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Electrify America comments on the Zero-emission Vehicle Infrastructure Plan

Additional submitted attachment is included below.

February 4, 2022

Hannon Rasool
California Energy Commission
715 P Street
Sacramento, California 95814

RE: Comments on the January 20, 2022 Workshop regarding the Zero-emission Vehicle Infrastructure Plan

Dear Mr. Rasool:

Electrify America appreciates opportunity to comment on the proposed Zero Emission Vehicle (ZEV) Infrastructure Plan (ZIP). Electrify America operates the largest open network of DC fast chargers (DCFC) in the nation, and recently reached a milestone of 200 public ultra-fast electric vehicle (EV) charging stations and over 830 individual chargers in California. Electrify America has also supported the installation of thousands of Level 2 chargers at workplaces and multiunit dwellings (MUD), and has deployed 60 innovative grid-independent, solar-powered Level 2 chargers across 30 rural locations in the state.

We urge you to include in the ZIP three main principles and priorities for deploying EV charging to support the State's transportation electrification goals:

1. Prioritize ultra-fast charging as the most optimal, future-proofed solution for public charging
2. Require investments capabilities that enhance charger reliability
3. Require the use of non-proprietary technology so that any car can charge at any station

Prioritize Ultra-Fast Charging

Electrify America encourages the CEC to prioritize investment in cost-effective, high-powered, ultra-fast charging infrastructure by establishing a minimum of 150 kW charging as satisfactory, and by requiring that at least one charger at each station location to be capable of delivering 350 kW, for all publically-funded charging stations designed to serve highway corridor travel or residents of multi-unit dwellings. We make this recommendation for the following reasons.

One of the principles of the ZIP highlighted during the workshop included State investments being directed to increase equity. We share the objective of equitably electrifying California and ensuring all Californians can access electric cars.

Compelling evidence demonstrates that investment in ultra-fast chargers is an important equity tool. According to UCLA's most recent research,[1] MUD residents rely on DCFC as their primary source of charging, using public DCFC for 43% of charging, more than twice as often as home charging and nearly three times as often as public L2. Unlike single family home residents, MUD residents depend on DCFC. Harvard[2] and Bloomberg[3] research demonstrates that those who live in MUDs and rent are lower income and more racially and ethnically diverse than the general population. DCFC investments serving MUD residents also address broader social inequity.

CEC's primary charging infrastructure investment program, CalEVIP, allocates funding in a manner that advantages Level 2 chargers and lower-power DCFC. For example, per charger spending caps reward investment in 50 kW chargers and discourage investment in ultra-fast 150kW and 350kW chargers. As of September 14, 2021,[4] over 80 percent of chargers installed or reserved under CalEVIP are Level 2 chargers and nearly 90 percent of remaining incentive funds are committed to Level 2 charging.

As the EV market shifts towards long-range electric vehicles with ultra-fast charging capabilities, including speeds up to 350kW, it's important that the charging infrastructure investments we make today can charge vehicles at the speeds that EV buyers expect.

In the past six model years, the average charging speed of new EV models has increased three-fold, from 50kW to 150kW, and the trend is accelerating. In the volume segment, Kia and Hyundai have introduced ultra-fast charging capable vehicles. Support for ultra-fast charging represents increased access, improved customer experience and adoption, and future-proofing California's EV charging network.

Indeed, according to recent research by Atlas Public Policy, the most cost-effective option for meeting the charging needed to transition the light duty fleet to 100% ZEV sales by 2035 would be to invest $39 billion nationwide in public charging stations by 2030. Of this investment, Atlas Public Policy found that $38.1 billion (97.5%) of the total investment was needed for public DCFC, to build approximately 252,000 ultra-fast 350kW chargers. Atlas Public Policy found that the nation would also need approximately 244,000 Level 2 public and workplace chargers, or 49% of the total public chargers needed, and the authors estimated that this would require $967 million (2.5%) of investment. Atlas found that other options, like investments in 150kW DCFC instead of 350kW charging, would require $13B in additional public investment, or a 33% increase in cost.

In light of the Atlas study and new market and policy context in California, as you develop the ZIP and update the AB 2127 charging assessment over the next two years, we encourage the

[1] https://innovation.luskin.ucla.edu/wp-content/uploads/2021/03/Evaluating-Multi-Unit-Resident-Charging-Behavior-at-Direct-Charging-Behavior-at-Direct-Current-Fast-ChargersCurrent-Fast-Chargers.pdf
[2] https://www.jchs.harvard.edu/state-nations-housing-2018
[3] https://www.bloomberg.com/news/articles/2018-08-08/who-rents-their-home-here-s-what-the-data-says
[4] https://go.energycenter.org/rs/157-ILH-029/images/SCIPL2_Public_Workshop_Presentation.pdf

CEC to prioritize investment in ultra-fast charging, and to conduct a deep-dive evaluation of ultra-fast charging and an assessment of the most cost-effective infrastructure network investment strategy to enable 100 percent ZEV sales in California within the next 10-15 years.

Require Investments in ZEV Infrastructure Reliability

As ZEVs enter the mass market and the State plans for achieving 100 ZEV sales, it is increasingly important to focus on the reliability of ZEV infrastructure. Drivers must be able to rely on the availability of charging or hydrogen refueling stations, just like they would conventional gasoline stations. Electrify America has made significant investments to ensure the reliability of its network, and is proud to have recently received the Electric Vehicle Charging Infrastructure Best in Test Award for second consecutive year.[5]

We encourage the CEC, in the ZIP, to indicate that reliability will be a primary focus of its grant programs moving forward. Rather than setting arbitrary benchmarks for up time or other parameters, however, we encourage the CEC to instead focus on investments that charging providers and hydrogen refuelers can make to ensure the reliability of their network. For example, along with providing the fastest charge speeds in the industry, Electrify America has invested in leading website and app platforms, multiple payment options – including credit card readers on all stations and "plug-and-charge" technology – leading testing laboratories, and 24-hour customer assistance. These investments have allowed us to develop the nation's leading, most reliable open charging network, and we encourage the CEC to require similar investments as a condition of receiving grant funding, in order to ensure improved reliability for ZEV infrastructure.

Require the Use of Non-Proprietary Charging

Electrify America agrees with the recognition in the AB 2127 Report that moving to a single connector type will reduce costs and improve convenience for EV drivers, and we encourage the CEC to highlight a commitment to the CCS charging standard moving forward.

Previous charging programs have required both CCS and CHAdeMO connector options, at either a charger or site level. As CHAdeMO is phased out of the market in North America, further requirements for deploying it increase station deployment costs, lower customer satisfaction, and require more leased space – without advancing future EV sales.

Electrify America has a CHAdeMO charger at every station, and in Q3 2021, CHAdeMO chargers delivered only 3.5% of the power dispensed at Electrify America stations in California, decreasing from 6% in 2020. Additionally, as identified in the AB 2127 Report, the industry is moving away from CHAdeMO and aligning around the CCS standard in North America.

[5] https://media.electrifyamerica.com/en-us/releases/167

We ask that the ZIP commit to CCS moving forward, and that in implementing charging programs on a go-forward basis, the CEC consider removing any remaining CHAdeMO requirements as soon as possible, and replace it with a CCS requirement instead.

Thank you for the opportunity to comment on development of the ZIP. We see this as an important effort as the State continues planning for an effective and equitable transition to electric vehicles. Please do not hesitate to reach out to us with any questions or if you would like to discuss further.

Sincerely,

Matthew Nelson
Director of Government Affairs
Electrify America