

DOCKETED

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NRDC Comments on AB 2127 Report

Additional submitted attachment is included below.



February 26, 2021

David Hochschild
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Comments of the Natural Resources Defense Council (NRDC) on the Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment (Staff Report) [Docket No. 19-AB-2127]

Commissioner Hochschild:

On behalf of the Natural Resources Defense Council (NRDC), and our more than 95,000 members in California, we appreciate the opportunity to comment on the Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment (Staff Report). NRDC appreciates the Energy Commission staff's efforts in developing this report and strongly supports the report's emphasis on transportation electrification as a key strategy to help achieve California's climate, air quality, and equity goals.

As the report rightly highlights, the transportation sector is the leading source of greenhouse gas and air pollutant emissions in California. Enabling the electrification of all types of vehicles will be essential to meet the goals set forth in Executive Orders B-48-18 and N-79-20, which established ambitious targets of deploying 250,000 chargers by 2025, 1.5 million zero-emission vehicles on the road by 2030, having 100 percent of in-state sales of passenger cars and trucks be zero emission by 2035, and having 100 percent of medium- and heavy-duty vehicles in the state be zero emission by 2045. The report also appropriately highlights the importance of electrifying medium- and heavy-duty vehicles and investments in charging infrastructure for promoting equity and environmental justice in underserved communities, which are often most affected by air pollution from transport, transit, and freight. Expanding the benefits of transportation electrification to underserved communities is essential to achieving the goals established by Senate Bill (SB) 350 (De León, 2015) and the Charge Ahead California Initiative (SB 1275, De León, 2014).

We echo the report's finding that continued support for the deployment of EV charging stations will be necessary for meeting these critical state policy goals. Accordingly, we support the report's proposal to continue quantitative modeling efforts to project the quantities, locations, and load curves of chargers needed to meet these goals. We are impressed with the significant progress that CEC has made in modeling and forecasting charging need and impact over the past



several years. We agree with Commissioner Monahan’s comments that this type of modeling is still in the early stages and that more data is needed. In that spirit, we offer a few thoughts and questions for consideration on ways to gain more insights and improve the results in the next round of AB 2127 modeling:

- In addition to gathering more observational data, the Commission should fund and collect new data on willingness to pay for charging, especially away-from-home and away-from-fleet charging. For example, how much are those who do not have access to low-cost off-street parking at night willing to pay for public Level 2 charging or DC fast charging?
- With more sensitivities conducted in the future, we hypothesize that the “gas station” model scenario will become the base case. For example, USDOE states that 250-mile range battery EVs are the norm today for new sales. We believe the continuing trend will be for even longer range BEVs and for PHEVs with 40-to-100-mile ranges. For those in single family homes and those operating fleets, this trend would likely result in decreased need for public Level 2 charging.
 - We estimate that home charging is roughly three times less costly for EV drivers than away-from-home Level 2 or DC fast charging, and that a similar situation exists for fleets. However, more recent data is needed, as we base our estimate on a 2017 EPRI study.¹
 - The Commission should examine what longer range BEVs and PHEVs will mean for drivers who park their cars overnight on the street or park in large apartments and condos. Charging preferences and behavior will likely be significantly different than for drivers who live in single family homes. We suggest that it would be beneficial to see cross tab results in order to see how much the different types of EV drivers (fleets, attached and detached homes, large apartments/condos, and street-parkers) are charging at the various locations examined in the report (fleets, public Level 2, public DCFC, MDU, street parking, workplaces).
 - The Commission should consider the competing visions of “home charging with some DC fast charging” (in urban locations, urban corridors, and rural corridors) versus “mostly Level 2 away-from-home charging,” including what the potential trade-offs would be.

¹ 2017 EPRI study available here: <https://www.epri.com/#/pages/product/3002011098/>, which considered electricity costs and all fees for away-from-home charging in each state and put them into a common metric so that pricing can be more easily compared. For California, Level 2 charging was priced at \$0.37 per kWh and 50 kW DCFC at \$0.40 per kWh.



- It would be especially helpful to gain a deeper understanding of the hard-to-serve markets (those who live in large apartments and condos, those who park on the street near their homes, low-income EV drivers, rural EV drivers, medium and long-range class 7 and 8 trucks) and what they need for charging for intraregional, interregional and local travel.
- The Commission should consider modeling additional sensitivities to see if they can reduce costs (for example—25 kW charging DC at fleet and curbside locations, TNC charging at homes overnight, and sharing of stations between light and medium/heavy duty EVs in public or private locations).
- It would be helpful to better understand why the LBNL results from their study of electric semi-trucks in California (medium and long-range class 7 and 8 trucks) showed a much smaller need for public charging (only 750 stations compared to the CEC modeling).²
- The Commission should examine the impact of LCFS Capacity credits which encourage DCFC stations to have both Tesla and non-Tesla connectors (for example, is encouraging multiple connectors at a DCFC station a better method to encourage EV adoption, compared to other methods?).

We appreciate the consideration of these comments and look forward to continuing to work with the CEC and Staff on accelerating widespread transportation electrification in California.

Sincerely,

/s/ Miles Muller

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² Available at <https://eta.lbl.gov/publications/california-semi-truck-electrification>.