

**DOCKETED**

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*Comment Received From: EV Realty  
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**EV Realty Comments - RFI Ideas and Considerations for CA Ports  
USDOT CFI**

*Additional submitted attachment is included below.*

June 28, 2024

California Energy Commission  
Sacramento, California 95814  
Submitted electronically to Docket #24-EVI-01

Re: EV Realty Response – Request for Information on the Considerations for the California Energy Commission Zero-Emission Medium- and Heavy-Duty Drayage Infrastructure Application for the U.S. Department of Transportation’s Charging and Fueling Infrastructure Discretionary Grant Program

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.

California is a leading market for truck electrification due in large part to the forward-looking policies and programs adopted in the state. 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. The Low Carbon Fuel Standard has the potential to drive investment in infrastructure, particularly through the Fast Charging Infrastructure “capacity credits” provision currently under consideration. Other key policy levers currently in place or under development include truck purchase incentives, infrastructure deployment grants, publicly available grid capacity data, 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 CEC’s RFI on drayage infrastructure. We look forward to continued dialogue on this opportunity and the many overlapping policies and programs in place across the state 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. *The purpose of this RFI is to help inform the CEC’s application to the Federal Highway Administration (FHWA) for federal funding. If awarded, the CEC will release a competitive grant funding solicitation to provide funding to end recipients who would develop and construct the zero-emission MDHD infrastructure. Would you consider applying for CFI grant funding for site development if the CEC is awarded funding?*

Yes, EV Realty would consider applying for CFI funding if CEC is awarded funding. Solicitation details and timing would be key considerations as we weigh opportunities and priorities. The status of complementary policies and programs supporting truck electrification will also affect our development plans.

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. *For drayage fleet operators and drivers: (a) For 2024-2027, what would you like to see as the priority for zero-emission infrastructure? Hydrogen or electric? Or a mix of both? (b) To meet Advanced Clean Fleet (ACF) requirements, are you considering battery electric or hydrogen trucks? (c) When/where would you prefer to recharge/refuel? E.g.: Depot charging vs. on-route, during loading/unloading, overnight or as needed. (d) Do you have a preference for the power level or speed of charging infrastructure? E.g. 150kW, 250kW, 350kW or 1MW. What would meet your needs and why? (e) Are you willing to provide a non-binding letter of commitment for the CEC’s application stating that your organization would utilize EV charging and/or hydrogen fueling infrastructure located within five miles of the AFCs found in the “Corridor Segment” below?*

N/A – EV Realty is not a fleet operator.

5. For EV charging and hydrogen fueling providers, describe:

- a. *Your organization's business model for public charging and/or hydrogen fueling offerings.*

EV Realty provides turnkey EV charging hubs for medium- and heavy-duty commercial vehicles. Our core offering is a multi-fleet depot with security and access controls. We are, however, considering public charging models provided we can meet fleet needs for security at the site, certainty around the ability to charge (e.g., via stall reservations), and pricing/payment considerations built into contracts with customers.

- b. *Mechanisms your organization might leverage to provide affordable charging and fueling services to drayage fleet operators.*

EV Realty's "grid-first" approach to siting avoids major costs including grid upgrades, onsite generation, and storage. Part of our goal in prioritizing grid-ready sites is to reduce costs, allowing us to pass these savings on to fleet operators. Additionally, recognizing that vehicles have varying charge speeds and charging curves, we are leveraging dynamic power sharing across our sites to reduce charging hardware costs while meeting customer charging expectations. Furthermore, EV Realty's multi-fleet charging hub model allows for infrastructure- and cost-sharing between multiple commercial customers to lessen overall infrastructure needs and reduce costs. Incentive funding, utility make-ready funding, favorable electricity rates, and other supportive policies such as a strong Low Carbon Fuel Standard will allow us to further reduce costs.

- c. *The scope of services, facilities and amenities provided at your recharging/refueling locations.*

Our sites provide multiple high-power charging stalls with lighting, security, personal vehicle parking and restrooms as baseline amenities at our facilities. On a site-by-site basis, EV Realty is exploring on-site attendants, vehicle maintenance, Wi-Fi, and food and drink. Depending on the AHJ and zoning considerations of each site, some services may not be feasible.

- d. *The anticipated site size, parking configuration (e.g., pull-through), total number of charging stalls capable of simultaneous charging, and total number of truck parking spaces that are not dedicated to charging or refueling.*

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 capacity in terms of both stalls and power levels 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 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.

- e. How your organization approaches right-sizing infrastructure for near-term market demand and future-proofs infrastructure to be responsive to evolving needs.*

We see value in planning larger depots (with more charging ports) than near-term vehicle numbers might justify as this can take advantage of economies of scale, reduce per-port costs and help “future-proof” for growing needs as the market develops. Building today for anticipated future demand also helps enable fleet operators transition their fleets to electric by removing one of the most frequently cited barriers to truck electrification – perceived lack of infrastructure readiness. We expect a significant increase in demand in the coming years as fleet electrification continues to ramp up and fleet operators recognize the benefits of off-site charging hubs as part of their overall solution.

