

Achieving Air Quality and Climate Change Goals through Energy and Transportation Transformation

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Driving Forces Behind CARB Policies

- * **Healthy Air Quality for All Californians**

- * Continued progress towards ozone attainment
- * Reduce localized exposure to pollutants and toxics

- * **Stable Global Climate**

- * Reduce greenhouse gases (GHG) 80% below 1990 levels by 2050



Over 90% of Californians still breathing unhealthy air

State of the Air 2013 Most Polluted U.S. Cities

Unhealthy Ozone Days

1	Los Angeles
2	Visalia
3	Bakersfield
4	Fresno
5	Hanford
6	Sacramento
7	Houston, TX
8	Dallas, TX
9	Washington, DC
10	El Centro

- * California has 7 of 10 most ozone polluted cities in the United States
- * 5 million Californians with asthma
- * 1.2 million children
- * 9,200 premature deaths annually due to current particulate matter (PM) levels



Policies and Programs





AB 32 and Cap & Trade



- * AB 32 requires California to return to 1990 levels of greenhouse gas emissions by 2020
- * The cap and trade program is a key element in California's climate plan.
 - * It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions
 - * establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy.



Scoping Plan Proposed Update

Sector Recommendations

Transportation

- * Reduce light-duty and heavy-duty GHG emissions 5 percent per year to continue progress toward near-zero emissions by 2050
- * Enhance and strengthen Low Carbon Fuel Standard (LCFS)
- * Develop Sustainable Freight Strategy

