DOCKETED		
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Project Title:	Energy Infrastructure Incentives for Zero-Emission Commercial Vehicles (EnergIIZE Commercial Vehicles)	
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Document Title:	CEC Presentation for Incentives Program Advisory Group (IPAG) led by California Air Resources Board	
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# California Energy Commission: ZEV Infrastructure Incentives

April 20, 2022

Elizabeth John Medium- and Heavy-Duty Zero Emission Technologies Office Fuels and Transportation Division



## **Context Setting: ZEV Goals**

Category	Description
Light Duty Vehicles	<ul><li>- 2025: 1.5M ZEVs</li><li>- 2030: 5M ZEVs</li><li>- 2035: 100% of New Sales are ZEVs (E.O. N-79-20)</li></ul>
Charging and Refueling Infrastructure	<ul><li>- 2025: 250,000 Chargers (inc. 10,000 DC Fast Chargers)</li><li>- 2025: 200 Hydrogen Refueling Stations</li></ul>
Medium- and Heavy-Duty Vehicles	<ul> <li>- 2029: 100% of New Transit Bus Purchases are ZEVs</li> <li>- 2035: 100% of All Off-Road Vehicles and Equipment are ZEVs</li> <li>(E.O. N-79-20)</li> <li>- 2035: 100% of All Drayage Trucks are ZEVs (E.O. N-79-20)</li> <li>- 2045: 100% of All Trucks and Buses are ZEVs (E.O. N-79-20)</li> </ul>



## **Clean Transportation Program Origins** in Statute

#### Assembly Bill No. 8

An act to amend Sections 41081, 44060 5, 44125, 44225, 44229, 44270.3 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 942/5, 94 NACEY 1, and NACEY 2 of, to add and repeal Section 43193 of, and to repeal section 44399 of, the Health and Safety Code, to amend Sections 4285 Section 44390 of the Budship B and 47889 of the Public Resources Code, and to amend Sections 9.50.1. (2007) of the Public Resources Code, miss of missing sections 1, 1961.1, and 9853.6 of the Vehicle Code, relating to vehicular air pollution, and declaring the urgency thereof, to take effect immediately.

[Approved by Governor September 28, 2013, Filed with Secretary of State September 28, 2013.]

AB S. Perea. Alternative fuel and vehicle technologies: funding t All 6, Perce. Autentative niet and venture reconorogies. nations from ann.

(1) Existing law establishes the Alternative and Renewable Fuel and viory Program, administered by the State Energy Resources

This bill would provide that the state board has no authority to enfor we vehicle manufacturers project to be sold or leased over the next 3 years, as reported to the state board, and the number of hydrogen-fueled position to the state status, said the mannest of hydrogen-indeed tered with the Department of Motor Vehicles through April

- Established by Assembly Bill 118 (Nunez, 2007)
- Provides up to \$100 million per year
- Extended to January 1, 2024 by Assembly Bill 8 (Perea, 2013)

**Clean Transportation Program Funding** 

By Category 2009–2021

**≠** ELECTRIC \$451M

OTHER TYPES \$46.3M

**WORKFORCE \$33.3M** 

ETHANOL \$33.5M

HYDROGEN \$218M (H)

NATURAL GAS/PROPANE \$131M •

BIOMETHANE \$67.9M •

BIODIESEL/RENEWABLE DIESEL \$67.9M •

\$1 Billion

invested in 600+ projects & programs

## **General Funds from ZEV Package**

## to be Administered by the CEC



\$250 million - for zero-emission drayage trucks

\$25 million - for drayage truck and infrastructure pilot



\$90 million - for transit buses

\$50 million - for school buses



\$250 million - for ZEV manufacturing grants

\$500 million - for ZEV infrastructure

\$785 million appropriated in Budget Act of 2021;

\$380 million anticipated in FY 2022-23 and 2023-24

The budget prioritizes diesel emission reduction by earmarking funding to replace







with zero-emission alternatives and refueling infrastructure

And to accelerate charging and hydrogen refueling stations and promote ZEV-related manufacturing

### 2021-2023 Zero-Emission Investments Funding Prioritizes



\$314M

Light-Duty Electric Vehicle Charging Infrastructure and eMobility



\$690M

Medium and Heavy-Duty Zero-Emission Vehicles and Infrastructure

(battery-electric and hydrogen fuel cell)



\$77M

Hydrogen Refueling Infrastructure



\$238M



Total General Funding (administered through CTP):

