

**DOCKETED**

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**Electrify America comments on AB 2127 Labor and Workforce workshop**

Please find our comment letter attached.

*Additional submitted attachment is included below.*



November 3, 2022

Commissioner Patty Monahan  
California Energy Commission  
715 P Street  
Sacramento, California 95814

**RE: Comments on the AB 2127 Second Assessment Labor and Workforce Workshop**

Dear Commissioner Monahan:

Electrify America appreciates the opportunity to comment on the October 18, 2022 Workshop on Labor and Workforce For Second Assembly Bill 2127 Assessment. Electrify America operates the largest open network of DC fast chargers (DCFC) in the nation, and recently reached a milestone of 1,000 ultra-fast 150 kW and greater chargers across 242 public charging stations 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.

Electrify America is committed to a positive workforce impact in California, and particularly to its impact on low-income and disadvantaged communities (LIC/DAC) in the state. In the 2022 Q2 Report to the California Air Resources Board, Electrify America's vendors reported that 36% of California-based workers on our company's projects reside within LIC/DAC areas as defined by the state. Eleven vendors, or 26% of all responding vendors active in California, also noted their efforts to recruit prospective workers from low-income or disadvantaged communities in the state. Vendors noted a range of strategies for hiring from these communities, including recruiting from local vocational and trade schools, attending job fairs, placing ads in publications that serve LIC/DAC areas, and using online recruitment tools.<sup>1</sup>

AB 2127 (Ting, Chapter 365, Statutes of 2018) requires the CEC to biennially assess the electric vehicle charging infrastructure needed to meet the state's goals of putting at least 5 million zero-emission vehicles (ZEVs) on California roads by 2030. The first AB 2127 Assessment found that the state will need nearly 1.2 million public and shared chargers by 2030 to meet the fueling demands of about 8 million passenger plug-in electric vehicles (EVs) anticipated to be on California roads, but it did not fully evaluate the role that ultra-fast charging can play to minimize costs, future proof the network, and maximize access and convenience for drivers, including apartment dwellers and others who may lack access to convenient at-home charging.

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<sup>1</sup> Electrify America (2022). "2022 Q2 Report to the California Air Resources Board," p. 21. Available at: <https://media.electrifyamerica.com/en-us/releases/192>

To achieve our State’s ZEV deployment goals, we must consider ultra-fast charging infrastructure and ensure eligible electrical workers have access to the training necessary. Electrify America recommends that the Second AB 2127 Assessment:

1. Consider ultra-fast charging as distinct from 50 kW DCFC, and assess which types of charging infrastructure can most cost-effectively enable 100 percent ZEV sales in California within the next 10-15 years;
2. Address gaps in EVITP related to ultra-fast charging;
3. Expand limited exam locations and times to accelerate the certification process, and;
4. Continue to offer courses in an online format indefinitely.

We offer some specific comments on the recommendations below.

### **Consider Ultra-fast Charging as a Cost-Effective, Future-Proofed Solution to Meet Charging Demand**

It is critically important to develop a fair and complete analysis that does not presuppose solutions or close the door to innovative market technologies. The previous AB 2127 analysis, for example, did not distinguish between different levels of fast charging (e.g., 50 kW and 350 kW) or account for costs associated with different scenarios, when it concluded that the state needed about 1.2 million chargers – mostly Level 2 – to support up to 8 million EVs by 2030.<sup>2</sup> Counter to the findings in the original AB 2127 report, ultra-fast charging is the most cost-effective, customer friendly, and future-proofed solution for the EV market in California, consistent with our own experience as well as third party research.

Research by Atlas Public Policy has found that installing 350 kW DCFC is the most cost-effective option for meeting needs to transition the U.S. light duty fleet to 100% ZEV sales by 2035. Emphasis on 350 kW technology provides significant cost savings relative to lower levels, such as 150 kW charging, due to increased throughput and the ability of stations to serve more vehicles. Atlas Public Policy found that deploying 350 kW charging stations would result in \$39 billion of needed investment nationwide in public charging stations by 2030, whereas installing 150 kW would require an additional \$13 billion in additional public investment, or a 33% increase in cost.<sup>3</sup>

Other compelling evidence demonstrates that investment in ultra-fast chargers is an important equity tool. According to research from UCLA,<sup>4</sup> MUD residents rely on DCFC as their primary source of charging, using public DCFC for 43% of charging and more than twice as often as home charging and nearly three times as often as public Level 2. Harvard<sup>5</sup> and Bloomberg<sup>6</sup> research demonstrates that those who live in

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<sup>2</sup> Electric Vehicle Charging Infrastructure Assessment - AB 2127 <https://www.energy.ca.gov/programs-and-topics/programs/electric-vehicle-charging-infrastructure-assessment-ab-2127>

