

**DOCKETED**

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## **CONCEPT #1: FREIGHT, ZERO-EMISSION VEHICLE INFRASTRUCTURE DEPLOYMENT FOR VEHICLE DEMONSTRATIONS**

### **PURPOSE OF SOLICITATION**

Projects funded under this solicitation concept will support the deployment of zero-emission infrastructure, including electric vehicle charging and hydrogen refueling for medium- and heavy-duty (MD/HD) advanced on-road or off-road vehicle technologies within the California freight system. This includes seaports, railyards, inland warehouses, and multimodal freight distribution centers that directly support freight transport vehicles.

This solicitation may complement California Air Resources Board solicitations for advanced vehicle demonstrations within the port and freight system.

### **ELIGIBLE APPLICANTS**

This competitive grant solicitation is open to owners and operators of freight facilities such as railyards, warehouses, distribution centers, airports, seaports, and depots.

At a minimum, all eligible Applicants must include the following in their proposed project: 1) an original equipment manufacturer (OEM) **or** a technology integrator working with an OEM and 2) committed end-user fleet operator partners.

### **PROJECT REQUIREMENTS**

All projects must be for zero-emission freight transportation projects.

To be eligible, infrastructure projects must:

- Be either new or upgrades to existing charging or refueling infrastructure for battery electric or hydrogen fuel cell freight vehicles.
- Be used to charge or refuel Class 3 through Class 8 vehicle(s) having gross vehicle weight rating (GVWR) of 10,001 lbs. or greater located in California.
- Demonstrate on- or off-road vehicle technologies to prove or validate their technical or market viability prior to commercial production and/or sale.
- Submit a preliminary electrical load capacity check (See "Preliminary Capacity Check" Section below) with their application.
- Provide minimum of 12 months data collection. Applicants shall describe plans for securing advanced technology vehicles that will enable collection of 12 months refueling events for the deployed infrastructure.

#### 1) Eligible Projects:

- Hydrogen fueling infrastructure for MD/HD vehicles.
- Electric infrastructure projects must include deployment of chargers for eligible vehicles and may include funding for panels, conduit, and wiring at the facility level as well as upgrades to distribution infrastructure including

meters and transformers to support current and future deployment of electric vehicles.

2) Ineligible Projects:

- Low NOx engine or propulsion system or propulsion technology
- Hybrids
- Paper studies (e.g., feasibility studies)
- Surveys
- Research
- Case studies
- Vehicle demonstrations
- Mobile refuelers
- Development of first prototypes
- Tests for regulatory compliance or to meet certification protocol<sup>1</sup>
- Transit fueling infrastructure
- Commercially available technologies
- Activities not directly related to freight handling or goods movement

**DISADVANTAGED COMMUNITIES (DACs)**

Projects covered by this solicitation are encouraged to achieve reductions in GHG and pollutant emissions that benefit DACs. All applications must identify and describe how the project benefits DACs.

The Office of Environmental Health Hazard Assessment (OEHHA) in the California Environmental Protection Agency (CalEPA) has developed the California Communities Environmental Health Screening Tool: CalEnviroScreen Version 3.0 (CalEnviroScreen 3.0)<sup>2</sup>. The Energy Commission will use the CalEnviroScreen 3.0 tool to verify DACs, defined as scoring in the top 25 percent scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations. All applications must use the CalEnviroScreen tool to identify and verify how their projects provide maximum benefits for DACs.

Note: CARB demonstration projects will be required to be located in DACs; therefore, if an applicant wants to use CARB funds for vehicles, they must meet CARB's requirements.

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<sup>1</sup> <http://www.arb.ca.gov/msprog/cert.htm>

<sup>2</sup> <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

## **PRELIMINARY CAPACITY CHECK**

A preliminary electrical load capacity check is required for each proposed project site. Applications submitted without a preliminary capacity check will be disqualified and not eligible for funding.

The preliminary capacity check, at a minimum, shall include the following:

- 1) A letter from the utility company with jurisdiction at the proposed project location stating that it can provide enough electrical power at the project location should all charging and fueling infrastructure be used simultaneously.
- 2) Name, position, and department of contact person at the utility company.
- 3) A preliminary scope of work for the provision of power to the project.

## **MATCH FUNDING REQUIREMENTS**

Applications must include at least 25 percent of total allowable project costs as match share. Public Agency applicants do not have a minimum match share requirement.

## **CONCEPT #2: TRANSIT AND TRUCK FLEETS, CAPITAL EXPENSE ASSISTANCE FOR ZERO-EMISSION INFRASTRUCTURE DEPLOYMENT**

### **PURPOSE OF SOLICITATION**

Projects funded under this solicitation concept will encourage early adoption of fueling infrastructure for zero-emission transit buses and truck fleets by providing capital assistance. Installing “make-ready” fueling infrastructure for zero-emission transit buses and truck fleets is capital intensive. Funds provided through this proposed solicitation would reduce capital risk often associated with adopting this type of infrastructure.

This solicitation may complement CARB’s solicitation for Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). This grant opportunity could be structured as a competitive, first-come first served solicitation.

### **ELIGIBLE APPLICANTS**

This competitive grant solicitation will target public and private transit agencies, and truck fleets in need of capital assistance to construct new make-ready infrastructure or to upgrade existing fueling infrastructure for zero-emission transit vehicles.

Eligible applicants will include owners and operators of transit and truck fleets with facilities for charging or refueling MD/HD battery-electric vehicles, MD/HD hydrogen fuel cell vehicles, or both.

