

DOCKETED

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Zeem Solutions; Comments on Mobility-as-a-Service Models & Warehouse and Regional Trucking

Additional submitted attachment is included below.

October 8, 2021
California Energy Commission

Re: Comments for Staff Workshop on Funding Allocations for Future Medium- and Heavy-Duty Charging and Refueling Infrastructure Projects

Dear California Energy Commission Staff,

Zeem Solutions (Zeem) appreciates the opportunity to provide comments and recommendations for the proposed solicitation concepts. We strongly support the proposed FY 2021-2023 budgets for Medium- and Heavy-Duty Infrastructure and look forward to continuing to work with CEC to allocate additional funding in future years.

Mobility-as-a-Service Models

- What current models exist and how could they be innovated/improved?
 - Zeem Solutions is a Transportation-as-a-Service company. Our mission is to transform the way fleets operate by providing an affordable solution for zero emission transportation that improves air quality within our communities.
 - Zeem owns and operates chargers at strategically located depots. Zeem's fleet customers pay a monthly lease that includes zero-emission vehicle leasing, charging, servicing, maintenance, and parking. Drivers arrive in the morning to pick up a clean, fully charged vehicle and return at the end of their shift to drop off the vehicle.
 - The depot is available for opportunity charging during the day for our customer fleets and for others on a contract basis. Zeem has resident technicians to provide service, preventative maintenance, and temporary replacement vehicles to ensure that fleets' operations run smoothly.
 - We currently have an operational depot near LAX and our first customers began operating out of that depot in December 2021. This site has nearly 8MW of charging power and will be able to support 200 commercial electric vehicles onsite and hundreds more through opportunity charging.
- How can this concept specifically target the drayage sector, which is heavily composed of IOOs, who may be unable to purchase ZEVs or finance their own infrastructure upfront?
 - Zeem's Transportation-as-a-Service offering works well for IOOs & small fleets by offering a turn-key solution for their operational needs where Zeem owns and operates the infrastructure. For all fleets in the drayage sector, Zeem's strategically located depots and the drayage fleets' predictable duty cycle work well together.
 - In addition to providing charging for resident fleets, Zeem opens its chargers for opportunity charging which increases charger utilization. Zeem's depots are an efficient use of space (space is limited and

expensive near ports) and public dollars.

- What component of these models would be the most advantageous for the CEC to fund (ex. construction of ZEV infrastructure)?
 - Vehicles are the most advantageous to fund. For the drayage sector specifically, class 8 zero emission vehicles are extremely expensive. Additionally, drayage operators and small fleets typically buy used diesel vehicles so the marginal cost of a *new* ZEV versus a *used* ICE is huge.
 - Infrastructure funding, especially funding that is synergistic with utility funding, is important.
 - A dedicated energy storage incentive program for medium- and heavy-duty fleets would be advantageous to utilities and fleets through peak shaving, charging flexibility, resiliency, renewables, and more.
 - The most important factor in the success of a CEC funding program is how it is funded, not what it funds. Letting third-party service providers participate and using proper mechanisms to tie incentives to desired behavior is key.
 - For example, if the objective of a charger funding program is to maximize decarbonization, require the applicant to operate the chargers until they dispense a set amount of kWh, whether that takes them 2 or 10 years.

Warehouse and Regional Trucking

- Is depot charging/home-base charging sufficient or is public charging or opportunity/destination charging necessary?
 - These types of charging are not mutually exclusive. When one set of chargers is used for multiple purposes, utilization increases. For example, resident fleets at a depot can use chargers overnight and those same chargers can be used for opportunity charging during the day.
 - Most charging needs will be met by depot/home-base charging ([NREL Study](#)), especially for regional haul trucks that have fixed, short duty cycles.
- Should infrastructure be shared between organizations/businesses?
 - Yes, charging should be shared between businesses, organizations, and multiple fleets because this maximizes charger utilization. Our depots host multiple fleets that share charging infrastructure.

Sincerely,

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