<sup>3</sup> Atlas Public Policy (2021). “How much should the U.S. invest in public EV charging? \$39 Billion” Available at: <https://atlaspolicy.com/how-much-should-the-u-s-invest-in-public-ev-charging-39-billion/>

<sup>4</sup> UCLA Luskin Center for Innovation (2021). “Evaluating Multi-Unit Resident Charging Behavior at Direct Current Fast Charging” Available at: <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>

<sup>5</sup> Joint Center for Housing Studies of Harvard University (2018). “The State of the Nation’s Housing” Available at: <https://www.jchs.harvard.edu/state-nations-housing-2018>

<sup>6</sup> Bloomberg (2018). “Who Owns a Home in America, in 12 Charts. Available at: <https://www.bloomberg.com/news/articles/2018-08-08/who-rents-their-home-here-s-what-the-data-says>

MUDs and rent are lower income and more racially and ethnically diverse than the average population as a whole. Serving MUD residents and those without charging at home via public ultra-fast charging is a cost-effective way to serve far more residents than Level 2 charging.

In light of this research, we encourage the CEC to directly model a wide array of fast charging technologies, including ultra-fast 350 kW charging, in its next phase of AB 2127 analysis. We also encourage an accounting of costs, in an effort to identify the lowest cost infrastructure solutions to meet the State's goals. We have no doubt that such an analysis would lead to findings similar to those from Atlas Public Policy and reveal ultra-fast charging to be a critical element to most cost-effectively advancing the State's ZEV goals.

### **Address Gaps in EVITP Curriculum**

AB 841 (Ting, Chapter 372, Statutes of 2020) requires contractors to be EVITP certified as a condition of accessing EV charging station incentives from the California Energy Commission (CEC), the Public Utilities Commission (CPUC), and the California Air Resources Board (CARB). AB 841 also requires the CEC, in consultation with the CPUC, to conduct joint workshops to determine if the EVITP curriculum and testing should be supplemented to include updated or additional topics necessary to ensure safe installation of charging infrastructure.

While we do not have access to the curriculum, our most recent understanding was that EVITP has no training or curriculum relevant to ultra-fast charging technology (150 kW to 350 kW), which have distinct requirements from 50 kW chargers, and may require separate equipment pads, freestanding switchgear and power cabinets with higher voltage architectures or power-sharing capabilities. Specifically, Electrify America became aware in 2018 that the EVITP curriculum did not include content on ultra-fast charging, and we developed a full curriculum on ultra-fast charging at our own expense. Electrify America has developed this training in house, and we offered it to the EVITP program at no cost. We are pleased and eager to assist the CEC with the inclusion of content on ultra-fast charging in the training's base curriculum.

High-powered charging is rapidly emerging as the industry standard, as nearly every automaker brings vehicles to market that can charge at ultra-fast speeds. Major upcoming funding programs – such as the National Electric Vehicle Infrastructure (NEVI) program – require 150 kW charging and a workforce skillset that requires understanding ultra-fast equipment. Furthermore, as the medium and heavy-duty segments electrify, high-powered charging technology will be even more critical. We believe that if California is going to mandate a training course for electrical contractors, the training course's base curriculum should have content on ultra-fast charging technology. Additionally, EVITP should include Train the Trainer curriculum and certify instructors to be able to teach the curriculum, as well.

### **Expand Exam Locations and Times to Accelerate the Certification Process**

EVITP provides limited exam locations and times, creating an artificial barrier for contractors that slows the certification process. To ramp up to meet the wave of large-scale EV investments, we recommend additional facilities and certified proctors for the required in-person exam certification be added across California to increase the available workforce to install EV charging infrastructure.

### **Continue to Offer Courses in an Online Format**

To meet the demand, AB 841 currently requires the Electric Vehicle Infrastructure Training Program to offer Electric Vehicle Infrastructure Training Program courses in an online format that would remain available through December 31, 2024. We recommend the online course offerings be provided quarterly and offered indefinitely until the installation demand is met.

### **Make Curriculum Broadly Available**

As noted previously, Electrify America noted several deficiencies in the EVITP curriculum the last time it was available for review. Since that time, Electrify America has not had an opportunity to review updated training materials to determine whether they have addressed the gaps, particularly the lack of coverage on topics related to ultra-fast 150 kW and greater charging. These ultra-fast chargers account for all of the equipment Electrify America installs in California, and are also required under the NEVI program and other upcoming funding opportunities.

Electrify America strongly recommends that the EVITP curriculum should be made public if it is a mandatory training requirement in California, to ensure that EVSPs and other interested parties understand the training required of their contractors and have the opportunity to identify potential training gaps. California should require that the EVITP curriculum be publicly available for review.

### **Conclusion**

Thank you for the opportunity to comment the labor and workforce components in the Second AB 2127 Assessment. 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,

/s/

Anthony Willingham  
State Government Affairs Manager