

DOCKETED

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Prologis Tri-State RFI Response

Additional submitted attachment is included below.



June 10, 2024

California Energy Commission
715 P Street
Sacramento, CA 95814

RE: Docket #24-EVI-01, Project Proposal Ideas and Considerations for California, Oregon, and Washington's Medium- and Heavy-Duty Joint Application for the U.S. Department of Transportation's Charging and Fueling Infrastructure Discretionary Grant Program Request for Information

Thank you for the opportunity to provide input to the California Energy Commission (CEC) in partnership with the California Department of Transportation (Caltrans), the Oregon Department of Transportation (ODOT), and the Washington State Department of Transportation (WSDOT) Request for information (RFI) to support potential medium-duty and heavy-duty (MDHD) corridor projects under the U.S. Department of Transportation's (USDOT) Charging and Fueling Infrastructure Discretionary Grant Program (CFI Program). The establishment of MDHD battery electric charging and hydrogen fueling stations along Interstate 5 (I-5) presents an opportunity to unlock interstate zero-emission freight across one of the nation's most important goods movement corridors and is in direct alignment with the Joint Office of Energy and Transportation's (JOET) National Zero-Emission Freight Corridor Strategy¹.

About Prologis, Inc.

Headquartered in San Francisco, CA, Prologis, is the global leader in logistics real estate, with a portfolio of over 1.2 billion square feet across four continents and approximately 2.8% of global GDP flowing through our properties each year. Prologis leases modern warehousing and distribution facilities to customers, which include manufacturers, retailers, transportation companies, third-party logistics providers, and other enterprises. Our large, flat rooftops have enabled us to build out commercial solar installations to serve onsite and offsite load with clean energy and battery storage, helping our customers reduce their emissions and placing us second in the U.S. for corporate on-site solar.

Prologis' Mobility business is helping transform the fleet and logistics industry and enabling our customers to transition to zero-emissions through industry-leading electric vehicle (EV) charging technology and solutions. With roughly 180 million square feet across of industrial real estate across nearly 900 properties in our California portfolio, the opportunity for us to help our customers with this transition is significant, and we are developing dedicated charging infrastructure at Prologis sites to support their medium- and heavy-duty (MHD) fleets across last mile, drayage, and other applications. In addition to providing charging solutions at our own properties, we offer electrification services at non-Prologis buildings and are developing multi-fleet charging hubs serving areas with dense concentrations of warehouses.

Prologis seeks to expand its ZEV transition support by establishing a national network of company-owned and operated, public charging stations for MDHD applications. Prologis' robust real estate portfolio provides a unique opportunity to expeditiously establish charging hubs in many of the target areas identified in phase 1 of the National Zero-Emission Freight Corridor Strategy. Establishing charging hubs in California is a top priority for the first phase of Prologis' public charging hub strategy.

¹ <https://driveelectric.gov/files/zef-corridor-strategy.pdf>



Thank you in advance for considering our recommendations, and we welcome the opportunity to elaborate on our responses. Please reach out to Katie Cox, Director, Incentives and Community Partnerships, at kcox2@prologis.com for more information or to discuss our comments in further detail.

We respectfully submit the following responses to the RFI.

Request for Information Questions and Answers

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?

Prologis is one of the largest owners, operators, and developers of industrial real estate in the world and a leading provider of turnkey fleet electrification services (i.e., charging and fueling infrastructure) for our customers, both at Prologis and 3rd party-owned sites. Our customers operate medium- and heavy-duty logistics fleets.

2. Are you part of a small, veteran-owned, woman-owned, or minority-owned business? Would you consider applying for CFI grant funding for site development if the tri-state agencies are awarded funding?

We would consider applying for CFI grant funding for site development if the tri-state agencies are awarded funding. We have ambitious goals to support public MDHD ZEV charging and hydrogen fueling, and CFI funding would enable us to deploy more charging and fueling infrastructure at an accelerated rate by de-risking investments and supporting development in underserved communities.

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.

At year-end 2022, some 22% of the registered Class 8 EV trucks in California had charged at Prologis refueling sites. At year-end 2023, we had provided enough EV charging to our customers to enable approximately 2 million miles of EV truck travel. Prologis' properties support logistics and goods movement by MDHD trucks via warehouses, distribution centers, and industrial parks. Whether fleets are located at a Prologis warehouse or third-party facility, Prologis Mobility's comprehensive platform is designed to meet fleets zero emissions needs for all vehicles with a simple charging-as-a-service model. We invest in state-of-the-art charging and fueling infrastructure, expedite, and simplify project implementation and ensure consistent, reliable, and efficient fleet charging and fueling operations when and where customers need them. This includes handling real estate, charging equipment, onsite make ready, operations and maintenance, and incentive program development. Prologis ZEV hubs enable fleets to tap into plug-and-play EV charging with no upfront cost (i.e., no capital costs), straightforward pricing per-kilowatt hour, simple contracts, and dedicated chargers. This includes operations and maintenance,



network management and 24/7 services. We also manage electricity, grid connections, energy management, and load optimization.

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?

It will be most important to focus public funding on en route charging in the next three years, but that en route charging will also occur overnight, thus, sites will need to support varied customer use cases. En route charging hubs require higher-powered infrastructure to minimize dwell times, infrastructure redundancy to minimize queuing and service interruptions, and battery energy storage systems (BESS) and charging management systems to minimize grid impacts and demand charges. These site elements, along with paying for underlying real estate costs, equate to higher capital costs and add pressure to cost recovery. The sporadic utilization of public charging stations, especially in the initial years of operation, may make it challenging for station owners and operators to achieve sustainable financial operations in the near term. This especially holds true for undercapitalized, small businesses and locations that may not have inherent demand but are critical to unlocking intrastate and interstate MDHD ZEV travel.

