

West Coast Collaborative
Partners Meeting

September 30, 2010
San Francisco

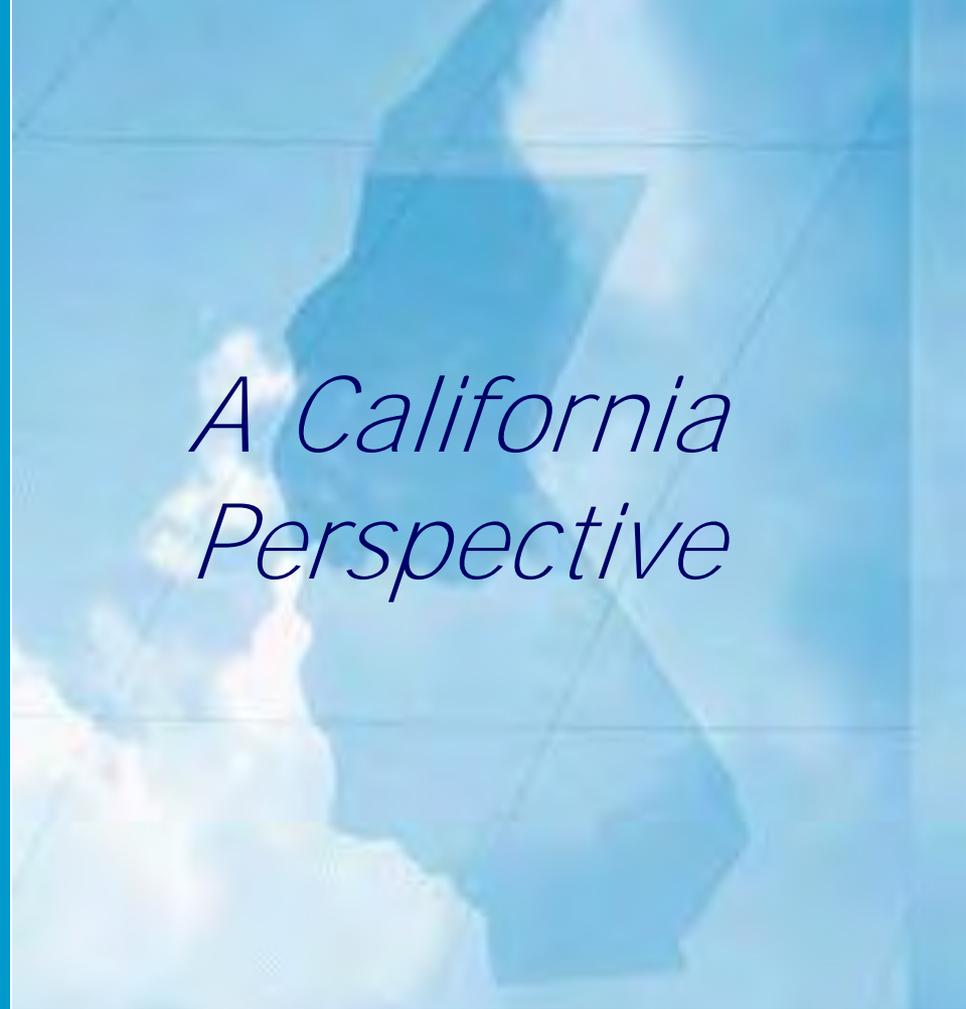
Diesel Technologies & Climate Change Mitigation

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California Environmental Protection Agency



Air Resources Board



*A California
Perspective*



Diesel Pollution



Multiple
Impacts



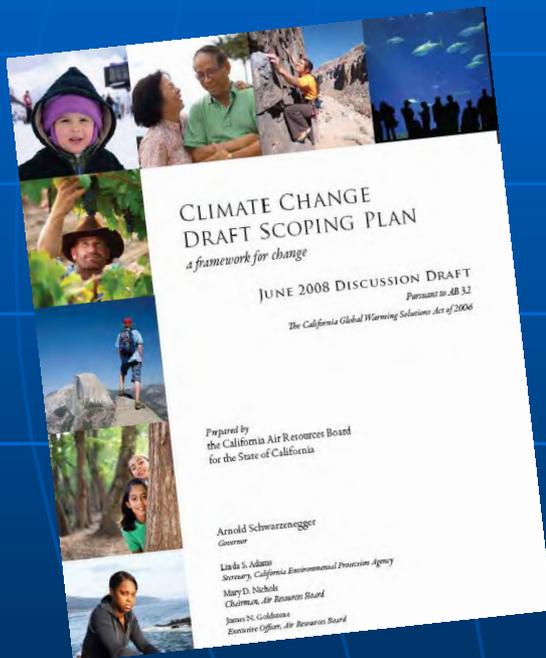
Common
Solutions

Cleaner Diesels in California

- Strategies to cut toxic + criteria pollutants
 - Standards for new diesel engines and fuels
 - Rules/incentives for existing equipment
 - Operational restrictions
 - Port and railyard initiatives
- Progress: diesel PM health risk at busiest ports and railyards reduced over 50% between 2005-2010

Climate Change Scoping Plan

- Board adoption Dec 2008
- Mix of strategies
- All programs to integrate greenhouse gas reductions wherever possible
- On track to cut emissions to 1990 levels by 2020