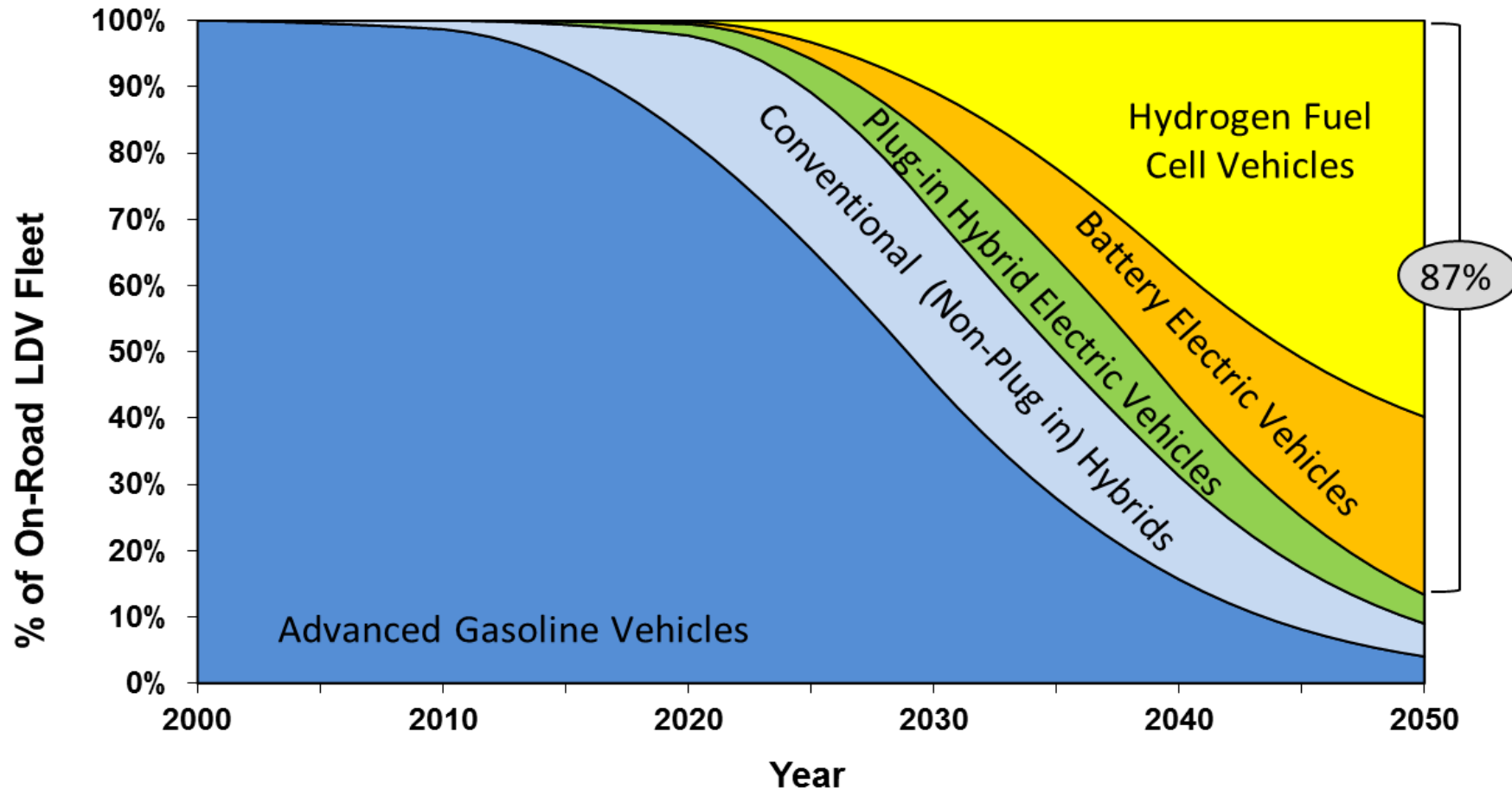
Energy

- * Develop a comprehensive GHG emission reduction program for energy by 2016
- * Increase energy efficiency, distributed generation/CHP, demand response, and integrated low carbon energy supply





Light Duty Vehicle GHG Goals





California ZEV Action Plan

2013

ZEV Action Plan

A roadmap toward 1.5 million zero-emission vehicles
on California roadways by 2025



Governor's Interagency Working Group on
Zero-emission Vehicles

Governor Edmund G. Brown Jr.
February 2013

- * Executive Order signed March 2012
 - * 1.5 Million ZEVs in California by 2025
 - * Infrastructure to support 1 Million ZEVs by 2020
 - * 10 percent of state fleet vehicles shall be ZEVs by 2015 and 25 percent by 2020
- * Action Plan finalized in February 2013
 - * Multi agency plan for supporting the goals of the Executive Order
 - * Focus on:
 - * Public awareness and demand
 - * Infrastructure
 - * Fleets
 - * Building ZEV industry

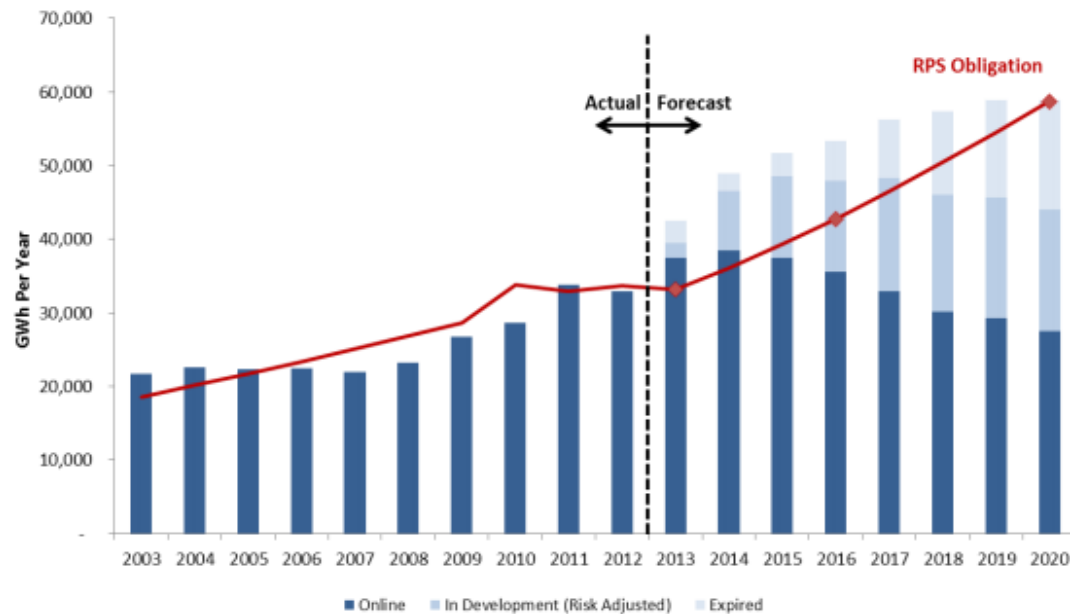


Low Carbon Fuel Standard

- * Reduce greenhouse gas emissions
 - * ~15 MMT in-state in 2020
- * Reduce carbon intensity of transportation fuel pool by 10% by 2020
- * Help achieve AB 32 objective of reducing GHG emissions to 1990 levels by 2020
- * Transform and diversify fuel pool
- * Reduce petroleum dependency



Renewable Portfolio Standard



Source: California Public Utilities Commission, August 2013



Challenges

- * Building the market pull for zero emission vehicles
- * Building the fueling infrastructure to support zero emission vehicles
- * Capture of the many pathways zero emission fuels can be produced for LCFS
- * Optimal integration and utilization of renewable energy



Opportunities

- * Cross sector connections that benefit multiple policy goals
- * Building business case for the market transformation we need to see

Thank you