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EV Realty Comments - Tri-State RFI

Additional submitted attachment is included below.

June 10, 2024

California Energy Commission
715 P Street
Sacramento, California 95814

Re: EV Realty Comments in Response to California, Oregon, and Washington's Request for Information on the Medium- and Heavy-Duty Joint Application for the U.S. Department of Transportation's Charging and Fueling Infrastructure Discretionary Grant Program - Docket #24-EVI-01

EV Realty develops, deploys, and owns multi-fleet EV charging hubs for commercial fleets. EV Realty's charging hubs enable truck electrification by providing critical charging solutions for fleets that may not be willing or able to deploy their own infrastructure due to grid constraints, landlord restrictions, resource limitations, or other operational considerations. Our model can also reduce overall costs by concentrating load in strategically chosen locations, thereby maximizing utilization of existing infrastructure and minimizing the need for grid upgrades. Ultimately, EV Realty's solution supports the overarching electrification goals articulated in the National Zero-Emission Freight Corridor Strategy with a particular focus on serving needs in and around the freight hubs identified in Phase 1 of the plan.

The West Coast is a particularly promising region for truck electrification due in large part to the forward-looking policies and programs adopted at the state and local levels across California, Oregon, and Washington. The Advanced Clean Trucks (ACT) and Advanced Clean Fleets (ACF) regulations are foundational and lay out an ambitious vision for truck electrification at the state level. Importantly, these are paired with supportive policies and incentives to drive investment. Clean fuels policies (Low Carbon Fuel Standard in California, Clean Fuels Standard in Oregon and Washington) have the potential to drive investment in infrastructure, particularly through so-called "capacity credits" currently under consideration in both California and Washington. Other key policy levers currently in place or under development include truck purchase incentives, infrastructure deployment grants, publicly available grid capacity data (in California), accelerated utility processes, and electricity rate structures that support EV charging. These complementary policies and programs will amplify the benefits of CFI investments in the region.

We appreciate the opportunity to respond to the tri-state RFI. We look forward to continued dialogue on this opportunity and the many overlapping policies and programs in place across the states to support truck electrification.

For more information, please contact:

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1. Please disclose your business type and vehicle class, if applicable. Are you a driver, fleet operator, truck stop operator, installer, manufacturer, utility, public agency, or other? Are you part of a small, veteran-owned, woman-owned, or minority-owned business?

EV Realty provides turnkey "charging as a service" solutions for commercial fleets. We develop, deploy, and own multi-fleet charging hubs that serve medium- and heavy-duty vehicles (class 2b-8).

2. Would you consider applying for CFI grant funding for site development if the tri-state agencies are awarded funding?

EV Realty would consider applying for CFI funding if the tri-state agencies are awarded funding. Solicitation details and timing would be key considerations as we weigh opportunities and priorities for expanding our charging hub footprint. The status of complementary policies and regulations supporting truck electrification in a given state will also affect our investment decisions.

3. Do you already operate or are you planning to use zero-emission battery electric MDHD vehicles in the next five years? Please use a 1-5 rating scale where 1= least likely and 5= most likely. Please add additional information regarding your (planned) use of zero-emission battery electric MDHD vehicles as desired.

N/A – EV Realty is not a fleet operator of MDHD vehicles. However, we are actively developing charging depots to serve these vehicles today and expect to have multiple new sites operational within the next several years.

4. What type of MDHD ZEV public charging do you anticipate being most important in the next three years (2024-2027) – en route or overnight charging? For what purposes do you anticipate needing public charging infrastructure – drayage, last-mile, delivery, long-haul freight, other?

