DOCKETED	
Docket Number:	24-EVI-01
Project Title:	U.S. Department of Transportation's Charging and Fueling Infrastructure Grant Program
TN #:	257557
Document Title:	Forum Mobility, Inc Comments - RFI Ideas and Considerations for CA Ports USDOT CFI
Description:	N/A
Filer:	System
Organization:	Forum Mobility, Inc.
Submitter Role:	Public
Submission Date:	7/1/2024 4:37:12 PM
Docketed Date:	7/1/2024

Comment Received From: Forum Mobility, Inc.
Submitted On: 7/1/2024
Docket Number: 24-EVI-01

Forum Mobility Inc - RFI Ideas and Considerations for CA Ports USDOT CFI

Additional submitted attachment is included below.

California Energy Commission
Request for Information
Docket #24-EVI-01

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 Feuling Infrastructure Discretionary Grant Program

Submitted June 28, 2024

By:

FORUM MOBILITY
ELECTRIFYING DRAYAGE

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June 28, 2024

The Honorable Pete Buttigieg
Secretary of the United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Subject: Letter of Commitment for the California Energy Commission's Medium- and Heavy-Duty Drayage Infrastructure Project under the Charging and Fueling Infrastructure Discretionary Grant Program Opportunity 693JJ324NF00017

Dear Secretary Buttigieg,

On behalf of Forum Mobility Inc., I am writing to express our commitment and support for the California Energy Commission's (CEC) proposed project to install charging and/or hydrogen fueling stations to support zero-emission medium- and heavy-duty (MDHD) drayage trucks at California ports.

Forum Mobility is committed to contributing to the success of this initiative and should the CEC be awarded through the CFI program, we plan to apply for funding to support several heavy-duty charging depots that will provide critical charging solutions to hundreds of small independent owner operators that service the Port of Long Beach, Port of Los Angeles and the Port of Oakland. We believe our contribution will significantly enhance the project's impact and help to ensure the successful deployment and use of zero-emission MDHD vehicle charging and fueling infrastructure.

We support the CEC's vision for the FY 2024 Charging and Fueling Infrastructure (CFI) application and our organization is prepared to collaborate closely with the CEC and other stakeholders to achieve a publicly accessible network of MDHD hubs that reflects the National Zero-Emission Freight Corridor Strategy.

We appreciate the opportunity to provide our input and are eager to support the CEC's application for the FY 2024 CFI program. Please do not hesitate to contact us at [insert contact email address] for further discussion on how we can contribute to the success of this critical initiative.

Sincerely,

Will Mitchell
Will Mitchell (Jun 28, 2024 11:57 PDT)

Will Mitchell, on behalf of
Matt LeDucq
CEO and Founder
Forum Mobility, Inc.
Matt.leducq@forummobility.com

Responses to RFI Questions

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

Forum Mobility (Forum) is a leading developer, owner, and operator of heavy-duty (HD) charging infrastructure and a buyer and lessor of class-8 heavy-duty electric vehicles (HDEV). Recognized as a Top 10 Drayage Service Provider in 2023 by *Logistics and Transportation Review*, Forum is expediting the deployment of zero-emission drayage trucks and corresponding charging solutions throughout the U.S. beginning with the primary harbor communities in California and the Northwest including the Ports of Long Beach, Los Angeles, Oakland and Seattle.

Forum's 'charging as a service' ("CaaS") and 'truck as a service' ("TaaS") models are purpose-built to address the current barriers of zero-emission HD truck adoption that primarily exists for small and independent fleet owners.

Forum is not a small, veteran-, woman-, or minority-owned business.

Question 2 - Would you consider applying for CFI grant funding for site development if the CEC is awarded funding?

In order to provide equitable truck leasing and charging options at parity or better to diesel, grant funding is a necessity to accelerate the transition to HD zero-emission charging technology. When identifying depot locations, Forum looks for sites that will also meet the requirements of state and federal grant programs such as disadvantaged communities, priority freight corridor designations, and proximity to small fleets and independent operators.

Grant funding received over the past two years has allowed Forum to expand into new port communities earlier than anticipated and provide more equitable charging contracts to customers. Forum will definitely be applying for CFI funding through the CEC, if awarded.

