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Los Angeles Cleantech Incubator and Engie Impact Comment Letter for Inaugural AB 2127 EV Charging Infrastructure Assessments

February 25, 2021
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: AB 2127 Electric Vehicle Charging Infrastructure Assessment (Docket 19-AB-2127)

Dear Commission staff,

On behalf of the Los Angeles Cleantech Incubator (LACI) and ENGIE Impact, thank you for providing the opportunity to comment on Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment (Staff Report). We fully support the California Energy Commission's efforts to analyze the infrastructure requirements for reaching state and regional targets for battery electric vehicles. The Commission's models will provide valuable insight regarding the funding levels the state will need to sustain, as well as tools that local planners can leverage to ensure smart, affordable, and equitable deployments of infrastructure across application types. Development of the Staff Report also aligns with our efforts to advance transportation electrification in the greater Los Angeles region.

In May 2018, LACI convened the Transportation Electrification Partnership (TEP), an unprecedented public-private partnership focused on accelerating reductions in climate and air pollution by the time of the 2028 Olympic Games by pursuing bold targets, pilots and policies that are equity-driven, create quality jobs and grow the economy. The 30+ members of TEP represent state regulators, local government, utilities, industry leaders, labor organizations and startups, all of whom are working to achieve bold transportation electrification targets in Los Angeles County, including the following:

- â—□ 84,000 public and workplace chargers to enable 30% of all light-duty private vehicles on the road to be electric by 2028
- â—□ 95,000 chargers installed for goods movements to enable 60% of medium-duty delivery trucks to be electric and 40% of short-haul and drayage trucks on the road to be zero emissions by 2028
- â—□ 100% of shared cars (e.g. taxis and TNCs) to be electric by 2028.

Given the direct applicability of the modeling tools developed in the Staff Report to TEP goals, our organizations jointly offer the following comments and recommendations for the CEC to consider as it further refines the tools. By focusing on modeling assumptions



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In May 2018, LACI convened the [Transportation Electrification Partnership](#) (TEP), an unprecedented public-private partnership focused on accelerating reductions in climate and air pollution by the time of the 2028 Olympic Games by pursuing bold targets, pilots and policies that are equity-driven, create quality jobs and grow the economy. The 30+ members of TEP represent state regulators, local government, utilities, industry leaders, labor organizations and startups, all of whom are working to achieve [bold transportation electrification targets](#) in Los Angeles County, including the following:

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Given the direct applicability of the modeling tools developed in the *Staff Report* to TEP goals, our organizations jointly offer the following comments and recommendations for the CEC to consider as it further refines the tools. By focusing on modeling assumptions that align with needed targets, incorporating up-to-date information on technical feasibility and market

maturity, and designing the tools with the end-users in mind, the CEC can build off of its existing body of work to lead the planning of infrastructure deployment across the state.

1. Focus modeling targets and assumptions in coordination with the CARB 2020 Mobile Source Strategy across all applications

CARB released its Draft 2020 Mobile Source Strategy in December 2020, and though that release was unlikely too late for incorporation with the *Staff Report*, revisions that take place before the next release of an AB 2127 *Staff Report* should focus on the infrastructure needs that would support, at a minimum, the targets specified in CARB's 2020 Mobile Source Strategy given that the *Staff Report* should serve as a guide for the funding required to meet our state goals. For instance, CARB defines 7.9M ZEVs by 2030 as necessary to reach emission reduction requirements; currently this level is defined in the *Staff Report* as the high adoption scenario in EVI-Pro-2 rather than the minimum needed. We are heartened to see coordination between the 2020 Mobile Source Strategy and the HEVI-Load modeling, and recommend this approach be adopted across all applications analyzed in the *Staff Report*, including light-duty and rideshare vehicles.

2. Incorporate the developing 1MW+ charging standard and compatible trucks into the modeling of the next iteration of the HEVI-Load tool

Substantial progress has been made recently in the development of a charging standard that can support charging speeds of 1MW or more, and the CEC's recent solicitation, GFO 20-306, will fund the ongoing development of such technology. This equipment is necessary to better replicate the existing duty cycles for a large proportion of Class 8 trucks, and should be included in the next modeling iteration of HEVI-Load. Additionally, this inclusion will require further consultation with OEMs on the timing of vehicle models that will support this high-powered charging standard.

3. Further prioritize observed behavior in modeling for all tools

We recommend that the CEC focus on incorporating data gathered from real-world operations when refining the modeling tools. For example, when developing the next iteration of EVI-Roadtrip, the CEC should model the proportions of drivers that behave in accordance with the 'Always Topping Off' and those that behave in accordance with 'Time Penalty Minimization' when charging. Using real-world behavior, with data gathered from OEMs, energy service providers or ongoing CEC-funded projects, can better inform the grid planning and infrastructure deployment goals of the *Staff Report*. Additionally, the COVID-19 pandemic may have a lasting impact on mobility and transportation behavior, so it is important to consistently refine these tools in light of these changing dynamics.

Another important consideration that merits further research and analysis relates to the technical and economic tradeoffs associated with public charging versus residential charging at multi-unit dwellings (MUDs). We strongly recommend expanding the current scenario analysis on this topic to understand: (i) how different levels of charging infrastructure deployment at MUDs, or lack thereof, impacts the need for both public L2 charging as well as public DC fast charging; (ii) what the most cost-effective and time-effective means are to fulfill the charging needs of MUD residents over time.

4. Model the influence of time-variant pricing on the use of public charging

Staff Report shows significant impact of public charging on grid load profiles. We think it is important to model how the load profiles associated with public charging, particularly DC fast charging, respond to time-variant price signals. This requires considering not only time-of-use rates by utilities, but also potential time-variant pricing structures by private players offering public DC fast charging service.

5. Provide opportunity for businesses, agencies and non-profits to examine use cases for the tools that can support ideal local infrastructure funding and implementation

Through the AB 2127 *Staff Report*, the CEC has developed informative tools for agencies and businesses that can have important implications for effective regional infrastructure deployments. We applaud the next steps the CEC has laid out to provide granularity at the county level across the different tools. Going a step further, and hosting workshops specifically tailored to agencies and businesses, focusing on how the CEC envisions usability of the tools, will maximize the effectiveness. Though this may be more appropriate for certain tools, the CEC should actively explore how to transfer learnings from the *Staff Report* to the private sector and municipalities.

We again appreciate the opportunity to provide comment on these CEC efforts and commends the Commission on its successes to date. As sustained funding and deployment over the next decade-plus will be required to reach emissions reduction targets and support a resilient grid, the AB 2127 *Staff Report* will continue to be an invaluable resource that can set a national example for charging infrastructure planning.

Sincerely,

Jack Symington
Transportation Manager
Los Angeles Cleantech Incubator

Dr. Karim Farhat
Director of Mobility Solutions
ENGIE Impact