



# CALTRANS ZERO EMISSION VEHICLE ACTION PLAN 1.0

Implementing Goal 3 of the Department's  
2015-2020 Strategic Management Plan



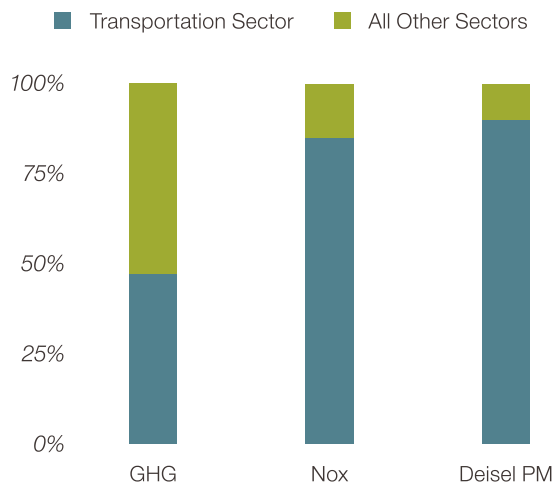
**SUSTAINABILITY**  
People, planet, prosperity

# INTRODUCTION

Transportation is the largest source of greenhouse gas (GHG) emissions in California, with vehicles, oil extraction, and oil refining combined accounting for roughly 50 percent of all in-state emissions. California leads the nation's climate change response since passing the Global Warming Solutions Act in 2006, which called for a reduction of statewide GHG emissions to 1990 levels by 2020. In 2016 California advanced this target to GHG emissions reductions 40% below 1990 levels by 2030. In addition, gasoline and diesel engines are responsible for 80 percent of the nitrogen oxide and particulate matter emissions statewide. Recent California legislation and executive orders call on the state to reduce emissions in the transportation sector:

- Executive Order B-48-18 calls on state agencies to prepare for 5 million Zero Emission Vehicles (ZEVs) on California roads by 2030, and to work with private partners to install 250,000 ZEV chargers (including 10,000 DC Fast chargers) by 2025
- SB 100 puts the state on the path to implement a zero-carbon electricity grid by 2045
- The Governor's ZEV Action Plan 2018 Update identifies actions to meet the goals of EO B-48-18 and assigns responsibility to appropriate state agencies.

## Emission Contribution from Mobile Sources



Source: California Air Resources Board: Mobile Source Strategy 2016

To carry out our commitments to meet California's climate goals, and to improve California's air quality and public health, Caltrans is implementing a Zero Emission Vehicles (ZEV) Program in the areas of Fleet, Freight, Workplace, Public and Partnerships. The Department's ZEV Technical Advisory Committee (ZEV TAC), staffed by the Headquarters Sustainability team, provides input and direction to these activities. The ZEV TAC has contributed to the preparation of this Caltrans ZEV Action Plan V1. The Action Plan intends to guide the development of Department ZEV-related policies and plans by identifying actions to meet the State's ZEV targets and facilitating facilitate Department coordination. Action Plan V1 focuses on current and near-term activities as of the start of Q4 FY 18/19. An update with additional information on future activities will be released at the end of FY 19/20.

## The ZEV Program Action Plan is divided into five activity categories:

1. Planning and Policy
2. Implementation
3. Data Monitoring and Tracking
4. Partnership
5. Support Activities

These are summarized on the following page.

### ZEV Program contacts:

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**Bob Myers**  
*Division Chief, Division of Equipment*

**Abbas Pourheidari**  
*Statewide Facilities Project Manager,  
Division of Equipment*

**Darwin Moosavi**  
*Sustainability Project Manager*

**Jannette Ramirez**  
*ZEV Program Lead*

# SUMMARY OF ACTIONS

1. PLANNING & POLICY	A.1	Develop a Workplace and Fleet Charging Implementation Plan
	A.2	Work with ZEV TAC to create policy on Workplace EV Charging
	A.3	Consider the need for a Director's Policy on ZEV implementation
	A.4	Create a plan to maintain and operate public charging infrastructure
	A.5	Update objectives for supporting hydrogen fueling for heavy-duty vehicles
2. IMPLEMENTATION	B.1	Install EV Charging Stations at Caltrans facilities to meet workplace and fleet requirements, per the Workplace Implementation Plan
	B.2	Project delivery of "30-in-30" public charging station projects
	B.3	Signage for HOV/HOT access for ZEVs
	B.4	Facilitate installation or update highway signage for PEV and Hydrogen stations, including signs indicating HOV/HOT access for ZEVs
	B.5	Annual FAP to include ZEV and CNG vehicles (50% new purchases by 2025)
	B.6	Carry out Sustainable Freight Action Plan ZEV-related commitments
3. DATA MONITORING & TRACKING	C.1	Create a centralized database to track workplace EV charging station installation
	C.2	Collect data on ZEV charger operation, and create a system to track usage
	C.3	Map workplace EV chargers at Caltrans facilities statewide, and post to the intranet.
	C.4	Update public charger information on the intranet, and provide webmap of 30-in-30 DC Fast Charger installations
4. PARTNERING	D.1	Represent the Department at ZEV-related conferences. Participate in inter-agency ZEV workgroups
	D.2	Actively seek funding opportunities for ZEV-related projects
	D.3	Pursue changes to Federal regulations which affect ZEV program progress
	D.4	Identify and track Legislative issues which affect the ZEV program
	D.5	Support the transition to Zero-Emission transit vehicles
	D.6	Encourage MPOs to develop regional ZEV infrastructure plans and policies
5. SUPPORT ACTIVITIES	E.1	Coordinate ZEV TAC meetings to advance ZEV Action Plan implementation
	E.2	Report out on ZEV Program Progress to Goal 3 Sponsors and Exec Board
	E.3	Provide regular updates on ZEV Program efforts to staff, agencies and the public
	E.4	Track ZEV-related research and innovation and communicate to stakeholders

