

APPENDIX D: CALIFORNIA'S ZERO-EMISSION VEHICLE PROGRAMS



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Overview

This appendix describes each of the primary responsibilities and programs of State agencies involved with accelerating the transition to light-, medium-, and heavy-duty ZEVs. There are other agencies involved as well, but only the ones most relevant for this report are included. Additionally, only the programs relevant to ZEVs are described below. Each of these agencies also has wide portfolio of other programs.

California Air Resources Board (CARB)



CARB is the primary State agency responsible for actions to protect public health from the harmful effects of air pollution, including to attack the serious problem caused by motor vehicles. In addition, CARB is leading the State's efforts to address climate change. Therefore, CARB has a suite of regulatory, incentive, and supporting programs—as more fully described in Appendix B—that support the transition of the transportation sector to zero-emission technology in order to reduce air pollutants and GHG emissions.

- Requires fraction of all light-duty vehicles sold to be ZEVs.
- Requires public transit agencies and airport shuttle operators to utilize ZEVs.
- Is developing GHG per passenger mile and zero-emission mile targets for transportation network companies.
- Is developing regulation to require fraction of all on-road motorcycles to use zero-emission technology.
- Is developing multiple regulations to require a portion of all medium- and heavy-duty vehicles sold to be ZEVs and for specific fleets to operate ZEVs.
- Provides purchase incentives for consumers and fleets to purchase or lease new light-duty ZEVs and PHEVs.
- Provides incentives and financing assistance for low-income and disadvantaged community residents to purchase or lease a used or new light-duty ZEV or PHEV and funding for clean mobility option pilots.
- Provides fleets and operators incentives to buy and demonstrate medium- and heavy-duty ZEVs and supporting infrastructure.
- Identifies hydrogen fueling station gaps for light-duty fuel cell electric vehicles through Assembly Bill (AB) 8, in collaboration with CEC.
- Provides incentives for electricity dispensed at residential locations, and for electricity and hydrogen dispensed at non-residential refueling stations, ZEV infrastructure development, and for the purchase or lease of eligible electric vehicles.

Governor's Office of Business and Economic Development (GO-Biz)



GO-Biz leads serves as the State of California's leader for job growth and economic development efforts. GO-Biz offers a range of services to business owners including: attraction, retention and expansion services, site selection, permit assistance, regulatory guidance, small business assistance, international trade development, and assistance with state government.

- Leads the State's Interagency ZEV Task Force and oversees the development and implementation of the ZEV Action Plan.
- Is assessing compliance with AB 1236 and works with communities to streamline permit processes

California Energy Commission (CEC)



The State Energy Resources Conservation and Development Commission, also known as the CEC, is the State's primary energy policy and planning agency. It has seven core responsibilities, including transforming transportation. Its investments include electric vehicle charging infrastructure and hydrogen refueling stations as well as innovation in medium- and heavy-duty advanced technology vehicles. The CEC is also investing in workforce training in cleaner transportation technologies.

- Administers the Clean Transportation Program—previously known as the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)—and invests up to \$100 million per year to promote accelerated development and deployment of advanced transportation and fuel technologies.
 - Funds the California Electric Vehicle Infrastructure Project (CALeVIP) that provides guidance and funding for local governments and organizations to develop charging station incentive projects.
 - Assesses electric charging infrastructure needs of the off-road, light-, medium-, and heavy-duty sectors in response to AB 2127, in collaboration with CARB and CPUC.
 - Is funding an initial network of 100 hydrogen refueling stations through AB 8, in collaboration with CARB and GO-Biz.
 - Has funded two renewable hydrogen production projects, and may fund additional projects in the future.
 - Funds ZEV regional readiness plans.
 - Provides funds for the training and development of California's alternative fuel workforce and ZEV-related manufacturing.

- Administers the School Bus Replacement Program that replaces dirty diesel school buses with cleaner technology including zero-emission, and helps support the installation of necessary fueling infrastructure.
- Assessing equity distribution of electric charging stations in response to Senate Bill (SB) 1000.
- Assesses the timing and costs of establishing the 100 hydrogen refueling station network jointly with CARB.
 - Is preparing an update to the California Vehicle-Grid Integration Roadmap (expected in 2019), in coordination with other State agencies.