Question 3 - Do you already operate or plan to use zero-emission 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 MDHD vehicles as desired.

Yes, Forum plans to continue to support the accelerated adoption of HDEV through its TaaS model. (5= most likely)

Question 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?
d. Do you have a preference for the power level or speed of charging infrastructure?
e. Are you willing to provide a non-binding letter of commitment for the CEC's application.

Does not apply to Forum Mobility.

Question 5 - For EV charging and hydrogen fueling providers, describe:
a. Your organization's business model for public charging and/or hydrogen fueling offerings.

Forum's business model focuses on independent operators and small fleets who, in most cases, cannot afford to build or do not have space for dedicated charging infrastructure. Almost all Forum sites cater to this demographic that will need overnight dwell charging. The majority of Forum depots are designed to include a percentage of charging bays that are dedicated to 24/7 public charging.

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

- Reduce costs by securing grant funding and incentives,
- Optimize operational efficiencies by incorporating evolving technologies (new higher-power chargers, changing charging systems to meet changing fleet charging patterns, on-site amenities (restrooms, driver lounges, Wi-Fi), and
- Tiered pricing structures.

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

- Safe and secure location with security gate, cameras and on-site depot attendant,
- Restrooms and driver lounge with food and beverage options,
- Driver parking spots for dwell customers.

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.

Forum takes the following into account when determining the site configuration of its depots:

- Traffic Patterns: Estimate the number of trucks expected to use the facility daily, considering peak hours,
- Facility Services: Consider space needed for additional services (e.g., restrooms, repair bays, driver lounges) and potential future expansion,

- Local Regulations: Research zoning requirements and minimum site size for commercial development.

Parking Configurations are determined by:

- Truck Maneuverability: Prioritize pull-through spaces for efficient truck movement. Consider trailer length and turning radius.
- Charging Infrastructure Placement: Plan for efficient access to charging stalls while minimizing wasted space.
- Traffic Flow: Designate separate lanes for incoming and outgoing trucks to avoid congestion.

Number of Charging Stalls are determined by:

- Number of Trucks: Determine the number of simultaneous chargers needed to meet peak demand.
- Charging Power: Consider the type of charger needed to accommodate Forum's charging models.

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

- Initial depot design is based on available power and forecasted customer demand
- All Forum depots are designed for future upgrades, including:
  - Installing oversized and spare conduit to allow for electrical upgrades based on engineer's estimate of anticipated load growth.
  - Selecting charger hardware in part based on modularity and future replaceability.
- As charging hardware evolves it will be efficiently modified or replaced to meet new market demands.
- Given that the speed of permitting and construction is a primary goal, depot design is focused on developing charging infrastructure first. However, drawings are designed to allow for future integration of distributed energy resources (e.g., batteries, solar panels)

Question 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.

The current advances in charging equipment and HDEV technology support the short drayage first-leg distances traveled from port facilities to intermodal supply chain locations, which does not require trucks to run long haul miles.