Eligible applicants must meet the following criteria:

- Be the site owner or have site owner authorization to install fueling or make-ready infrastructure for zero-emission buses or trucks.
- Be a licensed business, non-profit organization, or government entity based in California or have a California-based affiliate.
- Have recently purchased or have a commitment to purchase zero-emission transit vehicles or equipment.

### **PROJECT REQUIREMENTS**

Projects eligible for funding under this proposed solicitation include, but are not limited to, the following:

- New installations of, or upgrades to fueling infrastructure for battery electric and hydrogen fuel cell transit vehicles (sometimes referred to as “make-ready” infrastructure).
- Engineering assessments that analyze existing site capacity and costs associated with fueling infrastructure deployment necessary for zero-emission transit and truck vehicles.
- Grid integration, integrated storage solutions, and charging management projects that support zero-emission transit and truck vehicles.

To be an “Eligible Project” under this solicitation, projects must be located in California and fit into one of the categories listed below:

**Category A:**

- **“Make-Ready” Electric Vehicle Charging Infrastructure** – Planning for and new installations of, or upgrades to, in-ground electrical components up to the charger.

Eligible projects include electrical equipment upgrades such as transformers.

**Category B:**

- **Hydrogen Refueling Station Infrastructure** – Planning for and new installations of, or upgrades to, hydrogen refueling for MD/HD vehicles up to the “pump”.

**DISADVANTAGED COMMUNITIES (DACs)**

Projects covered by this solicitation are encouraged to achieve reductions in GHG and pollutant emissions that benefit DACs. All applications must identify and describe how the project benefits DACs.

Note: CARB demonstration projects will be required to be located in DACs; therefore, if an applicant wants to use CARB funds for vehicles, applicant must meet CARB’s requirements.

**PRELIMINARY CAPACITY CHECK**

A preliminary electrical load capacity check is required for each proposed project site. Applications submitted without a preliminary capacity check will be disqualified and not eligible for funding.

The preliminary capacity check, at a minimum, shall include the following:

- 1) A letter from the utility company with jurisdiction at the proposed project location stating that it can provide enough electrical power at the project location should all charging and fueling infrastructure be used simultaneously and that the utility company has approved the installation of zero-emission MD/HD fueling infrastructure.
- 2) Name, position, and department of contact person at the utility company.
- 3) A preliminary scope of work for the provision of power to the project.

**MATCH FUNDING REQUIREMENTS**

Applications must include at least 25 percent of total allowable project costs as match share. Public Agency applicants do not have a minimum match share requirement.

## **CONCEPT #3: ZEV BLUEPRINTS FOR MD/HD VEHICLES INFRASTRUCTURE (INCLUDING SMALL SEAPORTS AND DACS)**

### **PURPOSE OF SOLICITATION**

Projects funded under this solicitation concept will develop planning blueprints, which identify the actions and milestones needed for implementation of ZEVs and ZEV infrastructure. Funds provided through this proposed solicitation challenge project teams to accelerate the deployment of ZEV and ZEV infrastructure within the local and regional levels with a holistic and futuristic view of regional transportation planning.

Following the successful completion of a ZEV blueprint, applicants may be eligible for MD/HD ZEV infrastructure funding in future funding years. This solicitation may complement utility funding programs.

### **ELIGIBLE APPLICANTS**

This competitive solicitation will be open to all public and private entities but will target small seaports, disadvantaged communities, railyards, inland warehouses, and multimodal freight distribution centers that directly support freight transport vehicles.

### **PROJECT REQUIREMENTS**

The blueprint should:

- Be implementable.
- Build upon, but not be duplicative of previous planning efforts funded through the CEC.
- Identify charging requirements for medium-duty and heavy-duty vehicles.
- Identify potential sites, maps, and accessibility to travel routes for proposed charging.
- Include a plan for developing an outreach strategy, supported by education and outreach materials such as journal articles, webinars, and conference presentations.
- Include a community-based organization partner.
- Provide details about the workforce development strategies necessary to ensure the community workforce has the requisite knowledge, skills and abilities to develop, support, and maintain the ZEV ready community.

### **DISADVANTAGED COMMUNITIES (DACs)**

The blueprint funded by this solicitation will identify the benefits that would accrue to Disadvantaged Communities to the maximum extent possible. All applications must identify and describe how the project benefits DACs.

### **MATCH FUNDING REQUIREMENTS**

No match funds will be required.

## **CONCEPT #4: HYDROGEN RAIL & MARINE APPLICATIONS**

### **PURPOSE OF SOLICITATION**

Projects funded under this solicitation concept will support the deployment of hydrogen refueling infrastructure for rail and marine applications.

### **ELIGIBLE APPLICANTS**

In partnership with the California Energy Commission's Energy Research & Development Division (ERDD), this competitive solicitation will address the challenges faced when integrating fuel cell systems in rail and commercial harbor craft applications at California ports.

## **CONCEPT #5: MISCELLANEOUS – LONG-HAUL AND INNOVATIVE APPLICATIONS**

Competitive solicitations of these concepts may be planned for future funding years.

- Technology demonstration of innovative charging solutions, such as inductive or wireless to prove or validate their technical or market viability prior to commercial production and/or sale.
- Electric infrastructure for other applications, such as rail or marine.
- Field demonstrations of California Class 8 zero-emission long-haul truck(s) vehicles.
- Infrastructure for long-haul truck vehicles on major corridors, such as the I-710.
- Structure funding for MD/HD zero-emission vehicle infrastructure to match the light-duty CALeVIP program.