



South Coast AQMD Staff

Input to Draft AB 118 Investment Plan

January 8, 2009

DOCKET

08-ALT-1

DATE JAN 08 2009

RECD. JAN 08 2009



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Assistant Deputy Executive Officer

Science and Technology Advancement

Advisory Committee and CEC

- Challenges
 - Priorities
 - Opportunities
 - Mechanisms
- To *Develop* and *Deploy* Innovative Technologies



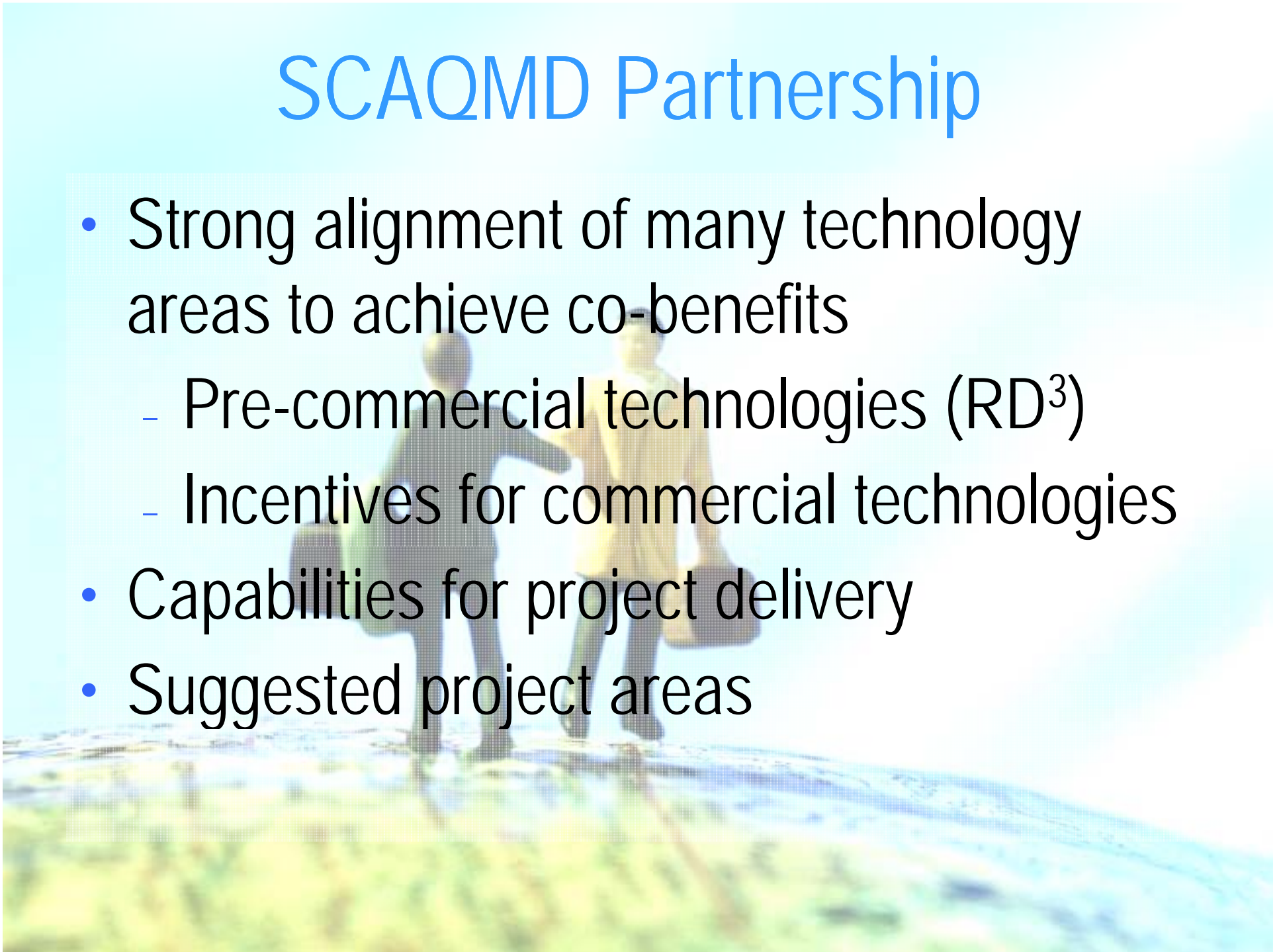
First Two Years of Funding

- Support Staff Draft Investment Plan
- Recognizes early opportunities to deploy low carbon technologies
- Includes funding for SULC technologies –
Electric and Hydrogen (incl. infrastructure)
- Energy efficiency (hybridization)



