California Air Resources Board Program

- Primary Regulatory Drivers for Fuel Cell Electric Vehicles (FCEVs)
  - Zero Emission Vehicle (ZEV) Mandate
    - Requires “Pure” ZEVs - i.e. Battery Electric and FCEVs - while allowing plug-in hybrids to count towards part of ZEV obligation
    - FCEVs qualify for additional credits per vehicle based on range
  - Clean Fuels Outlet for H2 Stations
Potential “Pure” ZEV Deployment Levels

ZEVs sales may be higher than regulatory floor due to market demand; or somewhat lower due to flexibility options.
The Partnership demonstrates vehicle technology while exploring the paths to commercialization, including the development of public hydrogen fueling infrastructure.

Changes to the ZEV regulation in 2003 provided new incentives for FCVs, resolved legal challenges, and addressed the state of technology at that time.

1.4 2008 Amendment and 2009 Technology Review

The Board adopted Resolution 08-24 at the March 2008 hearing, directing staff to redesign the 2015 and beyond requirements for the ZEV program, strengthen the requirement more than the current program, focus primarily on the zero emission drive, that is BEV, FCV, and PHEV technologies, and ensure California as the central location for advanced, low GHG technology vehicles from the demonstration phase to commercialization.

In 2009, staff undertook an assessment of ZEV technologies, an analysis of pathways to meeting California's long term 2050 GHG reduction goals in the LDV subsector and a review of current and possible future complementary policies that would be needed to aid in infrastructure development and market pull policies for ZEVs. Based on the U.S. DOE Vision model, staff developed a California-specific model for the LDV subsector, relying heavily on model inputs and assumptions from peer-reviewed studies.

Figure 1 shows what the cumulative on-road PCs would need to be to reach the 2050 goal.

This analysis assumed a 2050 target of 80% below the passenger vehicle portion of 1990's GHG inventory, or 20% of 108.5 MMT of CO₂ equivalent emissions.

Clean Fuels Outlet

- Transportation petroleum fuel providers obligated to supply or fund H2 retail stations
- Applies once 20,000 vehicles projected to be on the road state-wide, or 10,000 in an air basin such as South Coast Air Quality Management District
- Stations planning/construction must start well BEFORE vehicles are on the road so that fuel is ready when they arrive
- Potential legal challenge
Primary Funding Drivers
- AB118 Alternative Vehicle Technology Program
- Air Quality Management Districts
- Possible share of GHG allowance auction revenue

GHG Credits
- Improves FCEV fueling costs relative to gasoline and/or station profitability