California Public Utilities Commission (CPUC)



CPUC is the State agency in charge of regulating electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC protects consumers and ensures the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to the environment and the economy. Because the CPUC regulates the investor-owned electric utilities, it guides and oversees their transportation electrification projects, including investments in ZEV infrastructure for residential and workplace charging as well as the medium- and heavy-duty sectors, and implementing new electric vehicle rate structures.

- Overseeing utility programs to install electric vehicle charging infrastructure for light-, medium-, and heavy-duty applications.
- Overseeing an evaluation of the results of the SB 350 programs the CPUC authorized in 2018.
- Developing and enabling operational strategies and rate designs supportive of transportation electrification that both protect against negative grid impacts and minimize costs in response to SB 350 and SB 1000, in collaboration with CEC and CARB.
- Considering approaches to help mitigate or manage demand charges for high power uses such as electric buses and trucks, fast chargers, transit systems, hydrogen production and freight movement.
- Exploring vehicle-to-grid integration (VGI) through pilots to develop standards and to ensure harmonization across utility territories.

California Department of Transportation (Caltrans)



Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans carries out its mission of providing a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability, with six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration, and the Equipment Service Center.

- Provides incentives for the purchase of ZEVs and other clean technology by transit agencies including installation of ZEVs and supporting infrastructure through the Low Carbon Transit Operations Program and Transit and Intercity Rail Capital Program.
- Installing DC fast chargers throughout state at highway rest stops and other strategically located Caltrans properties and exploring locating hydrogen fueling stations on Caltrans properties, in collaboration with CEC, CARB, GO-Biz.
- Exploring providing land for public transit agencies or fleets to build ZEV infrastructure.
- Increasing visibility of ZEV infrastructure through signage.
- Provides Sustainable Transportation Planning Grants to encourage local and regional planning that furthers State goals, including transportation electrification.

California Building Standards Commission (CBSC)



CBSC oversees development, adoption, approval, publication and implementation of California's building codes. These building codes serve as the basis for the design and construction of buildings in California.

- Proposes California Green Building Standards Code (CALGreen) standards for non-residential structures, which includes EV-capable building standards.

California Department of Housing and Community Development (HCD)



HCD administers grants and loans that create rental and homeownership opportunities for all, manages the titling and registration of mobile homes, plays a critical role in the housing planning process, and protects the health and safety of Californians by enforcing standards for housing construction.

- Proposes California residential building standards, including EV-charging standards in the CALGreen Code.

California's Division of the State Architect (DSA)



DSA provides design and construction oversight for K-12 schools, community colleges, and various other state-owned and state-leased facilities to ensure that they comply with all structural, accessibility, and fire and life safety codes.

- Proposes CALGreen standards for public K-12 schools and community colleges.
- Proposes California Building Code accessibility standards for EV charging stations in order to ensure accessibility by individuals with disabilities to public buildings, public accommodations, commercial buildings, and public housing in order to clearly convey the construction requirements to station developers, building owners, and local building departments.
- Provides training and outreach regarding EVCS accessibility requirements to local government building officials and administrators as well as architectural and building official professional organizations.

California Department of Food and Agriculture (CDFA)



The Division of Measurement Standards (DMS) of the CDFA is responsible for ensuring the accuracy of commercial weighing and measuring devices, verifying the quantity of both bulk and packaged commodities, and enforcing the quality, advertising and labeling standards of multiple products, including most conventional and zero-emission transportation fuels.

- Overseeing the quality, dispenser accuracy, and advertising of fuel sold at hydrogen and electricity refueling retail facilities.
- Developing hydrogen contamination detectors in collaboration with the U.S. Department of Energy.

California's Department of General Services (DGS)



DGS serves as business manager for the State. DGS provides a variety of services to the State agencies through procurement and acquisition solutions, real estate management and design, environmentally friendly transportation, and more. DGS leads by example with respect to zero-emission vehicles and infrastructure, including the design and construction of electric vehicle charging infrastructure at State facilities.