# 1. PLANNING & POLICY

ACTIVITY	DESCRIPTION	ZEV PROGRAM AREA	RESPONSIBLE DIVISIONS	STAFF LEAD	COMPLETION DATE
<b>A.1</b> Workplace & Fleet EV Charging Infrastructure Plan	Identify priority locations to install workplace & fleet charging. Provide guidance and support for the development of ZEV infrastructure plans at each location.	Fleet, Workplace	Sustainability Equipment	Jannette Ramirez Abbas Pourheidari	June 2019
<b>A.2</b> Caltrans ZEV Policy & Procedures: Fleet & Workplace Charging	Provide input for the development of a policy (or Director's memo) for fleet and workplace charging, including consideration of use fees for workplace charging, and fleet charging use prioritization. Identify EV charging operation and maintenance needs and responsibilities.	Fleet, Workplace	Sustainability	Jannette Ramirez	January 2020
<b>A.3</b> ZEV Director's Policy (DP) or Deputy Directive	Provide input to develop a Director's Policy which would establish the Department's overall commitment to ZEV implementation and support through a multi-part program consistent with administration goals.	Fleet, Workplace, Public, Partnerships, Freight	Sustainability	Jannette Ramirez	June 2021
<b>A.4</b> Public Charging Infrastructure & Operations Plan	Create a plan to maintain and operate public charging infrastructure, in coordination with the CEC and other agencies.	Public	Sustainability	Jannette Ramirez	December 2020
<b>A.5</b> Hydrogen Fueling	Update objectives for supporting hydrogen fueling with emphasis on support for heavy duty vehicles, including the development of fueling corridors for freight.	Public	Equipment	Lisa Kunzman	June 2021

## 2. IMPLEMENTATION

ACTIVITY	DESCRIPTION	ZEV PROGRAM AREA	RESPONSIBLE DIVISIONS	STAFF LEAD	COMPLETION DATE
<b>B.1</b> Caltrans Facilities EV Charging Implementation	Deliver EV charging stations at Caltrans facilities to meet state goals for fleet and workplace charging through funding agreements with private funding partners, utilities, and public agency funding programs (Sustainability); coordinate site assessments (Business Operations for DOs, Equipment for other facilities); providing on-site project management and coordination with multiple stakeholders (Equipment).	Workplace	Sustainability Equipment Business Operations	Jannette Ramirez Abbas Pourheidari Selena Kubota	December 2020
<b>B.2</b> 30-in-30 delivery	Project delivery of 30 in 30 public charging projects.	Public	Design	Elbert Cox	December 2020
<b>B.3</b> ZEV Signage for HOV/HOT	HOV/HOT access for ZEVs.	Public, Partnerships	Traffic Ops	Joe Rouse	Completed
<b>B.4</b> ZEV-Related Signage	Facilitate installation or update highway signage directing customers to PEV charging and hydrogen fueling stations. Support standardized roadside and other signage.				Ongoing
<b>B.5</b> Preparation and Implementation of Fleet Acquisition Plan (Covers all fleet vehicles including ZEV and CNG)	Annual FAP to include acquisition of ZEV and CNG vehicles with increasing percentage to meet target (50% new purchases by 2025). Participate in the creation of a medium- and heavy-duty ZEV purchasing policy (DGS is lead).	Fleet	Equipment	Lisa Kunzman	Ongoing
<b>B.6</b> Sustainable Freight Action Plan ZEV Related Commitments	Meet to identify ZEV-related freight activities. Leverage available planning funds, in collaboration with the state's MPOs, to evaluate implementation of zero-emission technologies in freight corridors.	Freight	DOTP, Sustainability	Jannette Ramirez Eric Fredericks	Ongoing

### 3. DATA MONITORING & TRACKING

ACTIVITY		DESCRIPTION	ZEV PROGRAM AREA	RESPONSIBLE DIVISIONS	STAFF LEAD	COMPLETION DATE
C.1	ZEV Charging Equipment Inventory	Create a centralized database for the number and location of workplace charging stations installed and proposed, including funding sources.	Workplace, partnerships	Sustainability Equipment Business Operations	Jannette Ramirez Jim Lawrence	June 2019
C.2	ZEV Data Collection	Create a system to collect data on ZEV charger use and operation for fleet and employee charging at facilities.	Fleet, Workplace, Public	Sustainability Equipment	Jannette Ramirez Lisa Kunzman	June 2020
C.3	Data Mapping	Map workplace EV chargers at Caltrans facilities statewide, and make the map available to all Department employees through the intranet. Update the webmap on a regular basis.	Workplace, Partnerships	Sustainability	Jannette Ramirez	December 2019; Ongoing Updates
C.4	Public Charger Data	Update information on public charging installations in the Department on the Caltrans website. Include a webmap of Department-owned operational public EV chargers.	Public, Partnerships	Sustainability Design	Jannette Ramirez Elbert Cox	December 2019; Ongoing Updates

