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CEC RFI for FHWA CFI Grant Program; Port of San Diegoâ€™s ZE Truck Stop Facility

Additional submitted attachment is included below.

Tri-State CFI RFI Response

Charging & Fueling Infrastructure Program (CFI) FY 24

EV Truck Stop Facility - ZE MD/HD Vehicles

RFI Overview

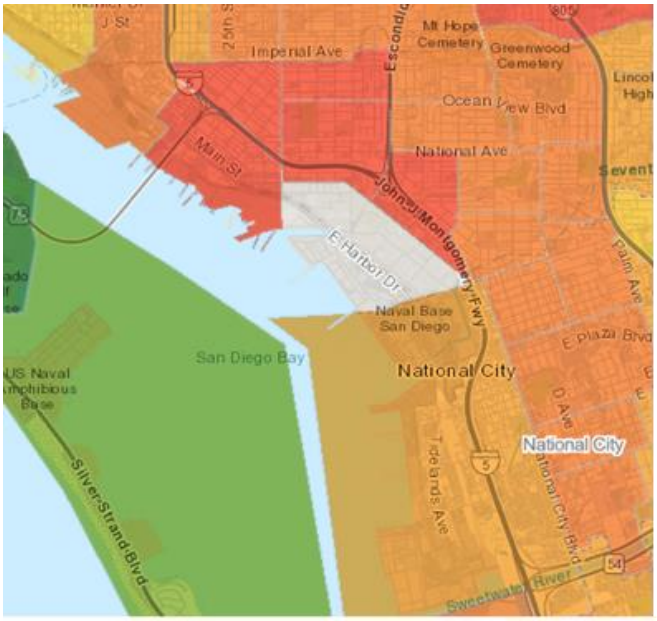
The Port of San Diego (Port) is pleased to respond the California Energy Commission's (CEC) Request for Information to provide input on a potential tri-state West Coast MDHD battery-electric/hydrogen highway corridor on I-5.

The San Diego Unified Port District Act establishes the Port's responsibility to increase commerce, generate economic growth, and foster job creation while acting as an environmental steward. As an established environmental leader in the San Diego region, the Port prioritizes reducing environmental impacts from maritime industrial activities on San Diego Bay. The Port's leadership addressing localized air pollution is embodied in the Port's Maritime Clean Air Strategy (MCAS) which serves as the agency's guiding planning document to improve air quality. The MCAS includes 34 separate clean air initiatives that address the different sources of mobile and stationary air pollution, including commitments to collaborate with stakeholders and provide education, community outreach, and improved public health.

Of interest to CEC are three working waterfront locations along the eastern shore of San Diego Bay. At the northern end is the Port's Tenth Avenue Marine Terminal (TAMT). To the south, is the National City Marine Terminal (NCMT). TAMT occupies approximately 100 acres of maritime industrial land in the heart of San Diego Bay's shoreline adjacent to a thriving downtown to the north, an environmental justice community and rail yard to the east, and major shipbuilding and repair facilities to the south. NCMT is a 135-acre complex with four working berths that primarily serve roll-on/roll-off cargo. NCMT is operated by Pasha Automotive Services (PAS), which provides auto-processing services to original equipment manufacturers (OEMs) before vehicles are loaded on either truck or rail for distribution to final destination. Pasha also operates a twice-monthly Jones Act service between San Diego and Hawaii. That service carries household goods, automobiles, small boats, and other cargo between the mainland and ports in Hawaii. Finally, NCMT also handles lumber for local use.

Located between the two terminals is San Diego's working waterfront, and the proposed Zero Emissions (ZE) Truck Stop. The area is connected by Harbor Drive, a regional arterial serving personal vehicles, cargo and delivery trucks, freight and light rail, bikes, and pedestrians.

The CFI funding of $2.5 billion over five years presents an opportunity to build upon the Port's historic investments in maritime cargo electrification infrastructure and last-mile distribution operation by funding a proposed ZE Truck Stop, including electric vehicle (EV) charging infrastructure in an urban, publicly accessible location, in underserved and disadvantaged communities.



CalEnviroScreen indicator map of the project area shows the area in the 80th and 90th percentiles for negative impacts on a statewide basis. Barrio Logan is show in in red (90th percentile) and West National City is in orange (80th percentile). The grey area is Naval Base San Diego.

