DOCKETED	
Docket Number:	19-TRAN-02
Project Title:	Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure
TN #:	249470
Document Title:	Presentation - Potential Solicitation for MDHD Charging and Hydrogen Refueling Infrastructure Projects on Designated Corridors
Description:	N/A
Filer:	Spencer Kelley
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/28/2023 12:24:57 PM
Docketed Date:	3/28/2023

Staff Workshop on Concepts for a Potential Solicitation for Medium- and Heavy-Duty Vehicle Charging and Hydrogen Refueling Infrastructure Projects on Designated Corridors

Fuels & Transportation Division
California Energy Commission
March 28, 2023

Presenters:
Sebastian Serrato, Kristi Villareal
Larry Rillera, Ben De Alba

Agenda

- Opening Remarks
- Workshop Goals
- State & Federal Funding
  - Federal Charging & Fueling Infrastructure Discretionary Grant Program
- Proposed Staff Concepts
- Q&A/Public Comment
- Next Steps
- Adjourn

Housekeeping

- Workshop is being recorded.
- Virtual Participation through Zoom
  - Q&A period after main presentation
  - Raise Hand or Q&A feature

- Workshop Event Webpage:

  https://www.energy.ca.gov/event/workshop/2023-03/staff-workshop-potential-solicitation-medium-and-heavy-duty-charging-and

- Written Comments to Docket #19-TRAN-02:

  https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-TRAN-02

Commitment to Diversity

The CEC adopted a resolution strengthening its commitment to diversity in our funding programs. The CEC continues to encourage disadvantaged and underrepresented businesses and communities to engage in and benefit from our many programs.

To meet this commitment, CEC staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups throughout the state;
- Notify potential new applicants about the CEC's funding opportunities;
- Assist applicants in understanding how to apply for funding from the CEC's programs;
- Survey participants to measure progress in diversity outreach efforts.
- Diversity Survey Link

Origins of the Clean Transportation Program

MD BEV: Credit David Cullen

Hyundai XCIENT HD FCEV

- Transportation sector responsible for significant greenhouse gas emissions and public health impacts
- Pollution burdens fall disproportionately on vulnerable and disadvantaged communities
- Clean Transportation Program created to invest in a cleaner, healthier transportation system
- Provides up to $100 million per year. Expires at end of 2023

Assembly Bill No. 8

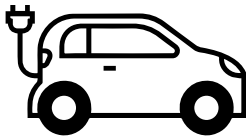
CHAPTER 401

Workshop Goals

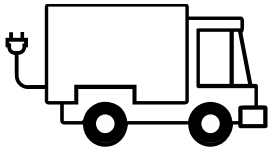
Goals of Corridor Solicitation Concepts Workshop

- Present concepts on a potential corridor-based, medium- and heavy-duty (MD/HD) zero-emission vehicle (ZEV) infrastructure grant funding solicitation:
  - Eligible technologies & applicants
  - Corridors
  - Labor and Workforce
- Gather feedback from interested parties

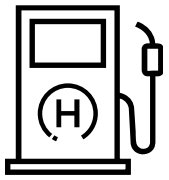
State Investments in FYs 22/23 - 25/26



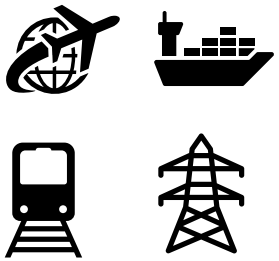
$900 M
Light-Duty EV Charging Infrastructure



$1.7 B
Medium and Heavy-Duty ZEV Infrastructure



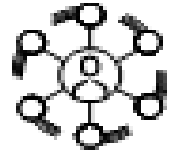
$ 90 M
Hydrogen Refueling Infrastructure



$97 M
Emerging Opportunities

$15 M
Low Carbon Fuels

$118 M
ZEV-Related Manufacturing



$10 M
ZEV Workforce Development

Total: $2.9 Billion

Available Funding for MD/HD Infrastructure

- The 2022-2023 Investment Plan Update for the CTP proposes a funding allocation of $1.7 billion to MD/HD ZEV Infrastructure from fiscal year (FY) 2022-23 through FY 2025-26

- Infrastructure Investment and Jobs Act.
  - $350 million across all states available for corridor refueling and charging.

