

CALIFORNIA CLIMATE POLICY FACT SHEET: ADVANCED CLEAN CARS

For more than 40 years, California has realized the benefits of its efforts to reduce pollution from motor vehicles – improved air quality, lower fuel costs for consumers, and growth in the state’s economy. Yet California’s transportation sector is now the [largest contributor](#) of greenhouse gas (GHG) emissions in the state, requiring California to seek more efficient and cleaner transportation alternatives. The [Advanced Clean Cars](#) Program, introduced by the California Air Resources Board (CARB) in 2012, is one of a suite of programs to reduce GHG emissions and other toxic air pollutants. The program is a coordinated package of regulations and incentives that builds upon previous efforts to control smog-causing, health-harmful pollutants (known as criteria pollutants) and GHG emissions from passenger vehicles. The program also complements many of the state’s existing emissions reduction programs, such as [Cap-and-Trade](#) and the [Low Carbon Fuel Standard](#) (LCFS). This California Climate Policy Fact Sheet outlines the basic components and legal background of the Advanced Clean Cars Program and the broader clean vehicle standards that contribute to attaining California’s air quality and climate goals.

Understanding California’s Advanced Clean Cars Program

The Advanced Clean Cars Program focuses on addressing both ambient air quality needs and climate change through two distinct [efforts](#): (1) Low-Emission Vehicle (LEV) regulation for criteria pollutants and GHG emissions and (2) Zero-Emission Vehicle (ZEV) regulation. The [goal](#) of the program is to develop vehicles that are better for the environment while still meeting the performance and safety standards that consumers expect.

1. LEV Regulation for Criteria Pollutants and GHG Emissions

The [first](#) LEV regulations were adopted by CARB in 1990 and required manufacturers to produce [light- and medium-duty](#) vehicles that emitted fewer criteria pollutants like carbon monoxide and nitrogen oxides. In 2004, following the landmark [Assembly Bill 1493](#) (Health & Safety Code § 43018.5 et al.) CARB added the [first vehicle GHG emission limitations](#). Finally, as a part of the Advanced Clean Cars Program, the LEV regulations were amended in 2012 to [strengthen](#) the Program by including increasingly stringent criteria pollutant and GHG emission standards for new passenger vehicles through the 2025 model year. In July 2019, CARB reached a [groundbreaking agreement](#) with major automakers to proactively adopt a modified version of the GHG standards despite conflict with the US Environmental Protection Agency over their validity under the Clean Air Act.

In order for a manufacturer to certify that a vehicle for sale in California meets LEV standards, it must follow stringent emission testing procedures and requirements and receive [verification](#) from CARB. CARB [estimates](#) that, thanks to this regulation, cars will emit 75% less in criteria pollutants and 40% less in GHG emissions in 2025 compared to 2012 model year vehicles.

2. ZEV Regulation

The ZEV regulation mandates that manufacturers increase the number vehicles available for sale that do not emit any exhaust, including battery electric, hydrogen fuel cell, and plug-in hybrid electric vehicles. Even compared to 2025 vehicles under the strictest criteria pollutant and GHG standards, ZEVs and plug-in hybrid electric vehicles are significantly lower emitting.

Manufacturers must produce for sale in California a certain percentage of ZEVs and plug-in hybrid electric vehicles in a given year, [increasing](#) from 4.5% in 2018 to 22% in 2025. Every vehicle receives credits based on the number of miles the vehicle can travel powered by non-emitting sources (thus,

for example, a plug-in hybrid electric model receives limited credit for its battery-powered capacity). A manufacturer can bank credits to use for compliance in future years or trade or sell credits. CARB oversees the entire compliance process and posts annual credit information on its [website](#). CARB [estimates](#) that about 8% of new vehicles sold in 2025 will be ZEVs or plug-in electric hybrids.

In addition to the vehicle mandates, California automobile sellers and drivers need access to electric vehicle charging infrastructure to create a robust market for ZEVs. To this end, in 2018 the California Public Utilities Commission [authorized](#) the state's three major investor-owned utilities to invest over \$750 million in public charging infrastructure, one of many efforts the state is making to meet its goal of 250,000 stations by 2025.

Key Legislation Related to the Advanced Clean Cars Program

- [Federal Clean Air Act Section 209](#) allows California to obtain a “waiver” permitting it to set vehicle emission standards more stringent than those set by the US Environmental Protection Agency for all vehicles nationwide, which the law otherwise prohibits. In 2019, the Trump Administration [moved to revoke](#) the [2013 waiver](#) California obtained to authorize the Advanced Clean Cars Program. This action raises questions about the future of the program, although the administration's novel legal grounds—there is no express revocation mechanism under the law, and California still faces the “compelling and extraordinary” conditions that merited the waiver—are subject to major litigation challenges.
- [AB 1493](#) directed CARB to set requirements for achieving the maximum feasible reduction of vehicle GHG emissions in the state, the first set of GHG emission standards for passenger vehicles.

Key Outcomes and Next Steps for California Clean Car Policy and Regulation

California currently has [24 million](#) registered passenger vehicles, with the vast majority burning fossil fuels. Emissions in the transportation sector are currently [responsible](#) for half of the GHG emissions within California and an even higher percentage of harmful criteria pollutants. Furthermore, Los Angeles and the San Joaquin Valley are [classified](#) as “extreme” ozone non-attainment areas by the EPA, meaning that these regions do not meet air quality standards designed to protect the public health. In order to meet its air quality and climate goals, California will need mass consumer adoption of clean vehicles in the coming years. The Advanced Clean Cars Program, building upon decades of effort within California to address vehicle pollution, has proven to be an effective step in reducing the climate impact of the transportation sector. Since 2010, more than 400,000 vehicles have [registered](#) as ZEVs and plug-in hybrids in California. However, as the state seeks to obtain its ambitious 2030 and 2050 climate goals—including [five million](#) ZEVs on the road by 2030—continued development of the Advanced Clean Cars Program and the infrastructure needed to support clean transportation throughout California will be essential.