\$1.127B



\$25M

Zero and Near Zero Carbon Fuel Production and Supply



\$243.8M

**ZEV Manufacturing** 



\$15M

Workforce Development Total Funding \$1.365B



# Prior MD/HD Infrastructure Funding and Total Awards

Grant Funding Opportunity Title	Total Amount
Block Grant for MD/HD Zero-Emission Refueling Infrastructure Incentive Projects	\$50 million (authority up to \$276 million)
Zero-Emission Transit Fleet Infrastructure Deployment	\$36.2 million
Blueprints for Medium- and Heavy-Duty Zero-Emission Vehicle Infrastructure	\$7.6 million
BESTFIT Innovative Charging Solutions (MD/HD projects)	\$8.4 million
Hydrogen Fuel Cell Demonstrations in Rail and Marine Applications at Ports (H2RAM) (Joint project with ERDD)	\$4 million
Zero-Emission Drayage Truck and Infrastructure Pilot Project (Joint solicitation with the CA Air Resources Board (CARB))	\$44.3 million (\$108.2 M total with CARB funds)



### **EnergIIZE**

#### **Energy** Infrastructure Incentives for Zero-Emission Commercial Vehicles

EnergIIZE Commercial Vehicles provides financial incentives to increase the adoption of commercial zero emission medium- and heavy-duty (MD/HD) vehicles to promote healthy communities

EnergIIZE helps commercial fleets keep pace with industry demands as they transition to zero-emission vehicles, and helps advance zero-emission infrastructure technology



Funded by the California Energy Commission's (CEC)

Clean Transportation Program





















#### **EV Fast-Track**

Applicants in this funding lane are ready to go and may already have prior experience applying for commercial MD/HD EV funding

#### **EV Jump Start**

Applicants in this funding lane will need to meet specific eligibility criteria and will be allotted more time to submit required documents

# **EV Public Charging Station**

Applicants in this funding lane intend to develop publicly available charging stations for commercial MHD EVs

#### Hydrogen

Applicants in this funding lane intend to develop a hydrogen infrastructure project for commercial MHD vehicles



# Proposed MD/HD ZEV Infrastructure Concepts

#### **Summary of Proposed Concepts**

Hydrogen Refueling

School District Vehicle Grid Integration

Truck Parking EV Charging and Hydrogen Refueling

Warehouse and Regional Trucking

Innovative EV Charging and Hydrogen Refueling Technologies

Mobility-as-a-Service Models

Rural Small Transit Fleet Infrastructure Deployment

Large Scale Ultra-Fast Charging Stations

MD/HD Blueprint Planning Documents

Infrastructure Concepts to Complement CARB Demonstration and Pilot Project Concepts

MD/HD Loan Pilot

https://www.energy.ca.gov/event/workshop/2019-10/staff-workshop-medium-and-heavy-duty-zero-emission-vehicles-and

## **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?docketnu

mber=19-TRAN-02

## **Comment by E-mail**

E-mail: docket@energy.ca.gov

Subject Line: "19-TRAN-02 MD/HD Allocation"



## **ZEV Dashboard**

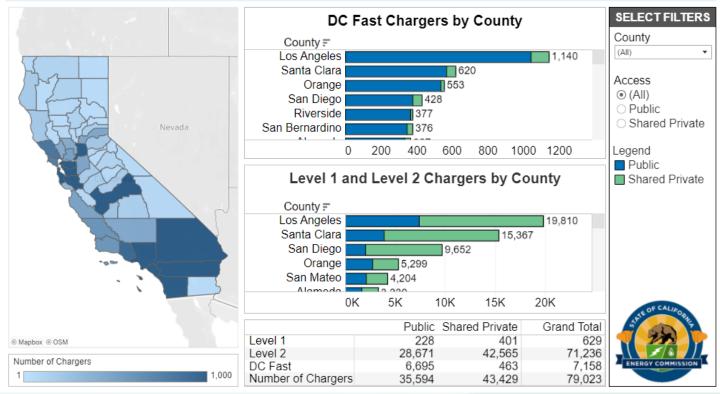
#### **ELECTRIC VEHICLE CHARGERS**

Total Public and Shared Private Electric Vehicle Chargers

79,023

**Public** 45.043% 35,594

**Shared Private** 54.957% 43,429



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https://www.energy.ca.gov/data-reports/energy-insights/zero-emissionvehicle-and-charger-statistics



## Find a Partner on EmpowerInnovation.net

Empower Innovation strives to accelerate your clean tech journey with easy access to funding opportunities from the CEC and other funding providers, curated resources and events, and connections to people and organizations.

#### FIND A PARTNER

Announce your interest in this funding opportunity and message other interested parties to find potential partners.

#### **RESOURCES & TOOLS**

Browse the collection of resources for clean tech innovators including Resource Libraries, Funding Sources, Tools, and Databases.

To search for funding opportunities, please go to this link: <a href="https://www.empowerinnovation.net/en/custom/funding/directory">https://www.empowerinnovation.net/en/custom/funding/directory</a>

Please direct questions for the Empower Innovation platform to: https://www.empowerinnovation.net/en/contact\_us





## Thank you

Clean Transportation Program Funding 101:

https://www.energy.ca.gov/event/workshop/2021-12/workshop-clean-transportation-program-funding-101

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