

## OVERVIEW OF

# The California Zero Emission Vehicle Program

*Advancing vehicle technology and improving air quality*

The Zero Emission Vehicle (ZEV) regulation was first adopted in 1990 as part of the Low Emission Vehicle Program. Although it has been modified several times over the years, it still remains an important program for meeting California's air quality and greenhouse gas reduction goals and has spurred many new technologies that are being driven on California's roads today.

The ZEV regulation has seen many successes over the years. For instance, over one million Californians are driving partial zero and advanced technology partial zero emission vehicles (PZEV and AT PZEV). These vehicles have near-zero tailpipe emissions, zero evaporative emissions and an extended emissions warranty of 15 years or 150,000 miles. In fact, they are 80% cleaner than the average 2002 model year car.

In addition to the variety of PZEVs and AT PZEVs available, hybrid-electric vehicles are also a success. With more models available each year and a number of announcements regarding plug-in hybrids, the numbers on California's roads continues to grow. Although these "near-zero" emission vehicles provide critical pollution reductions in the near term, with increases in California's population and in the number of miles we travel each day, we must continue to pursue pure zero emission transportation technologies.

The Board's motivation has always been to have zero emission technologies on the roads on a mass scale as soon as possible. Whether using fuel cells, battery electric vehicles, or other technologies, our commitment to zero emissions has never wavered. Our strategy, however, has appropriately considered the state of technology, market factors, economic impact, and our mission.

## Types of ZEVs Included in the Regulation

Category	Vehicle Acronym	Technology
Gold	ZEV	Battery, hydrogen fuel cell
Silver Plus	Enhanced AT PZEV	AT PZEV using a ZEV fuel such as electricity or hydrogen. Examples include plug-in hybrids or hydrogen internal combustion engine vehicles.
Silver	AT PZEV	Hybrid, compressed natural gas, methanol fuel cell
Bronze	PZEV	Extremely clean conventional vehicle with extended warranty and reduced evaporative emissions

## Vehicles Placed in California

The ZEV program continues to bring innovative, clean technologies to California's roads. Many of these cars, such as hybrids, have become widely accepted, like the Toyota Prius and Honda Civic Hybrid. The following table represents the number of vehicles placed between 1994 and 2008.

Vehicle Type		Quantity
ZEV	Fuel Cell	250
	Battery Electric	4,800
	Neighborhood Electric	28,000
AT PZEV	Hybrid, or Compressed Natural Gas	258,000
PZEV	Conventional	1,156,000

## **2009 Technology Review**

In March 2008, the California Air Resources Board (ARB) directed staff to redesign the ZEV regulation, keeping in mind California's long term air quality and greenhouse gas (GHG) emission reduction goals, and to return to them with an update and recommendation by the end of 2009. In preparation for this update taking place in December, ARB staff is reviewing the current status of ZEV technologies, conducting a two-day ZEV Technology Symposium, undertaking a long term GHG analysis, reviewing California ZEV infrastructure needs, and analyzing complimentary policies to the ZEV program.

The overall goals of this redesign are to shift the focus of the program from criteria pollutants to climate change emission reductions and to greatly strengthen the gold requirement to meet the need of moving advanced technologies from the laboratory and demonstration phase to commercialization.

### **What are the next steps with the ZEV Regulation?**

Staff will compile a report using information from the 2009 ZEV Technology Symposium, literature reviews, and meetings with industry and technical experts and will present this report as an informational update to the Board in December 2009. Following this update, staff may be asked to return to the Board in 2010 with regulatory changes to the ZEV Regulation.

### **For More Information**

For questions regarding the ZEV Regulation, please contact:  
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or visit the ZEV Program website: [www.arb.ca.gov/zev](http://www.arb.ca.gov/zev).

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[www.DriveClean.ca.gov](http://www.DriveClean.ca.gov).

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