Federal Funding Opportunities
IRA & IIJA

Inflation Reduction Act	Infrastructure Investment and Jobs Act
✓ Extends federal tax credit on charging equipment through 2032: • Individual/residential uses • Commercial uses • Equipment must be placed in a low-income community or non-urban area ✓ $1 billion for states, municipalities, Indian tribes, and schools for heavy-duty ZEVs and infrastructure ✓ $3 billion for zero-emission technology and equipment at ports	✓ $5 billion for the National Electric Vehicle Infrastructure (NEVI) Formula Program ✓ $2.5 billion for the Charging and Fueling Infrastructure Discretionary Grant Program (CFI): • Alternative Fuel Corridors Grants • Community Charging and Fueling Grants

NEVI: Charging and Fueling Infrastructure Discretionary Grant Program (CFI)

- $2.5 billion discretionary program from IIJA; $700M for FY 22 and FY 23
- Applications due May 30; information here
- Electricity, hydrogen, propane, methane eligible
- Stations must be publicly accessible
- Community grants capped at $15 million; 80% maximum federal share
- Eligible applicants: Tribes, states, local governments, ports, etc.
- **CEC to release Request for Information on CFI**

Concepts for Potential Solicitation: MD/HD Corridor Solicitation Concepts

Concept: Funding

- 2023 initial solicitation, potentially recurring
  - $20 million available for initial solicitation
- 50% total project match share requirement (O&M is eligible, cap of 10% of eligible match)
- Minimum award: $5M per project
- Maximum award: $20M per project

Concept: Applicant Requirements

- Serving a commercial fleet or vehicle operator with existing/planned fuel demand contracts
  - Examples include:
    - Fleet owner
    - Service providers
    - BEV or FCEV station developer
    - Site owner, authorized lessee, or an authorized representative of a site where MD/HD infrastructure will be installed

Concept: Project Requirements

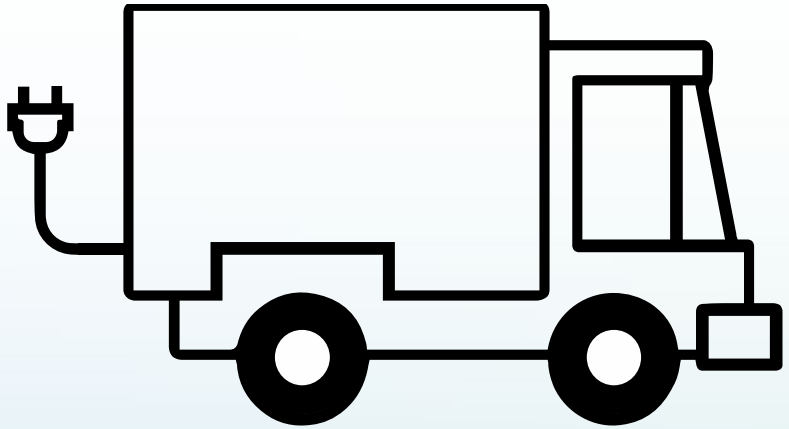
- Construction and installation of EV chargers and hydrogen refueling stations at 2 locations or more along a designated corridor
- Charging infrastructure for MD/HD battery electric vehicles (BEVs)
  - Minimum of 10 chargers high-powered DCFC at each location
- Hydrogen refueling for MD/HD fuel cell electric vehicles (FCEVs)
  - Minimum 3 dispensing platforms for simultaneous refueling at each location
- Both EV and H2 technologies at a location
  - Minimum 6 DCFC and 2 H2 dispensing platforms

