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FLO Comments on AB 2127 Workshop

Additional submitted attachment is included below.

October 8, 2022

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California Energy Commission
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Docket: 19-AB-2127

Mr. Eric Wood
Research Engineer, Data Analysis and Vehicle Energy Modeling
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Re: FLO EV Charging Comments on Assembly Bill 2127 Kickoff Workshop

Dear Mr. Adams and Mr. Wood,

FLO EV Charging ("FLO") thanks the California Energy Commission (CEC) and National Renewable Energy Laboratory (NREL) for the opportunity to comment on the AB 2127 EV Infrastructure Assessment 2nd Kick-Off Workshop. The CEC's bi-annual infrastructure analysis guides state planning and policy efforts to deploy more charging infrastructure in support of the state's 2035 phase out of new gas-powered cars sales. These assessments also help highlight critical gaps in infrastructure scale-up that have implications for issues like equity, grid readiness, and workforce development. FLO's comments seek to further underscore important nuances in infrastructure policy that warrant attention via this analysis.

FLO is a leading North American EV charging network operator and a smart charging solutions provider. We fight climate change by accelerating EV adoption through a vertically integrated business model and delivering EV drivers the most dependable charging experience from curbside to countryside. Every month, we enable more than 900,000 charging events thanks to over 70,000 fast and level 2 EV charging stations deployed at public, private and residential locations. FLO operates across North America and our high-quality charging stations are assembled with care in Michigan and Quebec.

I. Project the expected rate of home charging through 2035.

As the CEC knows, home charging is typically the cheapest, most convenient way for drivers to charge their EV who have access. For the last few years, the CEC has understandably focused on expanding the public EV charging network. FLO believes the state should maintain focus on home charging to some degree and would encourage the CEC to segment residential charging needs by county for both single-family homes and multi-family housing through 2035 (as implied on slide 15) and simultaneously identify key barriers to installing chargers at both location types.

This kind of granular data can help inform and further encourage stakeholder engagement with the CEC's upcoming design of the "Equitable At-Home Charging" incentive program, which the legislature funded with $20 million this year[1]. Designing this program with the best research, data, and analysis available will support the CEC's goals of deploying chargers at homes in low-income and disadvantaged communities.

[1] Assembly Bill 211 (Ting). Section 36. <Bill Text - AB-211 Public resources trailer bill. (ca.gov)>

II. Determine curbside charger deployment needs for key metropolitan regions to serve multi-family housing.

FLO strongly supports NREL's recognition of curbside charging as part of the "roots" of the state's charging network, serving as a critical home charging option (slide 18). In the CEC's previous AB 2127 analysis from July 2021, it estimated that multi-family housing needed approximately 500,000 chargers by 2035[2]. Curbside charging can provide enormous equity benefits, such as:

(1) increasing access to home charging for residents at multi-family housing and other kinds of garage orphans.
(2) supporting ride-sharing electrification for transportation network companies (TNCs).
(3) helping more evenly distribute charging infrastructure.
(4) helping get chargers in harder to serve areas.

Multi-family housing. While FLO strongly supports policies that enable the deployment of on-site chargers to serve multi-family housing, it is unlikely this can be the only charging solution for these drivers. Some buildings, especially those concentrated in dense urban environments, face significant barriers prohibiting installation of EV charging stations that the Commission is familiar with – costly infrastructure upgrades, building owners or property managers not being properly incentivized to install charging, lack of on-site parking or renters' lack of access to dedicated parking spots. Curbside chargers are an alternative solution when these barriers are insurmountable.

Ridesharing electrification. TNCs, predominantly Uber and Lyft, are transitioning their vehicle supply to 90 percent zero-emission by 2030. These drivers are typically low-income and live at multi-family housing, undermining their ability to access home charging. To ease their transition to EVs (and minimize potential frustrations with lack of home charging), curbside chargers can serve as a next best alternative to fulfill their overnight charging needs. Rideshare drivers typically depend on fast charging to minimize downtime (and thus lost revenue). However, if ridesharing drivers have access to overnight charging (curbside or otherwise), demand for public DCFCs decreases significantly, as evidenced by studies of rideshare charging needs in New York City[3], Columbus, Ohio[4], and Los Angeles[5]. This can stretch limited public dollars much farther.

Equitably Distributing Chargers to Serve Harder-to-Reach Areas. Acute charging deployment gaps remain across California in several areas – downtown cores, multi-family housing, and airports, to name a few. Given the lack of or high cost of available private real estate for station deployment, curbside charging can be a solution to get chargers in areas that otherwise wouldn't be able to deploy stations, or where doing so would be very expensive. This spreads the benefits of public stations more evenly, increases charger visibility to drivers, bolsters local commerce by providing an amenity for customers, and can ultimately increase consumer confidence in the availability of public infrastructure.

Given these considerations, FLO strongly recommends the CEC and NREL further the assessment by estimating the number of curbside chargers that could help fulfill home charging needs for drivers at

[2] California Energy Commission. Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment Analyzing Charging Needs to Support ZEVs in 2030. July 2021. Page C-24.
[3] Moniot et al. *Electrifying New York Ride-Hailing Fleets: an examination of the needs for public fast chargers.* iScience. April 15, 2022. Page 10.
[4] Moniot et al. *Feasibility Analysis of Taxi Fleet Electrification Using 4.9 Million Miles of Real-World Driving Data.* National Renewable Energy Laboratory. April 2019. Page 10.
[5] Schroeder, John et al. *EV Charging for All: How Electrifying Raid-hailing Can Spur Investment in a More Equitable EV Charging Network.* RMI. 2021. Page 8.

multi-family housing. Doing so better highlights the role of curbside charging as a critical tool for equitable overnight charging, and helps cities and counties better understand the scope of this need. To better elevate curbside charging as a critical solution, FLO encourages the CEC and NREL to dedicate a section of its next AB 2127 assessment to describing curbside charging, explaining its economic and equity benefits to drivers, and specifying approximate deployment needs for the state's metropolitan areas. This can help reinforce with municipalities and utilities that they should more proactively include curbside charging in their deployment efforts. Because the literature and analysis around curbside charging remains relatively sparse, the CEC and NREL have an important role to play drawing more attention to this issue.

III. Estimate home panel upgrades needed to support level 2 chargers in older, low-income, single-family homes.

The CEC's budget change proposal for its proposed Equitable At-Home Charging program states that it intends to use a portion of the funds for panel upgrades to support home charging. FLO strongly supports this policy as a key tool to increase equitable home charging deployment. Many older single-family homes are occupied by lower-income families; this building stock was constructed decades ago and did not anticipate the state's all-electric future. Statewide needs for home panel upgrades in older, low-income homes are likely much greater than what this program can fund. It's critical that the CEC understand the full scope of the need by estimating the number of homes that lack appropriate panel capacity by county and projecting, based on the buildings' ages, what level of upgrades are needed. This kind of granular data can help focus EV charger deployment efforts — utilities and community choice aggregators administer complementary incentive programs. By drawing attention to this issue, they can help amplify state efforts by dedicating more of their funds to panel upgrades for their communities.

Thank you for your consideration,

[electronically submitted]

Cory Bullis
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FLO EV Charging