

March 2024

# California Department of Transportation (Caltrans)

**ZEV Role:** Caltrans manages more than 15,000 centerline miles of California's state highway system, operates one of the largest public vehicle fleets in the country, manages major state and federal funding programs, owns rolling stock used in passenger rail services, supports transit operations, and works with local agencies to plan and construct transportation projects. Caltrans is incorporating zero-emission vehicles and infrastructure into all these responsibilities.

**Equity Focus:** Reduce the negative externalities of the state's transportation system on the most impacted communities. Ensure that access to ZEVs, deployment of ZEVs, and the development of ZEV infrastructure is carried out in an equitable manner resulting in improvements in air quality and increasingly sustainable land use patterns.

## 2023 Highlights

- **Federal funding:** Caltrans was awarded more than \$63 million in federal funds from the Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) grant program to fix and install more than 1,000 chargers at 300 sites statewide. Caltrans has replaced over 600 fleet vehicles with zero-emission vehicles and installed over 1200 workplace and fleet chargers.
- **State funding:** Caltrans was awarded Trade Corridor Enhancement Program (TCEP) Cycle 3 funds for truck charging and hydrogen fueling stations. These awards will expand the medium- and heavy-duty charging and fueling network within the state.
- Caltrans signed a historic \$207 million contract with Stadler Rail, Inc. to deliver ten of the first zero-emission, hydrogen intercity passenger trains in North America, furthering California's standing as a world leader in clean transportation.

## ZEV Market Development Objectives

### 1. Caltrans Vehicle and Equipment Fleet

#### Key Collaborators:

DGS, CalSTA, CARB, CEC, academic research institutions

#### Key Results & Actions:

A. Procure and deploy ZEVs for Caltrans fleet (Continued)

**2023 Targeted Key Results:** Complete delivery of 399 battery electric sedans; begin delivery of 235 battery electric SUVs and 18 battery electric street sweepers.

**Outcome:**

- Completed delivery of 399 battery electric sedans, 96 battery electric SUVs, and 1 battery electric pick-up truck. The battery electric street sweepers are on order and awaiting delivery.

**2024 Targeted Key Results:**

- Purchase and deploy ZEVs for Caltrans fleet to meet and exceed ZEV goals according to the Advanced Clean Fleets Rule and in line with Senate Bill 1203.
- Apply for state and federal incentives to bolster ZEV deployments.

B. Build and maintain chargers for Caltrans fleet (Continued)

**2023 Targeted Key Results:** Begin design and/or construction at 100 new sites to install Level 2 or Level 3 charging infrastructure, based on operational needs.

**Outcome:**

- Began design and/or construction at 93 new sites to install Level 2 or Level 3 charging infrastructure.

**2024 Targeted Key Results:**

- Plan for and install chargers at Caltrans' facilities to meet fleet demand.
- Identify funding and resources to bolster deployment of ZEV infrastructure and meet maintenance needs including state, federal, and utility incentives.
- Establish policy, procedures, and metrics for the reliability of charging infrastructure used by the Caltrans fleet.
- Update parking and charging policy for Caltrans fleet and employee vehicles.

C. Plan ZEV deployments in the Caltrans fleet (Continued)

**2023 Targeted Key Results:** Plan replacements of fleet vehicles with ZEVs and corresponding infrastructure needed to meet state goals and laws, including Executive Orders and regulations.

**Outcome:**

- Caltrans Fleet Acquisition Plan was submitted to the Department of General Services and approved for the next three years.

**2024 Targeted Key Results:**

- Caltrans will publish an approved addendum for the Multi-Year Fleet Acquisition Plan Request Memo to replace additional vehicles with ZEVs.
- Continue multi-year planning efforts to support ZEV fleet acquisition.

## 2. Personal Vehicles

**Key Collaborators:**

CEC, FHWA, Joint Office of Energy and Transportation, GO-Biz, tribal governments, local and regional governments, other state Departments of Transportation

**Key Results & Actions:**

- A. Secure and administer funding to support publicly accessible infrastructure for ZEVs (Continued)

**2023 Targeted Key Results:** Collaborate with the California Energy Commission to release the first round of funding under the National Electric Vehicle Infrastructure (NEVI) program.

**Outcome:**

- The first round of NEVI funding was released for solicitation in October 2023. Applications were due January 2024, and the notice of proposed awards is expected in April 2024.

**2023 Targeted Key Results:** Support applications from regional and local governments to the US DOT's Charging and Fueling Infrastructure (CFI) discretionary grant program.

**Outcome:**

- Caltrans issued over 20 letters of support in 2023 for applications to US DOT's CFI discretionary grant program. Five of these projects were awarded CFI funding (\$76.6 million).

**2023 Targeted Key Results:** Analyze the ZEV charging/fueling network and identify opportunities to use the Caltrans right of way to fill gaps in the ZEV charging/fueling network.