- Overseeing and assisting with the State fleet light-duty annual ZEV purchase requirement of 50% by 2025.
- Overseeing and assisting with the State fleet medium- and heavy-duty ZEV purchase requirement of 15% by 2025 and 30% by 2030.
- Continuing to expand the number of ZEVs available on State contracts, including medium-, and heavy-duty ZEVs, and providing the option of leasing and/or financing these ZEVs.
- Leading State agencies efforts to install workplace charging in at least 5% of parking spots at State facilities.
- Supporting State agencies in their efforts to install ZEV infrastructure to meet their fleet needs.

California's Department of Motor Vehicles (DMV)



DMV's two primary functions are to license California's 26.5 million drivers and register more than 34.7 million vehicles. In addition, DMV maintains and oversees many other functions, including maintaining records of accidents and convictions of licensed drivers; issuing identification cards for individuals; licensing and regulating driving and traffic violator schools; licensing and regulating vehicle manufacturers, transporters, dealers, distributors, vehicle salespeople, and dismantlers; collecting revenues, and regulating autonomous vehicles.

- Administers the Clean Air Vehicle Decal Program, a non-monetary incentive exempting new light-duty ZEVs and PHEVs from occupancy requirements to access carpool lanes, in collaboration with CARB.
- Is establishing a new component to the Clean Air Vehicle Decal Program for used ZEVs and other eligible vehicles bought by residents at or below 80 percent of the State median income per SB 957 (Lara, Chapter 367, Statutes of 2018) that will begin in early 2020.

- Will collect a \$100 annual registration fee for ZEVs and PHEVs starting in 2020 per SB 1 (Beall, Chapter 5, Statutes of 2017) in order to ensure these vehicles contribute to road construction and maintenance costs.

California Pollution Control Financing Authority (CPCFA)



CPCFA provides low-cost innovative financing to California businesses with an objective of making California more economically prosperous and environmentally clean.

- Provides loans for the design, development, purchase and installation of charging stations at small businesses through the California Capital Access Program (CalCAP) Electric Vehicle Charging Station Financing Program.

California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA)



CAEATFA works collaboratively with public and private partners to provide innovative and effective financing solutions for California's industries, assisting in reducing the State's greenhouse gas emissions by increasing the development and deployment of renewable energy sources, energy efficiency, and advanced transportation and manufacturing technologies to reduce air pollution, conserve energy, and promote economic development and jobs.

- Provides sales and use tax exclusion for qualified manufacturers of advanced transportation products, component, or systems, including for ZEVs.

Governor's Office of Planning and Research (ORP)



The Office of Planning and Research (ORP) serves the Governor and his Cabinet as staff for long-range planning and research, and constitutes the comprehensive state planning agency.

- Generates resources for local jurisdictions and community leaders, such as the [ZEV Community Readiness Guidebook](#).

California Strategic Growth Council (SGC)



SGC was established to coordinate State agency activities in supporting the planning and development of sustainable communities. SGC also administers a suite of grant programs funded through the California Climate Investments—a Statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions while providing a variety of other impactful benefits—particularly in disadvantaged communities.

- Administers the Transformative Climate Communities (TCC) Program, which funds development and infrastructure projects that achieve major environmental, health, and economic benefits in California’s most disadvantaged communities, including projects with zero-emission transportation components.

California Workforce Development Board (CWDB)



CWDB is responsible for the oversight and continuous improvement of the workforce system in California, which encompasses a wide array of work, including: policy development; workforce support and innovation; and performance assessment, measurement and reporting. CWDB’s workforce development efforts span all economic sectors, including transportation- and freight-related industries.

- Provides policy guidance to State agencies looking to integrate workforce development in ZEV-related programs and procurement. CWDB’s High Road Training Partnerships initiative includes investments in ZEV-related industries (public transit, freight/trucking and cargo-handling).
- Supports the transportation infrastructure workforce through its High Road Construction Careers initiative.

Employment Training Panel (ETP)



ETP provides funding to employers to assist in upgrading the skills of their workers through training that leads to good paying, long-term jobs.

- Provides funding to train employees in zero-emission vehicle and infrastructure manufacturing, installation, maintenance, and repair skills, in collaboration with CEC.