The three project areas are located within disadvantaged communities in San Diego County with Nonattainment designations and Air Toxics concerns. The project areas are also within the Portside Community boundary as defined by California AB617. The Portside Community was nominated because it includes several census tracts with some of the highest CalEnviroScreen 3.0 (CES 3.0) ratings in California. CalEnviroScreen is a science-based mapping tool that identifies California communities that are most affected by many sources of pollution, and that are often especially vulnerable to pollution's effects. CalEnviroScreen uses environmental, health, and socioeconomic information to produce a numerical score for each census tract in the State.

The proposed ZE Truck Stop also directly supports the regional Metropolitan Planning Organization (MPO) the San Diego Association of Governments (SANDAG) 2021 Regional Plan Sustainability Chapter. Roadway improvements included in this section of the Regional Plan are zero-emission infrastructure and the transition of commercial vehicle fleets to zero-emission models to improve the quality of life for surrounding communities.

RFI Respondent

- **Agency:** Port of San Diego
- **Name:** Susan Scott
- **Email Address:** sscott@portofsandiego.org
- **Comment Title:** California Energy Commission RFI for FHWA Charging and Fueling Infrastructure Grant Program; Port of San Diego's Zero-Emission Truck Stop Facility
- **Attachment** .pdf

RFI Feedback on Following Questions

(1) Business Type/Vehicle Class: Port as driver, fleet operator, truck stop operator, installer, manufacturer, utility, public agency, or other?

The Port of San Diego's working waterfront facilitates the international and domestic movement of goods and people, serves the US Navy's shipbuilding and repair needs, provides commercial deepwater fishing facilities, and creates economic opportunity for all types of businesses that serve residents and visitors alike – all while preserving the environmental health and sustainability of the Bay. The Port's operations created 39,543 direct jobs in 2019 and supported the creation of 64,410 new jobs in San Diego County, adding $5.4 billion in GRP and $9.2 billion in economic output.

The Port has entered into an agreement with Skychargers LLC (Skycharger) to develop an approximately 4.8-acre ZE Truck Stop / charging facility on Port property located on Port jurisdiction in National City, near both TAMT and NCMT. Between these maritime cargo terminals are located three commercial shipbuilders, US Navy Base San Diego, and various water-dependent industrial support businesses. The identified ZE Truck Stop is located at a site along the "last mile" to the terminals, and that can serve these industrial facilities.

The Port has adopted an ambitious goal to deploy 100% ZE trucks calling on the Port's marine cargo terminals by 2030. Skycharger is proposing to develop 35 dual-port Electric Vehicle Supply Equipment (EVSEs) capable of simultaneously charging 70 trucks. The site will also include a convenience store and a restroom facility to serve drivers using the facility. To offset impacts to the grid, a 1,720-kW solar array with a 1,060 kW/4220 kWh (power rating/capacity) battery energy storage system will be installed at the site.

The Port is the public agency/landlord to Skychargers LLC (Skycharger), the entity that will be developing, operating, and maintaining a ZE Truck Stop. Skycharger was established in 2013. The company has experience building ZE infrastructure for the West Coast Electric Highway DC fast charger network (the fourth largest charging network in California) and is currently constructing the PepsiCo Los Angeles Mega Facility in Torrance, California. Skycharger is also offering the Port's tenants a heavy-duty trucking-as-a-service program to transition fleets serving the Port from diesel to electric.

(2) Would Port consider applying for CFI grant funding for site development if tri-state agencies awarded funding?

The Port strongly supports a tri-state approach, and views this as an opportunity to advance the electrification of Interstate 5, starting at the southern end just north of the Mexico border (approximately 11 miles from the Port). As a landlord Port, Port staff will work with tenant businesses and/or a project proponent to develop the multi-agency application for CFI grant funding that includes the ZE Truck Stop and will accept grant funding from FHWA as a sub-applicant to CEC as part of a tri-state collaboration.

The Port recently submitted a grant application to the US EPA's Clean Port's Program that included the EV truck stop facility as a sub-element of the overall project. From the information gathered for that effort, the Port expects the total infrastructure and equipment cost for the facility to be $20.8M.

(3) Rate if Port already operates or plans to use ZE battery electric MDHD vehicles in next 5 years? Rate 1-5 rating scale (1=lease likely). Add info regarding this (planned) use as desired.

The Port rates this as a 5.

In October 2021 the Port of San Diego Board of Port Commissioners (Board) adopted the Maritime Clean Air Strategy (MCAS) which includes an aspirational goal that 100% of all trucks serving the Port's marine cargo terminals be zero-emission by 2030, ahead of California's statewide goal.