Charging infrastructure for MDHD vehicles in the near term should focus primarily on serving those segments of the market most primed for electrification: last mile, drayage, middle-mile, and other short-haul, return-to-base operations. We do not anticipate meaningful electrification of long-haul applications in the near-term as duty cycles and cost considerations make electrification a more challenging prospect at this time. This view of timing and priorities is informed by our discussions with customers around electrification costs, benefits, and operational fit. It also aligns well with the recently released National Zero Emission Freight Corridor Strategy, which begins with a focus on key freight hubs "in areas that may be most immediately suited to early deployments of first-mover battery-electric MHDV fleets with predominantly return-to-base operations." The plan also notes that "Initial focus on freight ecosystems within hubs will serve as foundational elements for zero-emission regional

(e.g., port drayage) and long-haul use cases longer term."[1]

A holistic charging ecosystem to support these market segments will be needed to meet near-term regulatory requirements including the Advanced Clean Truck and Advanced Clean Fleet rules as well as overlapping policy priorities related to greenhouse gas reduction, local air quality benefits, and transportation electrification. We anticipate this including both overnight and en route charging options to meet the diversity of fleet operational needs. In some cases, a single site may be able to provide both faster en route charging during the day and slower overnight charging at night.

The various constraints that fleet managers must negotiate (e.g., space or landlord restrictions) also highlight the need for a mix of public, private, and shared charging sites. Not all fleets will have the ability to install private, behind-the fence charging. And not all fleets will be comfortable with fully "public" charging that lacks security and access controls. A full charging ecosystem will need to have "all of the above," particularly for any longer dwell charging where security and access controls will be important considerations.

5. From 2024-2027, what is your first priority for power level and number of charging ports for public en route charging at a station? For public overnight charging? Do you have a second or third configuration preference?

Market needs will dictate different configurations for different regions and use cases. Our discussions with fleet customers underscore the fact that they need certainty about the ability to charge at a given location when they need to do so. This will require sufficient throughput at a site to avoid queueing and disruptive delays, particularly at public sites. The optimal mix of power levels and port numbers will vary, with sites in key freight hubs likely needing more ports and sites along connecting corridors likely prioritizing higher power. We see value in planning larger depots (with more charging ports) than near-term vehicle numbers might justify as this can reduce per-port costs and help "future-proof" for growing needs as the market develops.

6. Please identify the percentage of pull-in or pull through parking preferred and other desired station configurations at a given site. Describe the vehicle class and vocation considered when making this recommendation if it differs from the information provided in question 1.

We expect pull-through sites to be most important for more remote en route charging locations along connecting corridors. For charging depots located in the major freight hubs that make up Phase 1 of the National Zero Emission Freight Strategy, we anticipate a greater focus on pull-in stalls. Space constraints and cost considerations make pull-through spots more challenging in higher-traffic, higher-density areas within freight hubs. We are not prepared at this time to specify a percentage as each site is different and the optimal mix will depend on the expected vehicle types, classes, and vocations.

[1] National Zero-Emission Freight Corridor Strategy, page 4-5.

7. What distance should separate charging stations to support zero-emission trucks along the I-5 corridor? Provide description of typical route or use-case considered when making this recommendation. Describe the vehicle class and vocation if it differs from the information provided in question 1.

Segments of the corridor near major freight hubs will require more charging locations given the higher expected traffic volumes for local and short haul applications. For these regions closer to the key freight hubs and facilities identified in the National Zero Emission Freight Corridor Strategy, we recommend thinking not just about distance between corridor chargers, but rather about the overall charging ecosystem for a given freight hub. We defer to fleets and others focused on the longer-term, long-haul applications to weigh in on appropriate spacing for connecting corridor chargers, recognizing the need for some redundancy and for sufficient capacity to meet needs as long-haul electrification begins to ramp up in the future.

8. What amenities are you seeking at a charging facility? Is there a desire for additional parking at a facility beyond charging stalls? Is there a desire for reservation options?

Safe and secure parking beyond charging stalls is important for multiple reasons. For return-to-base operations in and around freight hubs, additional parking allows drivers to leave their personal vehicles. We also recognize that there is a well-known truck parking shortage across the country. To the extent that charging sites can help alleviate some of this problem, that should benefit fleets. Restrooms are another “must-have” amenity for any site. For any longer-dwell charging, security is an important consideration as trucks and cargo are valuable and cannot be left fully unattended. Additional amenities will vary by location and application.