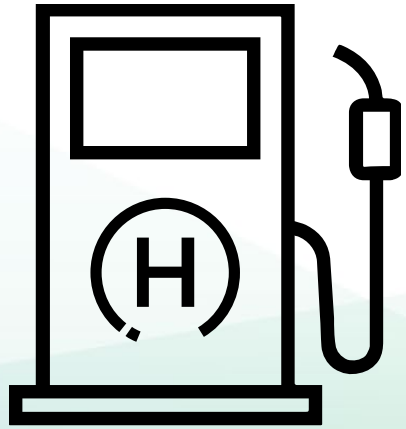
Concept: Project Requirements

- Business Plan (including target markets and addressing fleet needs; corridor build-out plan)
- Maximum time to operation and open-retail
- Minimum fleet fueling/charging requirements
- Minimum operational periods and up-time requirements
- Operation & Maintenance costs ineligible for reimbursement, but are eligible as match (maximum 10% eligible match)
- Public fueling requirement
- ZEV Infrastructure Labor and Workforce Plan

Concept: Eligible Equipment

- Electric Vehicle
  - EnergIIZE eligible equipment list
- Hydrogen
  - Stations must be capable of dispensing 350 or 700 bar and be certified to ASME, ASTM, and NFPA standards





Concept: Evaluation Criteria

- Evaluation Criteria
  - Budget
  - Hydrogen Station Performance
  - Charging Station Performance
  - Approach to Station Selection
  - Project Readiness
- Qualifications of Project Team
- Social and Environmental Benefits
  - Diversity, equity and inclusion of local businesses, workers, and residents in DACs/LICs
- ZEV Infrastructure Labor and Workforce Plan

Concept: Evaluation Criteria: ZEV Infrastructure Labor and Workforce Plan

- Purpose - To support an inclusive and high-road* workforce for ZEV infrastructure construction, installation, and service.
- Requirements - Develop a ZEV Infrastructure Labor and Workforce Plan:
  - Support and pipeline development for Electric Vehicle Infrastructure Training Program (EVITP) training and certification.
  - Use of pre-apprentices for the project (reimbursed).
  - Number of apprentices on the project.
  - Number of direct and indirect jobs created for the project.
  - Job quality – training, recruitment, and hiring from prioritized communities for all job roles; job classifications or titles; job classifications' specific role(s) in the project; prevailing wage rates and benefits; workplace safety and violations.
  - Worker voice, transparency, and collaboration within the company/business.

Source info: https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=UIC&division=7.&title=&part=&chapter=2.&article=

Concept: Eligible Corridors

Senate Bill 671

- Requires that the California Transportation Commission (CTC) identify freight corridors, or segments of corridors, and the infrastructure needed to support the deployment of MD/HD ZEVs.
- The Clean Freight Corridor Efficiency Assessment is due December 1, 2023.

Concept: Eligible Corridors

- The methodology used to identify the proposed Top Six Freight Corridors is linked here on the CTC website:

  https://catc.ca.gov/-/media/ctc-media/documents/programs/sb671/sb671-technical-memo-030923-a11y.pdf

DRAFT Proposed Top Six Freight Corridors

AS OF 02/02/2023 ILLUSTRATIVE & DRAFT PRELIMINARY – FOR DISCUSSION

Further consideration of high truck vehicle volume but low truck VMT or <50-mile corridors may be necessary to complete charging and/or refueling infrastructure

Priority corridors for consideration
Ordered by truck VMT[1] – 2022 projected

Daily truck VMT on high-volume FAF links by corridor
Million miles

I-5 from the south border to north border (Oregon)[2]	4.5
I-15 from LA to southeast border (Nevada)	1.6
Route 99 from Stockton to Red Bluff	1.3
I-10 from LA to southeast border (Arizona)[3]	1.2
I-40 from intersection with I-15 to southeast border (Arizona)	0.7
I-80 from San Francisco to northeast border (Nevada)[4]	0.7
Other	6.4
Total	16.5