Public charging infrastructure will be important for drayage, last-mile, delivery, and long-haul freight. Each application is important since public charging sites will provide critical charging access to small fleets and independent operators that do not have their own private infrastructure. Such public infrastructure is necessary to enable the equitable adoption of MDHD ZEVs among these businesses.

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?

Charging hubs should include 10 - 100+ DC fast charging ports, dependent upon traffic flow as well as current and projected fleet utilization estimates. Prologis designs each site to be right-sized to meet current market demand, while ensuring sites are future-proofed and adaptable to rapidly evolving MDHD EV adoption technology advancements. This means ensuring all chargers are Megawatt Charging Standard (MCS)-Ready. This also means that every charger and its power electronics will already be ready to accept an upgrade to the MCS connector standard when needed.

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.

Prologis' ZEV charging hubs are designed to maximize equipment flexibility and modularity while reducing cost to refuel to meet a varied customer configuration demand as power levels increase over time. For example, Prologis' flexible modular designs allow for simple pull-in to pull-through reconfiguration as MCS vehicles begin their introduction.



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.

We recommend a maximum of 150 miles between charging stations for a minimum viable network. It is worth noting that the tri-state's ambitious ZEV fleet transition goals will warrant redundant charging stations and industrial clustering as ubiquitous as diesel fueling stations to enable a full ZEV transition. Therefore, it is less critical to focus on the spacing between stations and focus more on the most critical travel corridors and industrial clusters to electrify first and to serve opportunity charging use cases that complement destination (dwell) charging use cases and limitations at warehouses.

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?

Prologis ZEV charging hubs prioritize customer safety and convenience in their design. Each site is well-lit, accessible to the public, free of obstructions or obstacles, and includes emergency shutdown switches with the appropriate guards and covers. Each site uses point of sale systems that accept, read, and processes credit cards,



debit cards, fueling cards, gift cards, as well as wireless transactions from contactless cards and mobile devices. Since charging may take more or less time, depending on drivers' needs, Prologis will also build and provide comfortable, safe, and convenient seating, waiting, and restroom areas for patrons. Prologis has heard from numerous customers that reservation options are desired to help instill confidence in operators that a charging station will be available for them en route at exactly the time they need so as not to queue and/or wait for charger access. We strongly encourage the tri-state partners to support reservation options and contractable chargers in their project.

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.



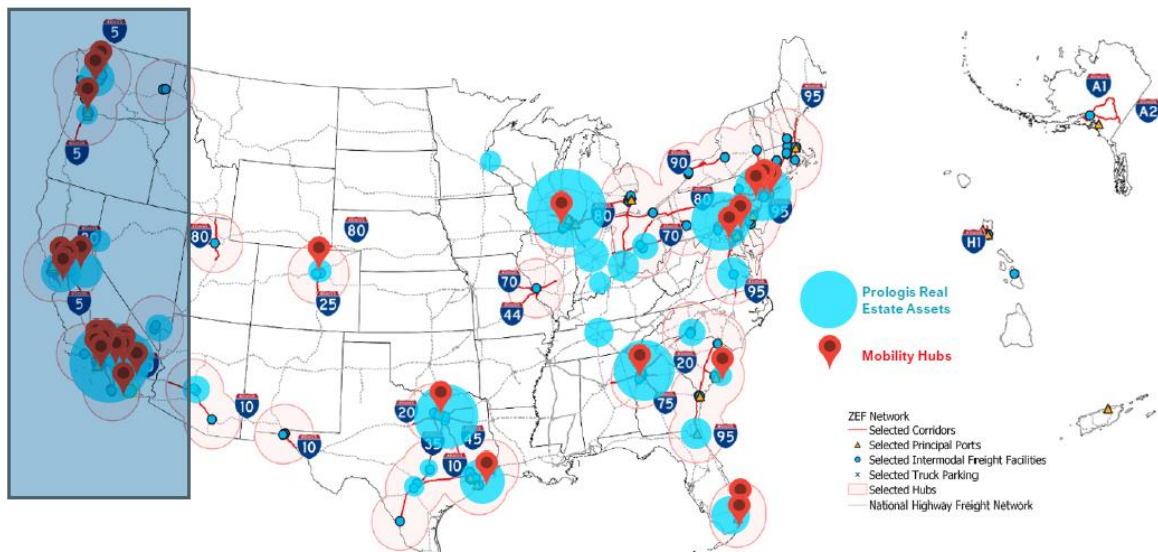
MDHD charging stations can range between \$1000-4000/kW installed capacity depending on site conditions, amenities, utility regulations, real estate cost, and distributed energy resources involved.

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.

Prologis' customers include some of the largest fleets in the nation. We seek to support these fleets ZEV transition by establishing a national network of MDHD public charging hubs. We have already started coordinating with many of these fleets to confirm demand for public MDHD charging stations and identify strategic locations as part of our broader national charging network efforts. Of the corridor segments identified in the RFI, California segments 2 and 3 have the highest demand from fleets and is where we would focus our initial deployment efforts, but we also have good coverage planned in the Seattle/Tacoma metro area and Portland. We continue to engage fleets and are supportive of exploring deployment efforts along the entire I-5 corridor as additional high demand locations are identified.

The below image showcases the Prologis real estate and charging hub plan alignment to the Joint Office of Energy and Transportation's Phase 1 of the National Zero-Emission Freight Corridor Strategy.

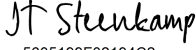
PHASE 1 – National Zero-Emission Freight Corridor Strategy
Prologis Mobility Hubs Overlay





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.

Prologis does not represent a utility. It’s important to note, however, that each of our charging hubs contemplated to date have been between 4-15MW of power.

DocuSigned by:

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10 June 2024

JT Steenkamp
Director Projects & Technology – Prologis Mobility

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