In 2023, the Port released a Request for Proposals for a private operator to develop and operate an electric truck charging facility on Port jurisdiction. In Spring 2024, the Port entered into an Exclusive Negotiating Agreement with Skycharger to construct and operate the first exclusively ZE truck stop in San Diego County. Port staff anticipates approximately 40 ZE trucks will be operating in 2026 through Skycharger's trucking-as-a-service program. Additionally, with California regulations requiring drayage trucks to transition from diesel trucks to ZE trucks by 2035, staff anticipates many more battery electric trucks to operate at the Port of San Diego.

The Port's tenants are also partnering with the Port to accelerate the ZE transformation of Port operations by investing in EV cargo handling equipment to be deployed at TAMT and NCMT.

(4) What type of MDHD ZEV public charging is most important in next 3 years ('24-'27) – en route or overnight charging? For what purposes? (drayage, last-mile, delivery, long-haul freight, other?)

The Port believes that both types of charging are important.

The ZE Truck Stop will offer opportunity and overnight charging for drayage and other MDHD ZEV in the region, with priority given to trucks that serve the Port's marine cargo terminals. The location will serve trucks using I-5 and I-15 to call TAMT, NCMT, and potentially other working waterfront businesses.

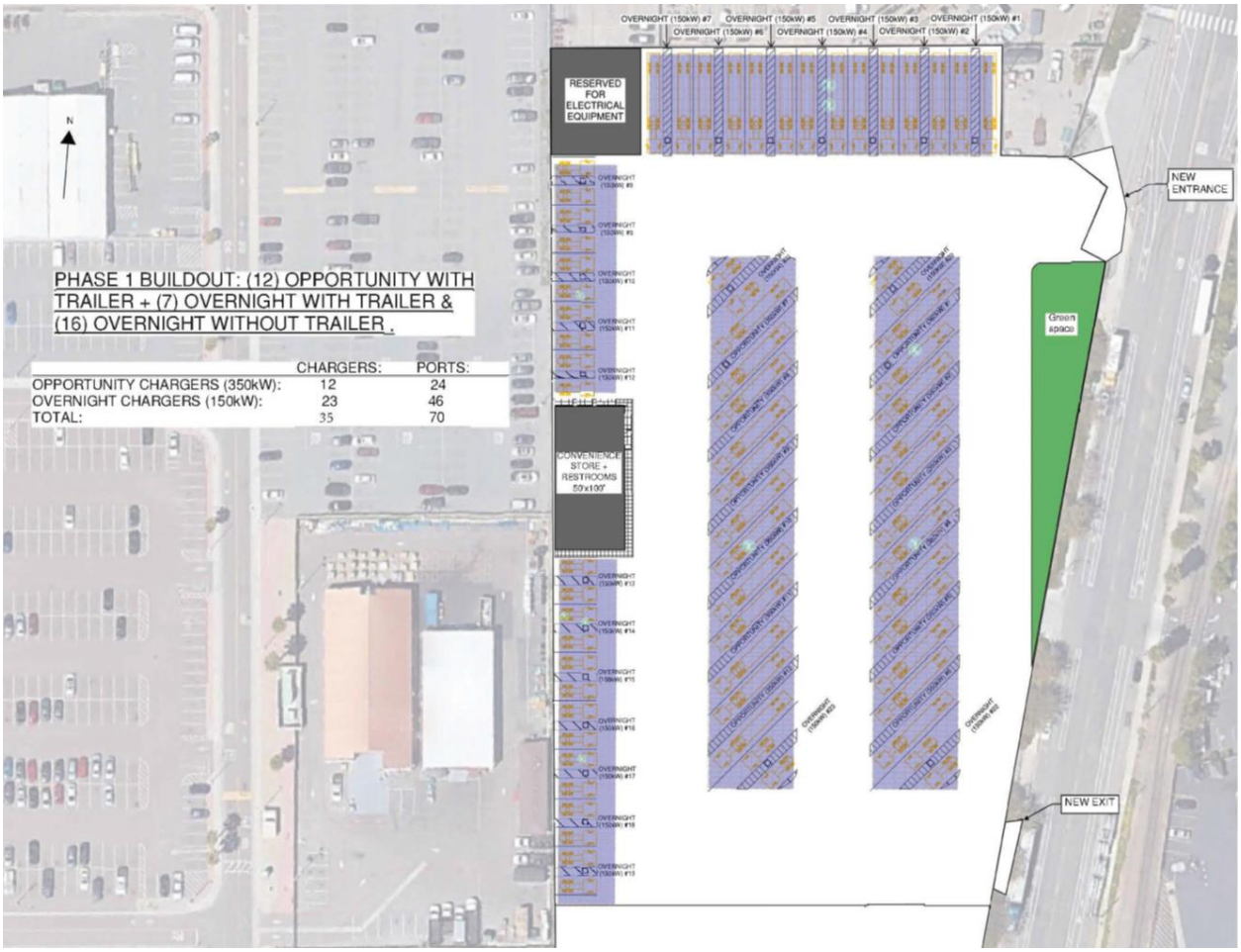
In the near term (three years), the Port believes the best opportunity for battery electric truck operation will be on short-haul routes where overnight charging can occur. However, certain cargo types may require multiple daily truck trips to and from the cargo terminals using drayage trucks and requiring the need for opportunity charging to properly fulfill the duty-cycle.