Our discussions with customers have also highlighted a need to eliminate uncertainty regarding the availability of chargers at a given time. Customers have indicated a desire for a reserved block of time or even a fully dedicated stall. As a result, reservation options are a feature in which customers have expressed interest. Security and access controls at facilities are important physical features to ensure operational fidelity of such reservation options. These sorts of arrangements are relatively straightforward for semi-private, multi-fleet depots and more challenging for fully public stations.

9. If possible, provide any general cost estimates for MDHD charging stations you have designed, built, or have experience with, including charger power levels and number of chargers installed. Please provide a range of public cost share as a percentage of total project cost that would be necessary to support more public charging stations to serve zero-emission trucks along freight corridors.

Project costs will vary significantly depending on location, size, and equipment. Medium- and heavy-duty truck charging depots will generally be larger in terms of both footprint and power needs than sites serving light-duty vehicles. This is particularly true for multi-fleet depots in and around freight hubs, where operational needs will require more ports and more capacity to support simultaneous charging.

Sites that lack access to sufficient grid capacity will need additional grid upgrades or on-site distributed energy resources (generation and/or storage) that can be expected to further increase capital costs. Given the significant variation in costs and project economics from site to site, it is difficult to provide a useful overall percentage of public cost share needed to support investment.

While we are not recommending a specific target percentage of public funding across commercial truck charging sites, it is important to recognize that incentives are crucial at this nascent stage of the market. Commercial electric trucks lag years behind light duty EVs in terms of on-road vehicle numbers, near-term trajectory, and overall market maturity. Moreover, heavy-duty commercial trucks will require much greater upfront investment in infrastructure, as these vehicles will be unable to leverage the ubiquitous, pre-existing level 1 home charging that has proven instrumental in launching the passenger vehicle market. We therefore recommend continued focus on public investments to deploy charging infrastructure in advance of widespread vehicle adoption, including public support for up to the 80% allowed under this program. We caution against assuming that what has worked thus far for passenger vehicles in terms of infrastructure planning and investment will naturally translate to the commercial truck market.

Finally, capital costs alone are just part of the equation. At this stage of the market with uncertainty around truck deployment timelines, policy levers to address near-term utilization risk and drive investment are vitally important. We recognize that the CFI program is not designed to provide this sort of operational support, but note that both California and Washington have proposed Fast Charging Infrastructure (FCI) programs through the state's respective fuels programs (Low Carbon Fuel Standard in California, Clean Fuels Program in Washington) that are ideally suited to this purpose and would effectively complement the CFI investments that are the subject of this RFI.

10. Use the maps under the "Corridor Segments" section below to identify locations within the National Zero-Emission Freight Corridor Strategy hubs along I-5 (identified in the map segments below) you anticipate needing EV charging in the next three years (2024-2027). You may identify sites where you plan to or would be interested in building charging stations or where you would like to see charging as a consumer. Please detail preferred locations across California, Oregon, and Washington. For each location, please provide desired site characteristics including number of chargers, power levels, type of charging desired (overnight or en route), and vehicle class and vocation if the information differs across locations or differs from the information provided in the questions above.

Over the next three years, we see the greatest need for charging in the "core" regions of the freight hubs identified in the National Zero-Emission Freight Corridor Strategy. The most promising region in the maps provided in the RFI is the region around Seattle with locations that can serve the Port of Seattle as well as intermodal facilities in the region. The dense population and heavy truck traffic in this area should be able to support multiple charging facilities serving the trucking applications most "ready" for electrification (short haul, last mile, middle mile, etc.). These sites, particularly where they are serving class 8 vehicles, would need high power charging for en route and shorter dwell charging needs, but might also be able to provide overnight charging for some customers.

11. If you represent a utility, please use the maps under the “Corridor Segments” section below to identify locations within the National Zero-Emission Freight Corridor Strategy hubs along I-5 (identified in the map segments below) where there may be capacity for 5 megawatts or more of power in the next five years. This information may be considered in the development for future Requests for Proposals.

N/A