>10M or >60% of statewide truck vehicle miles travelled

1. Vehicle miles travelled
2. The I-5 corridor includes the I-710 where it connects I-5 to the ports of Los Angeles and Long Beach, and the segments of I-405 and Highway 1 that connects I-10 and I-710 near the San Pedro Bay Ports. This corridor also includes the local roads that connect the I-5 to the Port of San Diego and to the US/Mexico border
3. The I-10 corridor includes the short segment of SR-47 that connects I-10 to the Port of Los Angeles, and the segments of I-405 and Highway 1 that connects I-10 and I-710 near the San Pedro Bay Ports
4. The I-80 corridor includes the short segments of I-580 and I-880 that connect I-80 to the Port of Oakland

Source: Highway Performance Monitoring System (Federal Highway Administration), Freight Analysis Framework (Bureau of Transportation Statistics)

DRAFT Designated Corridors – Key Connecting Routes to Ports Included

AS OF 02/09/2023 ILLUSTRATIVE & DRAFT PRELIMINARY – FOR DISCUSSION

PORT OF OAKLAND

The I-80 corridor includes the short segments of I-580 and I-880 that connect I-80 to the Port of Oakland

SAN PEDRO BAY PORTS

The I-5 corridor includes the I-710 where it connects I-5 to the Ports of Los Angeles and Long Beach, and the segments of I-405 and Highway 1 that connect I-10 and I-710 near the San Pedro Bay Ports. This corridor also includes the local roads that connect the I-5 to the Port of San Diego and to the US/Mexico border

The I-10 corridor includes the short segment of SR-47 that connects I-10 to the Port of Los Angeles, and the segments of I-405 and Highway 1 that connect I-10 and I-710 near the San Pedro Bay Ports

Note: These ports are key freight origin and destination points. Thus, they have been included in the freight corridors to reflect the need for infrastructure in and around them

Source: CTC Working Group, analysis of Freight Analytics Framework (FAF 5)

Public Comment/Discussion Period

Zoom Participants

- Use the "raise hand" feature to make verbal comments
- Use the Q&A feature to type in your question

Telephone Participants:

- Dial *9 to raise your hand
- Dial *6 to mute/unmute your phone line

Written Comments

https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-TRAN-02

Deadline for comment: Friday, April 14, 2023

Discussion

- Is there interest in developing such projects?
- Minimum chargers, dispensers, capacity?
- Ideas regarding designated corridors and building out the infrastructure – planning for a recurring solicitation.
- Well thought out business plans will be important:
  - Can contracts supporting those plans be secured in time for submittal during application phase?
  - Should extra points be given to mixed use stations utilizing both ZEV technologies?

Discussion

- Public fueling requirement:
  - How to best balance infrastructure use to be available for public and light duty refueling/charging?
  - Are there services or business structures available to optimize station utilization in a multiuse case?
- Schedule Requirements:
  - Time frames for events that may impact the developers' schedules, such as permitting, supply chain delays, and grid upgrades

Discussion

- Standard MD/HD equipment:
  - For electric charging equipment we are considering the EnergIIZE Eligible Electric Equipment list to be a guide for applicants.
  - Hydrogen stations must be capable of dispensing 350 or 700 bar and be certified to ASME, ASTM, and NFPA standards.
- Please share the potential risks and mitigations staff should be aware for the concept ideas presented today.

Submit Comments to Docket 19-TRAN-02

Electronic Commenting System

Visit the comment page for this docket at:
https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-TRAN-02

Comment by E-mail

E-mail: docket@energy.ca.gov

Subject Line: "19-TRAN-02 Staff Workshop on Potential Solicitation for MD/HD Charging and Refueling Infrastructure on Corridors"

All comments due by 5 pm, April 14, 2023

Contact Information

Sebastian Serrato

sebastian.serrato@energy.ca.gov

916-891-9151

Kristi Villareal

kristi.villareal@energy.ca.gov

916-908-7494

Thank you for participating remotely.