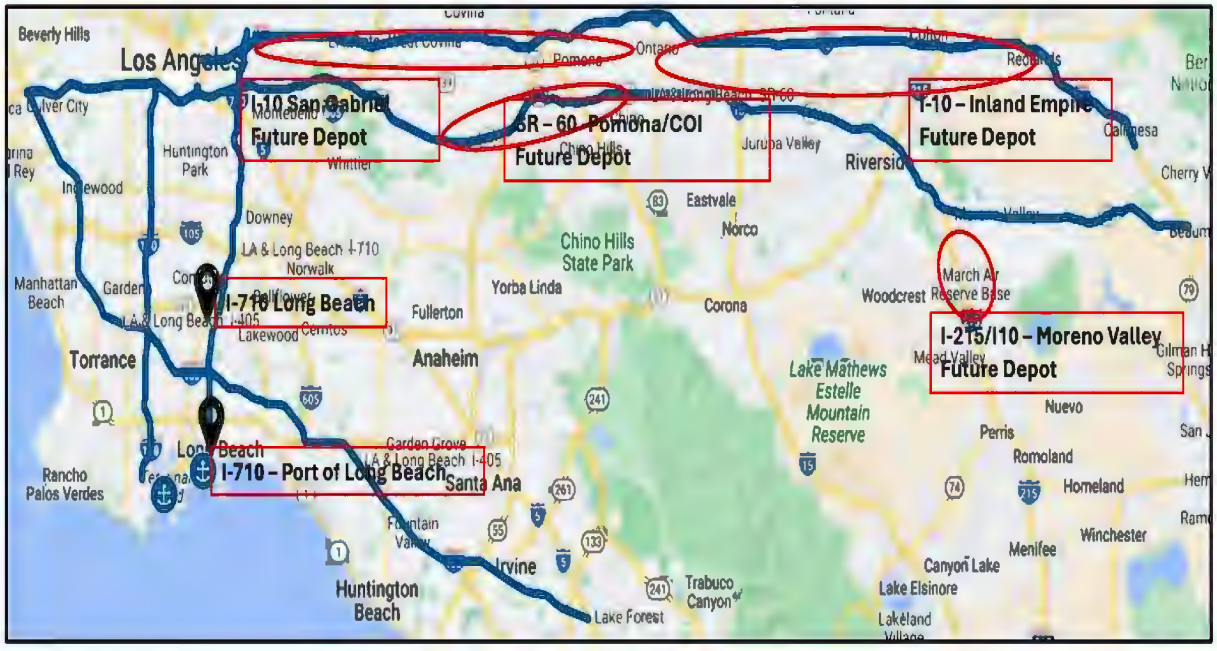
Recent investments in California ports are focused on building charging infrastructure near and along key drayage freight routes, with a focus on high-power chargers. The goal is to create a network that supports drayage short-haul operations without requiring constant charging while encouraging a shift to zero-emission transportation. Forum feels strategically placed stations located every 50-75 miles would support current and projected national truck transportation trends.

Question 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?

Forum, who acts as both a developer and lessor, would like to see a higher cost share for infrastructure projects (60%). A deeper investment from federal grants like CFI would allow Forum to lease more trucks, offer even better charging rates to fleets resulting in a deeper and accelerated adoption of HDEVs. Projects cost estimates are listed below in Question 8-b - "Corridor Segments".

Question 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.

Forum Mobility HD Charging Network Southern California



Forum's Southern California HD charging network, when fully developed, will encompass six depot sites starting at the Port of Long Beach and Los Angeles and extending along the I-710, SR 60, and I-10 freight corridors into the Inland Empire and Moreno Valley.

