

BMW CleanEnergy Seminar

Sacramento, CA

California Mobile Source Control Programs

**Dr. Alan Lloyd, Chairman
California Air Resources Board
March 20, 2002**

California Environmental Protection Agency



Air Resources Board

Air Resources Board Goal

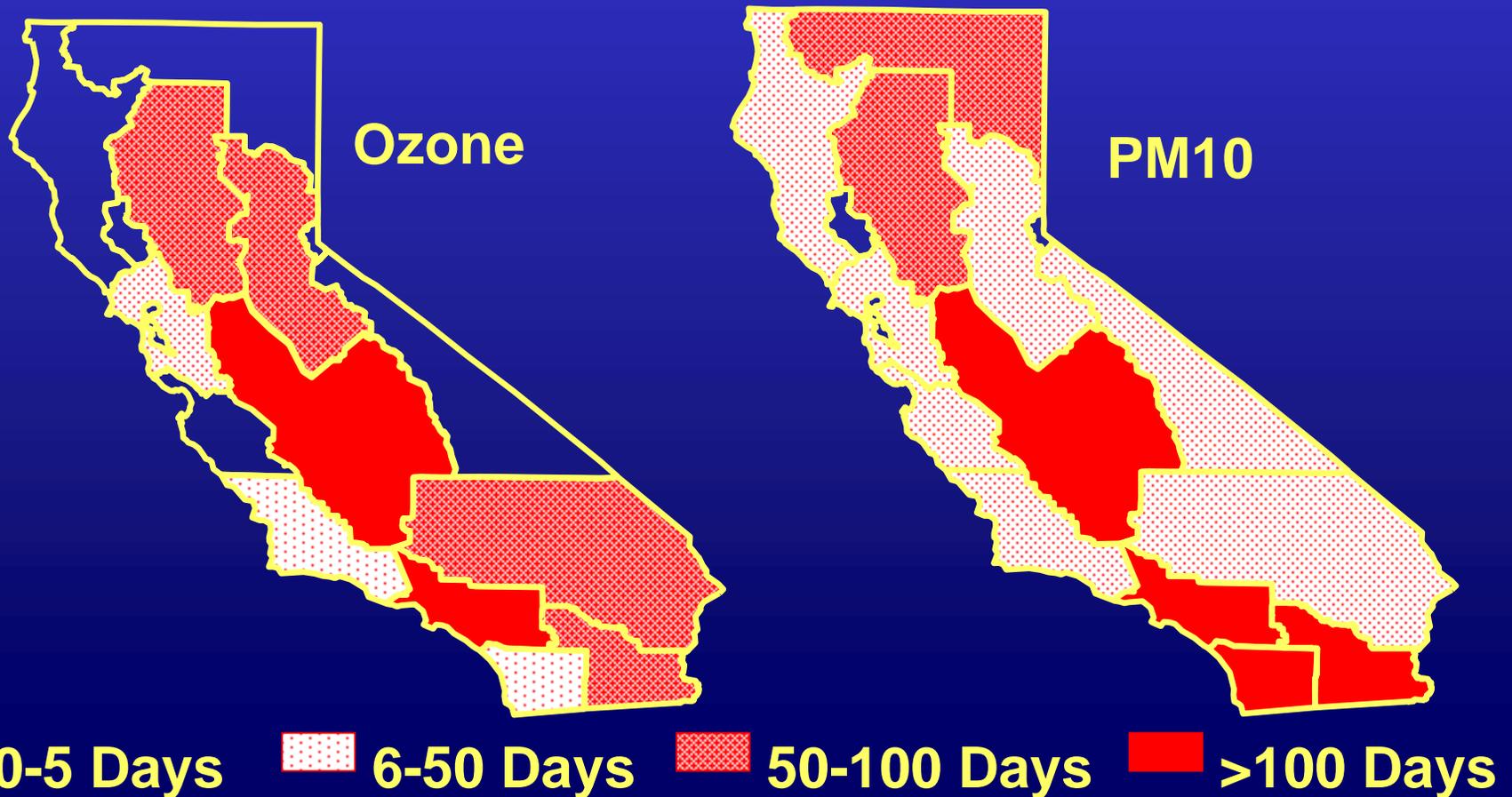


Ensure all Californians, especially children and the elderly, can live, work and play in a healthful environment

- free from harmful exposure to air pollution

Over 90% of Californians Breathe Unhealthy Air at Times

Days Over Applicable State Standard,
1999 Monitoring Data



ARB Goals for Mobile Source Control Programs

- Achieve maximum feasible emission reductions from on-road and off-road mobile sources to attain state air quality standards
 - cut *community* exposure to air toxins
 - reduce *regional* ozone, particulate, and toxins levels
 - cut contribution to *global* pollution
- Requires partnerships at the community, regional and global level

Zero Emission Vehicle Program

10 % Mandate

2 %

ZEV



6 %

PZEV



2 %

AT-PZEV



ZEV Air Quality Advantages

- No tailpipe emissions
- No evaporative or fuel marketing emissions
- No emission control equipment deterioration or failure
- Reduced toxic and greenhouse gas emissions
- Extremely low indirect emissions in California

California Fuel Cell Partnership



- Announced
April 20, 1999
- Office and public
gallery opened
November 1, 2000
- Bringing Fuel Cell
Vehicles to Market
Report, October 2001



California Fuel Cell Partnership



- Partnership Goals
 - Demonstrate vehicle technology
 - Cars ~60
 - Buses ~20
 - Demonstrate alternative fuel infrastructure
 - Identify path to commercialization
 - Increase public awareness
- 20 Members
 - Auto, oil, technology, government, transit

Ford P2000 H2 ICE Refueling



Ford P2000 H2 ICE at Michelin Challenge Bibendum



Vision for the Future

“Conventional technologies and fuels are not enough”

- Zero and near-zero emission vehicles
- Improved efficiency for lower CO₂
- Sustainable fuel supply
 - Hydrogen for both ICE and fuel cells
 - Renewables for electricity and hydrogen generation
- Clean and healthful air