(5) From "24-'27, identify first priority for power level and charging port number for public en-route charging at a station? Public overnight charging? Does Port have a second or third configuration preference?

The first phase of the ZE Truck Stop is anticipated to open in 2026 and proposes 70 EVSE ports: 24 for opportunity charging at 360 kW and 46 for overnight charging at 160kW. A second phase will be designed once the utilization of the first phase triggers the need for additional infrastructure.

(6) Identify percentage of pull-in or pull through parking preferred and other desired station configurations at given site(s). Describe vehicle class/vocation considered if it differs from info in question (1).

Sixteen of the 70 proposed ports (approximately 23%) will be pull-through stalls.



(7) Distance between separate charging stations to support ZE trucks on I-5? Provide description of typical route or use-case considered for this recommendation. Describe vehicle class/vocation if different from info in question (1).

The Port's proposed ZE Truck Stop site is located on a surface arterial street less than 1 mile from I-5 (approximately two blocks).

The site is approximately 15 miles from Truck Net, the only existing HD truck charging station in San Diego County, located just north of the international border at the 905 and 125 interchange.

In February 2024, the San Diego Association of Governments (SANDAG) released the San Diego and Imperial Counties Sustainable Freight Implementation Strategy, which identified the colocation of truck parking and charging facilities as an opportunity to expand charging availability. The California Statewide Truck Parking Study also considered the feasibility of installing zero-emission fueling at truck parking lots. Both studies referenced public-private partnerships, similar to the one between the Port and Skycharger. Between Los Angeles and the international border, there is an existing truck parking facility and rest area, located south of the Marine Corps Base Camp Pendleton.

(8) What amenities desired at charging facility? Desire for additional parking beyond at charging stalls? Desire for reservation options?

The Port's proposed ZE Truck Stop will have a convenience store with restrooms and showers, as well as additional parking beyond charging stalls for those utilizing the site for overnight charging. A proposed reservation system will be deployed to gain access to these spots and track use.

(9) General cost estimates for MDHD charging stations the Port has designed, built, has experience with, including charger power levels and number of charges installed. Provide range of public cost share as a percentage of total project cost necessary to support more public charging stations to serve ZE trucks along freight corridor.

EVSE units vary in cost based on power. For example, 120-180 KW chargers cost between $100,000 to $120,000 per charger. Higher power chargers (350-360 KW) could be up to $230,000 per unit. Installation and miscellaneous costs can add additional costs up to $50,000 per unit. This does not include the make-ready infrastructure.

The Port recently submitted a grant application to the US EPA's Clean Port's Program that included the EV truck stop facility as a sub-element of the overall project. From the information gathered for that effort, the Port expects the total infrastructure and equipment cost for the facility to be $20.8M. The EVSE purchase, installation, and other ancillary costs were estimated to be $13.2M, or 63% of the total cost.

(10) Identify locations within the National Zero-Emission Freight Corridor Strategy hubs along I-5 that you anticipate needing EV charging in the next three years (2024-2027).

The Los Angeles to international border portion of I-5 is not included in the map segments provided in the RFI, however, this portion of I-5 is referenced throughout the National Zero-Emission Freight Corridor Strategy. The Port of San Diego facilities are also noted in the Strategy as ZE freight hub facilities prioritized in Phase 1. The Port's alignment with the National Strategy, combined with staff and Skycharger's commitment to, and investment in, a site location makes this an ideal project element to be included in a multi-agency FHWA CFI grant application submitted by CEC.

(11) N/A - Disregard as the Port is not a utility.