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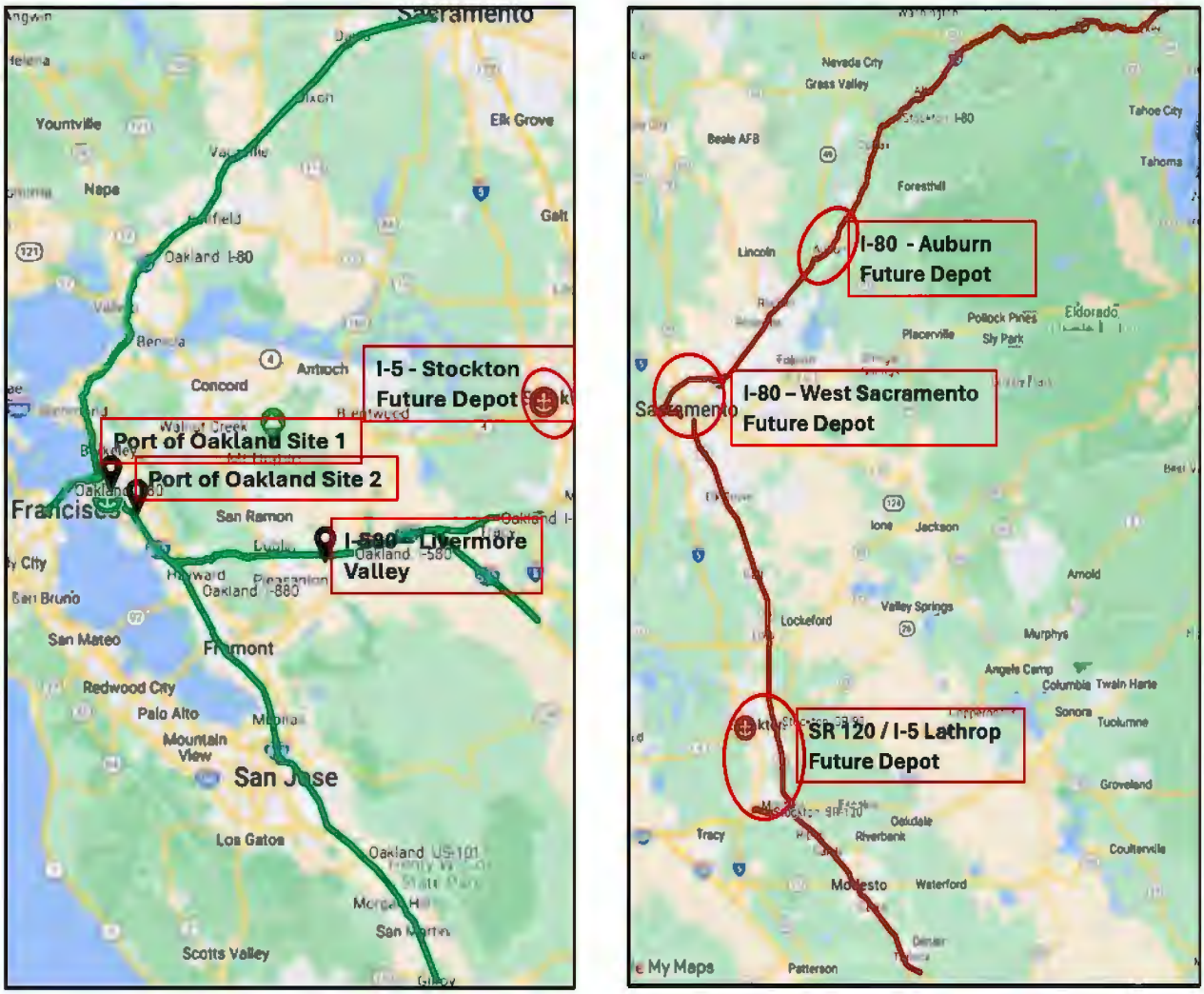
Forum Mobility HD Charging Network in Northern California



Forum's Northern California HD charging network will support two freight corridors. The first will directly support the Port of Oakland with four depots extending along the I-580 through the Livermore Valley. The second will support freight traffic along the I-5 and I-80 providing end points for drayage traffic from the Port of Oakland and providing critical charging for long haul HD traffic moving through the state.

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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. 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.

HD Depot Location	Truck Charging Bays	# of 180 kW Dual Ports	# of 360 kW Dual Ports	Project Completion	Total Project Cost	Grant Funding
Projects in Development						
I-710 - Port of Long Beach	44	0	44	2024	$14,860,000	$3.5MM - Awarded
I-580 - Livermore Valley	84	0	42	2025	$26,000,000	No (Not in a DAC)
I-710 - Long Beach	95	42	12	2026	$18,554,000	$10MM - Awarded
Port of Oakland (site 1)	30	0	30	2026	$7,300,000	$3.5MM Submitted
Port of Oakland (site 2)	86	36	50	2027	$23,000,000	CFI/BAAQMD
Projects in Site Development						
I-5 - Lathrop	60	30	30	2026	$21,000,000	SJVAPCD
Port of Seattle	60	30	30	2027	$24,000,000	TBD
I-10 - San Gabriel	76	50	26	2027	$22,000,000	CFI/SCAQMD
SR-60 - Pomona/COI	50	25	25	2027	$18,000,000	CFI/SCAQMD
I-10 - Inland Empire	110	50	60	2027	$30,000,000	CFI
I-80 – West Sacramento	40	40	0	2027	$17,000,000	CFI/SMAQMD
I-80 - Auburn	20	20	0	2027	$10,000,000	CFI
I-215 - Moreno Valley	100	60	40	2027	$25,000,000	CFI/SCAQMD

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.

Forum's focus for the next three years is on the freight corridors presented in question 8.

Question 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.
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?

Does not apply to Forum Mobility