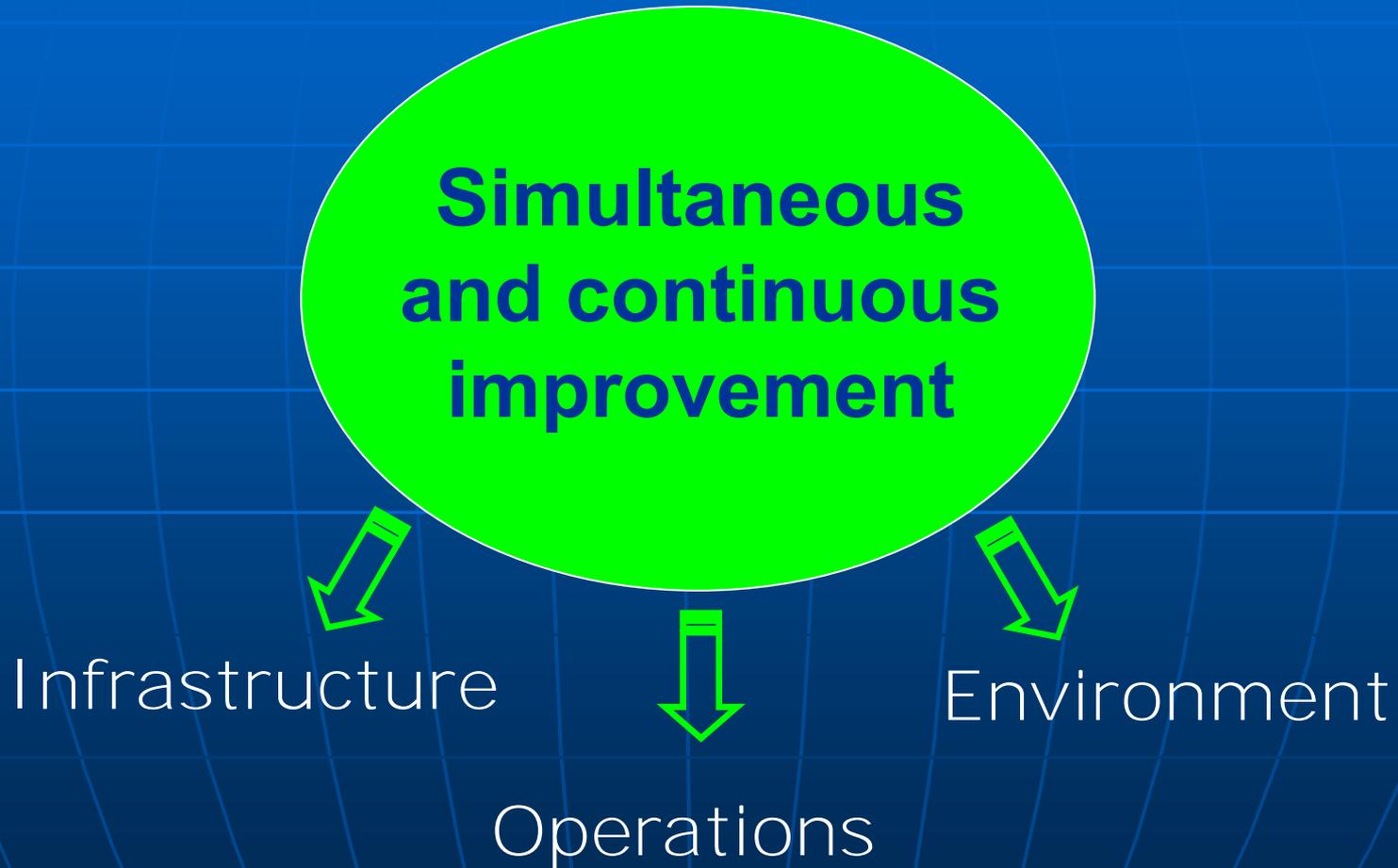


California's Climate Strategies for Heavy Diesel Engines

	Regulation	Incentives
Low carbon fuels		
Low emission engines		
Efficient engines		
Aerodynamic trucks		
Reduced idling/speeds		
Electric power		
Efficient freight system	2011	

State Policy

(2007 Goods Movement Action Plan)



Improving Freight Velocity Can Help

Otay Mesa Border Truck Crossing



Average wait time in Mexico is ~2 hours;
 $\frac{1}{2}$ of truck emissions are from idling in queue

But Air Quality Results Depend on the System

I-710: Typical Day



I-710: Truckers' Strike*



* Local PM levels remained high -- due to more pollution from ships idling at dock and offshore

Proposition 1B (2006)

\$2B – Freight Infrastructure Investments

\$1B – Goods Movement Emission Reductions

First \$250M Upgrades

6,000 trucks
(10% natural gas)
3 ship berths
14 locomotives

Reduces Emissions

2.3 million lbs PM
40 million lbs NOx



Intrastate Locomotives

- 120 Tier 3 equivalent switchers in CA
- Reduces diesel PM, NOx, and fuel use
- Advanced technology projects underway
 - PM and NOx retrofits; fuel cell
- >400 more intrastate units to upgrade



*ARRA-funded project for
11 gen-set switchers in
Southern California*

Interstate Locomotives Require National/Regional Coordination

(Travel by a Single Locomotive for 60 days)



Courtesy of Union Pacific Railroad

How can WCC help?

- Significant, sustained increase in incentive \$
 - Joint funding for line-haul locomotives
- Federal policy that links freight infrastructure and air quality improvements
- Federal/international requirements to improve efficiency (trucks, ships, aircraft)



For More Information

- ARB Climate Change Web Site
www.arb.ca.gov/cc/cc.htm
- California Climate Change Portal
www.climatechange.ca.gov
- Diesel Programs and Activities
www.arb.ca.gov/diesel/diesel.htm

