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Joint comments of Forum Mobility and EV Realty on AB 2127 2nd Assessment draft

Additional submitted attachment is included below.

September 20, 2023

California Energy Commission
715 P Street
Sacramento, CA 95814

RE: Second AB 2127 Assessment Draft

Dear California Energy Commission Staff,

Thank you for the opportunity to provide comments on the AB 2127 Second Assessment Draft Staff Report.

Forum Mobility and EV Realty are companies that are building charging infrastructure for the MHD sector. Our comments and recommendations are derived from our deep engagement with our customers, and designing services that fit their articulated needs.

In the report, MHD charging is separated into two segments including 1) depot charging; and 2) on route public charging, as defined below:

- **Depot charging:** A depot charger is provided by a MDHD fleet operator at the location where the vehicle returns overnight or between trips. The models in this report estimate depot charging needs at a range of power levels from 20 kW to 150 kW.
- **On route public charging:** An on route public charger is a high-powered charger operated by an EVSP that is used to charge MDHD vehicles making brief stops during trips. The models in this report estimate on route public charging needs at a range of power levels from 350 kW to 1.5 MW.

We believe this is a framework more consistent of LD charging than that of MHD charging, and as such does not adequately reflect likely future deployment scenarios.

Goods movement businesses have idiosyncratic constraints and needs that must be addressed in charging service design:

Constraints

- To build your own charging, you need to own land (or have 10 year+ lease), be on a distribution feeder with adequate hosting capacity, and have sufficient capital. Many – if not most -- fleets and drivers will not meet these conditions and will have to find charging services elsewhere.

Needs:

- They must have a guaranteed space to charge at the end of the duty cycle. They cannot drive around looking for an unoccupied charger

- Overnight charging must be in a secure venue, given the cost of the trucks and the cargo
- Mid-route charges must be schedulable. Given the size of the batteries and the time it takes to charge them, freight businesses cannot operate with huge uncertainties in timing. They are meeting schedules of customers and must be able to plan with a degree of precision.

The combination of these constraint and needs indicates that many fleets and drivers will need to find charging services in a location different from where they have traditionally domiciled, and that 'public' charging (as traditionally understood as a scale-up of fossil fuel stations, with no restriction on access) is unable to deliver.

To this point, in the discussion of MHD public charging, the "assessment assumes that public chargers for MDHD vehicles will average around 5 percent utilization per day in 2030, with utilization somewhat lower for 1.5 MW chargers. If actual utilization is higher than this, a smaller number of chargers would be able to serve the same charging demand. Actual utilization may also be affected by peak demand and drivers' tolerance of queues, as well as station economics." (page 60).

We suggest that the cost of land and chargers in the 350kW to 1.5 MW range does not support a station with a 5% utilization rate. In addition, freight businesses will have an extremely low tolerance for queues. Time is money, and unpredictable time will impact the schedules – and money – of not just the shippers, but also cargo owners and the destinations.

The third path, which we recommend that the CEC incorporate into its modeling and describe in the final report, is a '3rd party depot' model, in which multiple fleets and independent owner operators share a facility and are served by a subscription model. These facilities can serve both overnight and daytime/on route charging and present an opportunity to plan for infrastructure more efficiently and cost effectively. An analogue is community solar – an asset that multiple entities combine forces to support, utilize, and derive benefit from.

Third party depots are designed to be built on freight routes and on distribution circuits with existing spare hosting capacity. This results in maximizing utilization of existing grid infrastructure (which lowers ratepayer costs) and increases speed in deployment. Moreover, anticipated utilization rates are much higher than the 5% ascribed to public charging in the draft report.

We recommend the CEC expand the charging solutions it considers for MHD vehicles to include this model to better plan for its ZEV future. Doing so will also provide a signal to guide future policy efforts, opening the door for policy consideration and eligibility.

Yours,

Adam Browning
EVP of Policy and Communications, Forum Mobility

Suncheth Bhat
Chief Business Officer, EV Realty