## 4. PARTNERING

ACTIVITY	DESCRIPTION	ZEV PROGRAM AREA	RESPONSIBLE DIVISIONS	STAFF LEAD	COMPLETION DATE
<b>D.1</b> Partnering and Interagency Coordination	Represent the Department at ZEV-related conferences such as STEPS, TDA, VELOZ, and others. Attend national or regional conferences. Coordinate with other state transportation agencies on public charging corridors and public speaking events to represent the Department's work on ZEV implementation.	Partnering	Sustainability	Jannette Ramirez	Ongoing
<b>D.2</b> Funding Partnerships	Actively seek funding opportunities for ZEV infrastructure and ZEV-related projects. Track application requirements and deadlines. Coordinate internally and with outside partners to complete applications for department-wide grants. Track district level funding partnerships for reporting.	Partnering	Sustainability	Jannette Ramirez	Ongoing
<b>D.3</b> Coordination of Federal ZEV Implementation	Identify Federal regulations which affect the Department's ability to achieve ZEV goals. Pursue changes as needed.	Partnering, Public	Federal Liaison	Nicole Longoria Giles Giovinazzi	Ongoing
<b>D.4</b> Legislative Coordination	Identify and track Legislative issues--Federal, State, and Local--which affect the ZEV program goals.	Partnering	Legislative Affairs, Sustainability	Andrew Carhart Ellen Doudna	Ongoing

## 4. PARTNERING (CONTINUED)

ACTIVITY	DESCRIPTION	ZEV PROGRAM AREA	RESPONSIBLE DIVISIONS	STAFF LEAD	COMPLETION DATE
<b>D.5</b> Support transition to Zero-Emission Transit Vehicles	Complete local and regional improvements to integrate transit systems. Evaluate the potential for state-owned land to provide no-cost leasing options for public transit agencies or fleets to build charging or fueling infrastructure.	Partnering, Public	DRMT	Momoko Tamaoki	Ongoing
<b>D.6</b> Regional Planning adoption of ZEVs	Encourage MPOs to develop and adopt regional ZEV infrastructure plans and policies as part of their regional transportation corridor planning.	Partnering, Public	DOTP	Erin Thompson	Ongoing



## 5. SUPPORT ACTIVITIES

ACTIVITY		DESCRIPTION	ZEV PROGRAM AREA	RESPONSIBLE DIVISIONS	STAFF LEAD	COMPLETION DATE
E.1	ZEV TAC	Coordinate ZEV TAC meetings to advance the ZEV Action Plan development and implementation.	Fleet, Workplace, Public, Freight, Partnerships	Sustainability	Jannette Ramirez	Ongoing
E.2	Management Liasion	Report out to Goal 3 Sponsors meeting and Executive Board on ZEV Program progress.	Fleet, Workplace, Public, Freight, Partnerships	Sustainability	Jannette Ramirez	Ongoing
E.3	Information dissemination on ZEV Program	Provide regular updates on the Department's ZEV efforts to Department staff, partner agencies, and the public.	Fleet, Workplace, Public, Freight, Partnerships	Sustainability	Jannette Ramirez	Ongoing
E.4	Research/Innovation liaison	Track research and innovation related to ZEV implementation and communicate this information to interested parties, through coordinated presentations, the website, the newsletter, podcasts and webinars.	Fleet, Workplace, Public, Freight, Partnerships	Sustainability	Jannette Ramirez	Ongoing

## ACRONYMS

<b>ARFVTP</b>	Alternative and Renewable Fuel and Vehicle Technology Program
<b>CEC</b>	California Energy Commission
<b>CNG</b>	Compressed Natural Gas
<b>CTC</b>	California Transportation Commission
<b>DGS</b>	Department of General Services
<b>DOTP</b>	Division of Transportation Planning
<b>DP</b>	Director's Policy
<b>DRMT</b>	Division of Rail and Mass Transit
<b>EV</b>	Electric Vehicle
<b>FAP</b>	Fleet Acquisition Plan

<b>GO-Biz</b>	Governor's Office of Business and Economic Development
<b>GovOps</b>	Government Operations Agency
<b>HOT</b>	High Occupancy Toll lane
<b>HOV</b>	High Occupancy Vehicles
<b>MPO</b>	Metropolitan Planning Organization
<b>STEPS</b>	Sustainable Transportation Energy Pathways
<b>TAC</b>	Technical Advisory Committee
<b>TDA</b>	Transportation Decarbonization Alliance
<b>Traffic Ops</b>	Division of Traffic Operations
<b>ZEV</b>	Zero Emission Vehicle