EV Realty recognizes the importance of futureproofing and is taking steps to build with flexibility in mind by installing additional conduits throughout our sites to accommodate evolving fleet requirements and demand. This includes futureproofing for the buildout of additional charging ports at our facilities, as well as additional conduit runs that enable upgrades to MCS ports, particularly for pull-through charging stalls.

- 6. What distance should separate stations to support zero-emission drayage truck activities around California ports? Provide a description of a 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.*

For 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 chargers, but rather about the overall charging ecosystem for a given freight hub. Routes and charging locations will vary by fleet, highlighting the need for a network serving different needs. Different fleets are likely to utilize different depots, meaning that the usual question of the right distance between chargers (e.g., for passenger cars on a corridor) is arguably less relevant. Some regions with particularly dense traffic may need multiple depots in relatively close proximity. Distance becomes more relevant as you move out along corridors away from ports and other key hubs (intermodal transfer facilities, etc.).

In and around the core hub areas, a broad ecosystem will be needed. For example, recent RMI analysis of the greater Los Angeles area highlights the spread of drayage truck trips from the Port of Los Angeles, concluding that “installing drayage truck chargers further away from ports can benefit fleets’ bottom line and operations, avoid grid bottlenecks, and reduce port congestion.” The analysis shows that destinations for drayage trucks after leaving the port are diverse, with some clustering but with a clear need for a dispersed charging network.<sup>1</sup>

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<sup>1</sup> <https://rmi.org/the-case-for-placing-drayage-truck-chargers-away-from-ports/>

- 7. If possible, provide any general cost estimates for MDHD charging and/or hydrogen fueling stations you have designed, built, or have experience with, including charger power levels and number of stations installed. Please provide a range of public cost-share as a percentage of the total project cost necessary to support more public charging stations to serve zero-emission trucks along drayage corridors. For example, should the publicly funded cost share be 50% CEC/federal and 50% private/other?*

Project costs will vary significantly depending on real estate cost, 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, though total project costs can be reduced where developers are able to identify “grid-ready” sites that do not require on-site resources to work around grid constraints.

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. 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. California’s proposed Fast Charging Infrastructure (FCI) provision under the Low Carbon Fuel Standard could potentially meet this need. While we recognize that this sort of operational support is outside the scope of CFI, we believe it is important to highlight these connections between programs across state agencies as widescale infrastructure deployment requires a “whole of government” approach.

- 8. Use the maps in the "Corridor Segments" section to identify areas where you expect to need zero-emission truck infrastructure in the next three years (2024-2027). These Corridors have been selected to align with the National Zero-Emission Freight Corridor Strategy, the California Transportation Commission’s SB 671 Clean Freight Assessment and to complement California, Washington and Oregon’s Tri-state application.*

- a. *You can pinpoint sites where you plan to build stations, or where you would like to see a station as a driver.*

EV Realty is in active development on multiple sites aligned with the National Zero-Emission Freight Corridor Strategy, including the Ports of Oakland and Ports of Los Angeles and Long Beach corridor segment groups. EV Realty intends to continue to grow our portfolio at locations along these corridor segments, as well as potentially the Stockton and San Diego corridor segments.

- b. *If possible, please provide specific details for each location, including the preferred location, the number of stations, the type of fuel (hydrogen or electric), power levels (if applicable), and vehicle class.*

EV Realty is in active development of sites in Livermore and San Bernardino with close proximity to highway onramps and high-density warehouse districts. We recently announced specifications for our Livermore hub, which will include 54 pull-in and 4 pull-through charging stalls capable of 240-400kW per port intended to serve medium- and heavy-duty vehicles across class 2b-8. While we have not yet announced details on our other sites, they will generally also be multi-acre sites with sufficient existing grid capacity and to charge dozens of vehicles simultaneously.

- c. *Identify any corridor segments you think should be considered that have not been included and how they align with the National Zero-Emission Freight Corridor Strategy.*

We have no additional recommendations for additional corridor segments that should be included within the National Zero-Emission Freight Corridor Strategy within California. EV Realty is focusing our siting efforts near warehouse districts that serve the ports and freight hubs, which are sufficiently covered by the current list of corridor segments.

9. *If you represent a utility: (A) Please use the maps in the "Corridor Segments" section to identify locations that have or will have a capacity for 5 MW or more in the next five years. These will not be considered utility recommendations or guarantees of available capacity. This information may be considered for future funding opportunities. (B) Please share your policy regarding capacity build-out for futureproofing. E.g., if conduit is installed for the future installation of megawatt charging, would you offer transformer capacity to support the anticipated future load to include megawatt charging?*

N/A