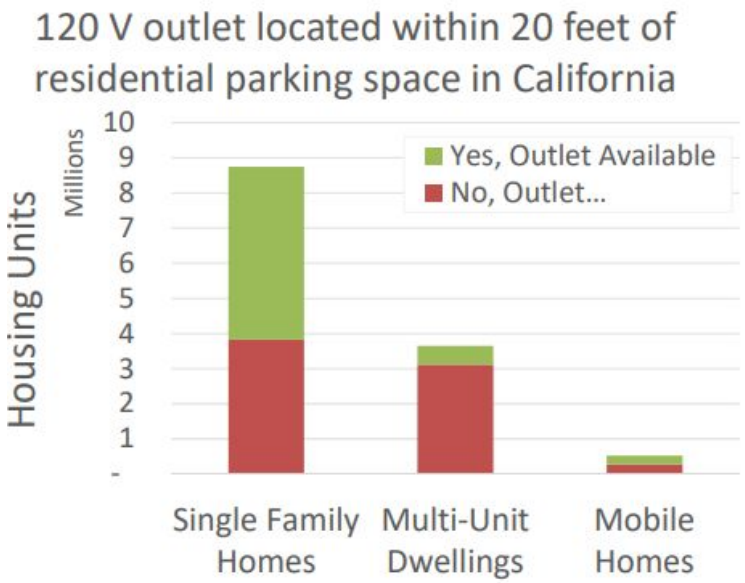
[4] California Air Resources Board. Electric Vehicle (EV) Charging Infrastructure: Multifamily Building Standards. 2018

[5] California Energy Commission, Lead Commissioners Report, 2020-2023 Investment Plan Update for the Clean Transportation Program, June 2020

[6] California Air Resources Board. Electric Vehicle (EV) Charging Infrastructure: Multifamily Building Standards. 2018

[7] *Ibid*

That said, we understand significant challenges persist. Half of California's housing units do not have electrical outlets near the vehicle's parking location.[8] And the majority of residents in multi-family dwellings do not have available 120 V electric outlets where cars are parked.[9] This would make even level 1 charging infrastructure unavailable to the majority of residents in multifamily dwellings. Solving these issues may require longer term investments, but not all multi-family dwellings present the same challenges.



According to a case study from the Luskin Center for Innovation, similar to a report prepared by the Luskin Center for CEC staff, level 2 charging in "Dingbat" garages is only "moderately" complex.[10] This presents opportunities for investment. We further encourage staff to structure incentives to appropriately apply to both new and existing construction.

[8] Office of California Governor Gavin Newsom, Alice Reynolds, *Barriers and Solutions for Plug-In Electric Vehicle Charging Infrastructure,* 6/4/19
[9] *Ibid*
[10] UCLA Luskin Center for Innovation, 2016, *Overcoming Barriers to Electric Vehicle Charging in Multi-Unit Dwellings: A South Bay Case Study.*

Table 4.2: Evaluation of Charging Potential Across Different MUD Parking Layout

Straightforward Moderately Complex Very Complex

		Level 1 Charging		Level 2 Charging
Dingbat With Door	⚡	Likely access to a 110/120-volt outlet in the garage, particularly with an automatic door that relies on electricity. Outlets in this configuration are typically connected to the house panel. If the outlet does not already serve energy intensive loads (e.g., laundry machine, pool pump), it may provide a convenient opportunity for charging.	⚡⚡	Many provide convenient access to the unit panel if the garage is below or in front of the unit, which reduces the distance between the panel and parking spot. Even though the distance between the two may be minimal, electricians may still need to core the wiring and conduit through unit walls and/or the floor.
Dingbat Without Door	⚡	Likely access to 110/120-volt outlets, although outlets may be scattered across the parking environment. These outlets are almost always connected to the house panel. PEV drivers should consider electrical capacity of the panel in light of shared loads. In scenarios where tenants have assigned parking, a PEV driver may swap spots for easier access to the outlet.	⚡⚡	Many have convenient access to the unit panel if the garage is below or in front of the unit, which reduces the distance between the panel and parking spot. The conduit and wiring can often be surface-mounted along the length of the parking site.
Detached Parking	⚡⚡	Possible access to an outlet in each detached garage. Higher value and newer MUDs with detached parking are more likely to have outlets. With an automatic door, there is also a higher likelihood of access to an outlet. When parking is assigned, residents may need to swap parking spots to gain access to Level 1 charging.	⚡⚡⚡	Most are separated from the MUD structure and the house and unit panels by concrete or asphalt. Thus, running wiring and conduit from the panel to the EVSE is likely to require a construction activity such as trenching
Subterranean/ Podium Garage	⚡	Likely access to 110/120-volt outlets. Every subterranean garage and podium garage we visited did have at least one outlet available. In scenarios where tenants have assigned parking, a PEV driver may swap spots for easier access to the outlet.	⚡⚡⚡	Wiring and conduit may need to traverse through building material and/or earth. Large subterranean garages may have multiple levels of parking and require coring through concrete decks. MUDs with podium parking garages are likely to have an electrical box on the same level as the parking area, which may reduce the risk of coring through the structure or ground.
Driveway Only	⚡⚡	Unlikely access to a 110/120-volt outlet. There may be access in MUDs where there is an outlet on the outside wall of the MUD that faces the driveway.	⚡⚡⚡	Unlikely access to 110/120-volt outlet.
Parking Lot	⚡⚡⚡	Unlikely access to an electrical outlet.	⚡⚡⚡	Unlikely access to an electrical outlet.

Recovery and Reinvestment - Direct investments to Disadvantaged Communities. We welcome the Clean Transportation Programs' commitment to equity. It has proven this commitment by ensuring that almost half of site-specific funding either resides in or benefits disadvantaged communities.[11] We support the call to establish that at least 50% of Recovery and Reinvestment funds are spent in disadvantaged and low-income communities.

We appreciate the opportunity to comment.

[11] California Energy Commission, Lead Commissioners Report, 2020-2023 Investment Plan Update for the Clean Transportation Program, June 2020

Warm Regards,

Alfred J. Artis
Policy Analyst