**Outcome:**

- Research into opportunities for ZEV infrastructure within the Caltrans right of way is underway.

**2024 Targeted Key Results:**

- Collaborate with the California Energy Commission to award and oversee the first round of NEVI funding and to release the second round of NEVI funding.
- Collaborate with the California Energy Commission to administer and award funding to repair and replace broken or non-operational EV chargers under the Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) Program.
- Operate and maintain Caltrans' publicly accessible chargers.
- Identify opportunities and remove barriers to streamline and develop ZEV infrastructure on Caltrans ROW. Develop guidelines and specifications for developing ZEV infrastructure on Caltrans ROW.

### 3. Passenger Rail

**Key Collaborators:**

Passenger rail agencies, CalSTA, CARB, GO-Biz, FRA, vehicle manufacturers, host railroads

**Key Results & Actions:**

A. Procure ZE multiple unit vehicles for new corridors (Continued)

**2023 Targeted Key Results:** Begin procurement and provide oversight on the deployment of zero-emission multiple-unit rail vehicles. Gain direct experience operating and maintaining these vehicles in a passenger environment.

**Outcome:**

- Caltrans has contracted with a manufacturer to produce ten zero-emission, hydrogen-powered passenger trainsets, funded through the Governor's multiyear zero-emission vehicle package.

**2023 Targeted Key Results:** Perform market sounding for hydrogen railway technology to support the replacement of diesel locomotives on inter-city routes.

**Outcome:**

- Caltrans continues to explore opportunities to convert its existing rail fleet to zero-emissions technologies, including through conversion of existing diesel locomotives to hydrogen.

B. Identify opportunities to partner with other agencies to further ZE rail adoption (Continued)

**2023 Targeted Key Results:** Coordinate zero-emission rail efforts across all state rail agencies and with partner agencies, including development of a Zero-Emission Handbook for agencies.

**Outcome:**

- Caltrans continues to coordinate zero-emission rail efforts across all state rail agencies by leading the Rail Fleet Consortium and Zero-Emission Working Group. Caltrans is also in the process of completing a Zero-Emission Handbook for rail applications and expects to deliver the final version later this year.

**2024 Targeted Key Results:**

- Provide technical assistance to rail agencies as they transition to zero-emission.
- Continue to lead the Rail Fleet Consortium and Zero-Emission Working Group.

C. Develop infrastructure to support ZE rail (Continued)

**2023 Targeted Key Results:** Implement the Zero-Emission Strategy for Intercity Passenger Rail to reduce emissions, improve air quality, and establish a shared understanding of technologies.

**Outcome:**

- Caltrans continues to implement the Zero-Emission Strategy for Intercity Rail by procuring rail rolling stock that meets the goals set forth in the Strategy and is continuing to explore partnering opportunities to develop zero-emission technology.

**2023 Targeted Key Results:** Identify opportunities to develop charging and fueling infrastructure to support both rail and transit modes at station locations.

**Outcome:**

- Caltrans is working with its partner agencies to develop charging and hydrogen fueling infrastructure to support rail and transit, as well as other private and commercial modes at shared facilities. Caltrans is also participating in discussions with partners such as the ARCHES program and private producers to develop green hydrogen supplies for the initial operations of its hydrogen multiple unit trainsets.

**2023 Targeted Key Results:** Oversee the development of zero-emission dual-mode catenary and battery multiple unit passenger rail vehicles.

**Outcome:**

- Through administration of the Transit and Intercity Rail Capital Program, Caltrans is supporting partner agencies pursuing zero-emission rail propulsion technologies, including dual-mode catenary and battery multiple unit passenger rail vehicles. Caltrain has contracted with a manufacturer to produce one battery electric multiple unit trainset to demonstrate operations between San Francisco and Gilroy.

**2024 Targeted Key Results:**

- Coordinate with partners to plan and develop hydrogen fueling and charging infrastructure for passenger rail.
- Administer Transit and Intercity Rail Program funds to passenger rail projects that improve rail facilities, connectivity, and safety, reduce GHGs, and increase ridership.

## 4. Commercial Vehicles

**Key Collaborators:**

CTC, CalSTA, CEC, CARB, FHWA, local and regional governments, ports, other state Departments of Transportation

**Key Results & Actions:**

A. Plan for Commercial Vehicle Electrification (Continued)

**2023 Targeted Key Results:** Publish the 2023 California Freight Mobility Plan, including findings from the SB 671 Clean Freight Corridor Efficiency Assessment, which will identify six freight corridors, or segments of corridors,

and the infrastructure needed to support the deployment of zero-emission medium- and heavy-duty vehicles. This plan will include strategies to support the deployment of infrastructure throughout California for zero-emission trucks.

**Outcome:**

- Caltrans published the California Freight Mobility Plan 2023 which outlines strategies and objectives for short-, medium-, and long-term implementation of additional ZEV infrastructure to support freight operations at all levels of the supply chain and regions of the state.

