

## California Air Resources Board's

### Zero Emission Vehicle Program

#### Background

California has long been a leader in driving down emissions from cars and light trucks. California's Air Resources Board (CARB) established the Zero Emission Vehicle Program (ZEV) in 1990 as a complement to its existing Low Emission Vehicle program which set standards for smog forming and other pollutants. CARB found that simply improving internal combustion engines alone was not enough to significantly clean our air; zero emission vehicle technological advancements were needed. The goal of the ZEV program was to drive emissions control technology by setting requirements for manufacturers to sell vehicles with no (or very low) emissions to help the state address clean air challenges. In 1998, ZEV began to grow and had more defined standards than before so it became a separate program from LEV. The ZEV program has taken on a new charge and strives to reduce greenhouse gas emissions, in California while encouraging new technological advancements in zero emission vehicles (ZEVs). Types of ZEVs might include hydrogen fuel cell vehicles, battery electric vehicles and neighborhood electric vehicles; vehicles that all Californians should have the option to purchase and drive.

In 1996, ARB amended the ZEV program to include partial zero emission vehicles (PZEVs) and cleaner advanced technology partial emission vehicles (AT PZEVs). CARB has amended the ZEV program about six different times just in this year as new technologies develop. As a result of these changes, automakers offered more clean cars in the California market, and CARB estimates that Californians are driving more than one million PZEVs and AT PZEVs. PZEVs and AT PZEVs can receive partial credits for being extremely clean vehicles, but are not considered to be pure ZEVs. Examples of AT PZEVs include hybrids, such as the Prius, and compressed natural gas vehicles, while most PZEVs are conventional vehicles with extremely low tail pipe emissions. The Prius is the most well sold and longest running AT PZEV. According to CARB, both PZEVs and AT PZEVs can be up to 80% cleaner than 2002 internal combustion engine vehicles.

#### Making ZEV stronger

CARB is now working to strengthen and revise the ZEV program as part of its review of the state's full suite of vehicle emission standards which includes LEV and greenhouse gas standards. The revisions process started in 2008 and is slated for completion in 2010. In September 2009 ARB held a Technology Symposium providing an opportunity for automakers, interest groups and the public to engage the new ZEV program. Auto manufacturers laid out their plans to meet ARB's zero emission vehicles standards with a mix of plug-in hybrid vehicles, hydrogen fuel cell and battery electric vehicles. CARB also heard from various stakeholders about infrastructure challenges both with hydrogen and battery electric technologies. Following the



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Symposium ARB released a White Paper outlining 2 different policy options for the ZEV program moving forward. The first policy option would be similar to the current ZEV program, but focuses on getting an increased percentage of ZEVs and ATPZEVs on the road. The second policy option, would allow auto manufacturers more time to ramp up production of ZEVs.

Sierra Club and our allies are very concerned about the second option which would give automakers so much flexibility in ramping up production that manufacturers could possibly deter crucial technological advancements and delay putting ZEVs on the road, even possibly hindering 80% reduction in GHG goals set for 2050. Sierra Club California testified at the CARB meeting in early December on our concerns with the policy option and we are actively working with ZEV staff to ensure that a policy is reached that strives to achieve stringent emission reductions for passenger vehicles and gets greener vehicles on the road without compromising technological advancements.

### **Coming Next**

Sierra Club California will be working hard in the coming year to ensure that CARB continues being a national leader in setting landmark reductions to passenger vehicle pollutants moving forward. We feel the time is ripe for California to invest in new technologies that will create green jobs, reduce our dependence on foreign oil and ensure the air our children breathe is clean. CARB plans on adopting new stronger ZEV regulations in December.

# ZEV Program Timeline

**Abbreviations**  
ZEV: Zero Emission vehicle program  
PZEVs: Partial Zero Emission Vehicles  
ATPZEVs: Advanced Technology Partial Zero Emission Vehicles  
LEV: Low Emission Vehicles Program  
ARB: The Air Resources Board