**2023 Targeted Key Results:** Oversee the Sustainable Transportation Planning Grant Program and support planning projects that develop zero-emission charging and fueling infrastructure.

**Outcome:**

- Caltrans awarded six Sustainable Transportation Planning Grants for FY 23-24 that plan for zero-emission charging and fueling infrastructure.

**2024 Targeted Key Results:**

- Oversee the Sustainable Transportation Planning Grant Program and support planning projects that develop zero-emission charging and fueling infrastructure.
- Begin work on the California Freight Mobility Plan 2027 update.
- Update the Caltrans Right of Way manual to address ZEV infrastructure within the Caltrans airspace and draft a flowchart to explain the airspace use agreement process.
- Adopt the Geotab data analytics platform for use within analysis, plans, and studies relating to corridor electrification and charging infrastructure placement.
- Guide Regional Transportation Plans and Sustainable Community Strategies to incorporate strategies that enable the transition to medium- and heavy-duty ZEVs.

B. Coordinate and convene interagency freight meetings (Continued)

**2023 Targeted Key Results:** Continue organizing the Interagency Freight Program monthly meetings to coordinate sustainable freight activities across state agencies, including those related to zero-emission vehicles and charging and hydrogen fueling infrastructure.

**Outcome:**

- Caltrans convened and coordinated 12 Interagency Freight Program meetings to coordinate sustainable freight activities across state agencies.

**2024 Targeted Key Results:**

- Convene the Interagency Freight Program monthly meetings to coordinate sustainable freight activities across state agencies, including those related to zero-emission vehicles and charging and hydrogen fueling infrastructure.

C. Support and lead ZEV freight project proposals (Continued)

**2023 Targeted Key Results:** Pending awards, begin implementation of Caltrans' zero-emission charging and fueling infrastructure projects that receive funding under Cycle 3 of the Trade Corridor Enhancement Program (TCEP). Scope zero-emission charging and fueling infrastructure projects to submit to Cycle 4 of TCEP.

**Outcome:**

- Caltrans, in coordination with grant recipients for Cycle 3 TCEP, have begun environmental clearance, grant agreements, and baseline agreements for truck charging and hydrogen fueling projects. Caltrans worked with regional and local partners to scope zero-emission charging and fueling projects to submit to Cycle 4 of TCEP.

**2023 Targeted Key Results:** Begin project administration responsibilities for any zero-emission charging and fueling freight projects awarded under the Port and Freight Infrastructure Program (PFIP).

**Outcome:**

- Caltrans, in coordination with CalSTA, has begun administering funds for freight projects awarded under PFIP. In 2023, 23 PFIP projects were awarded funding to support zero-emission freight projects.

**2024 Targeted Key Results:**

- Scope zero-emission freight project proposals and secure funding from state and federal programs.
- Provide technical assistance and administer funding for zero-emission freight projects from state and federal programs.
- Publish the Caltrans System Investment Strategy (CSIS) including project scoring metrics associated with ZEV infrastructure.



## 5. Transit Buses and Shared Mobility

### Key Collaborators:

Transit agencies, CARB, CalSTA, GO-Biz, FTA, vehicle manufacturers

### Key Results & Actions

#### A. Identify opportunities to deploy ZEVs and infrastructure for transit operations (Continued)

**2023 Targeted Key Results:** Administer funding agreements from FHWA to support hydrogen fueling stations at three transit agencies selected by CalSTA.

#### **Outcome:**

- Two projects have been programmed into the Federal Transportation Improvement Program (FTIP). The transfer of funds from FHWA to FTA has been completed and funds have been obligated for one project. The second project has been initiated and funds are expected to be obligated this federal fiscal year.

**2023 Targeted Key Results:** Oversee the demonstration of zero-emission over-the-road hydrogen fuel cell electric coaches.

#### **Outcome:**

- Sunline Transit Agency was sent a Letter of Selection for a demonstration project of over-the-road hydrogen fuel cell electric coaches. Caltrans is working with CalSTA on an interagency agreement and distribution of funds for this project.

**2023 Targeted Key Results:** Coordinate zero-emission efforts across all transit partner agencies.

#### **Outcome:**

- Caltrans is participating in California's North State Super Region working group to help small, rural transit agencies make a coordinated and efficient transition to zero-emission buses.

#### **2024 Targeted Key Results:**

- Provide technical assistance to transit agencies to enable the adoption of zero-emission transit buses and the buildout of ZEV infrastructure in line with the Innovative Clean Transit standard.

- Administer funding programs for zero-emission vehicle procurement and infrastructure buildout.
  - Coordinate ZEV efforts across transit agency partners.
- B. Determine asset management functions for Caltrans related to zero-emission transit bus adoption and develop roadmap for execution (New)

**2024 Targeted Key Results:**

- Validate proof of concept for Caltrans' role in supporting transit agencies through coordination and streamlining of zero-emission bus operations and maintenance.