SCAQMD Partnership

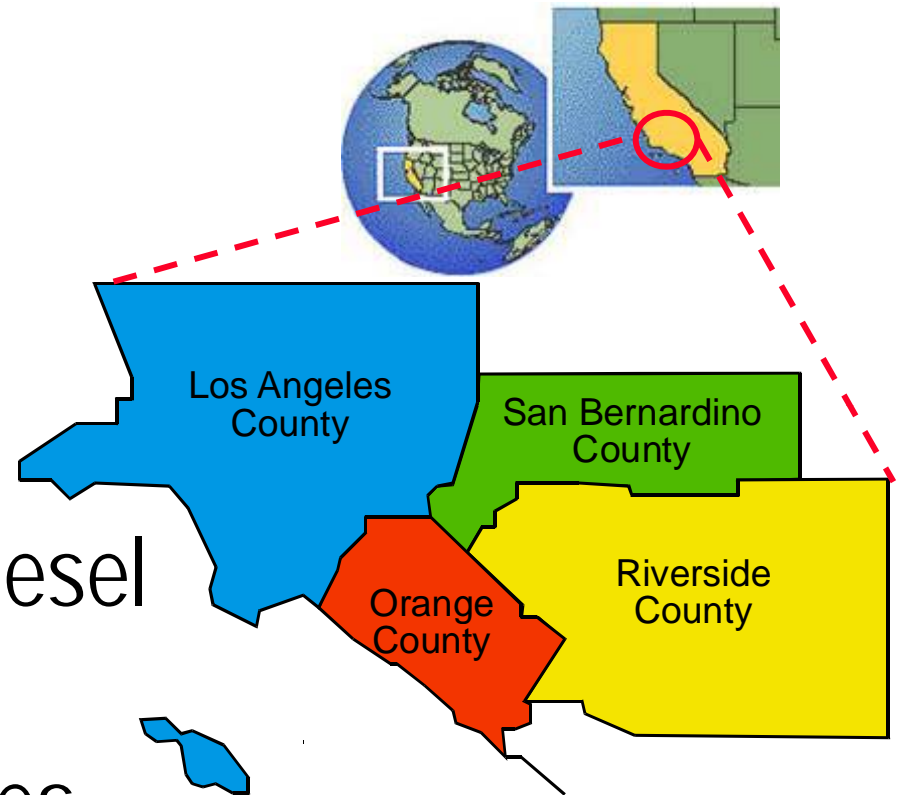
- Strong alignment of many technology areas to achieve co-benefits
 - Pre-commercial technologies (RD³)
 - Incentives for commercial technologies
- Capabilities for project delivery
- Suggested project areas



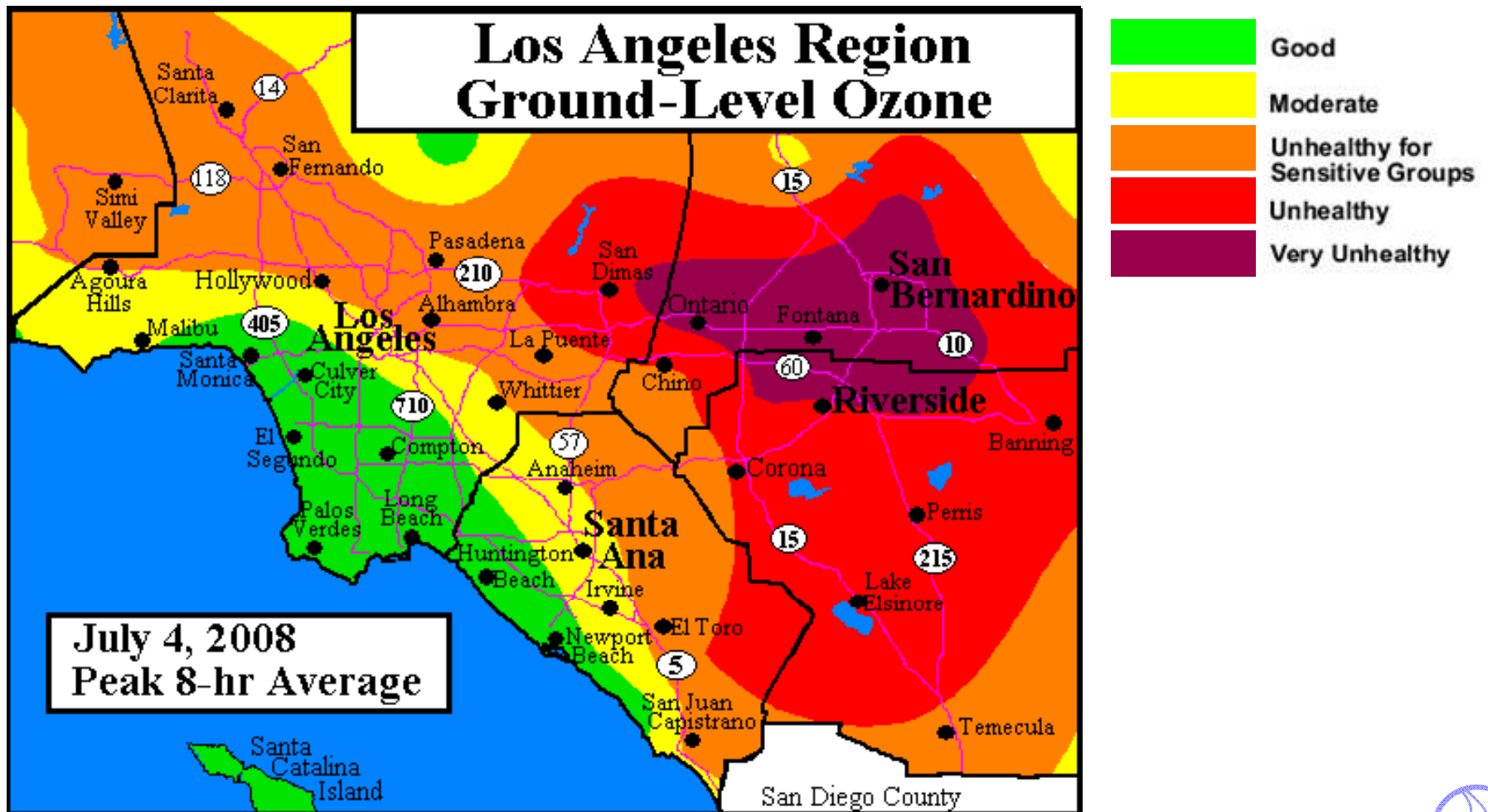
AQMD Background

South Coast Basin:

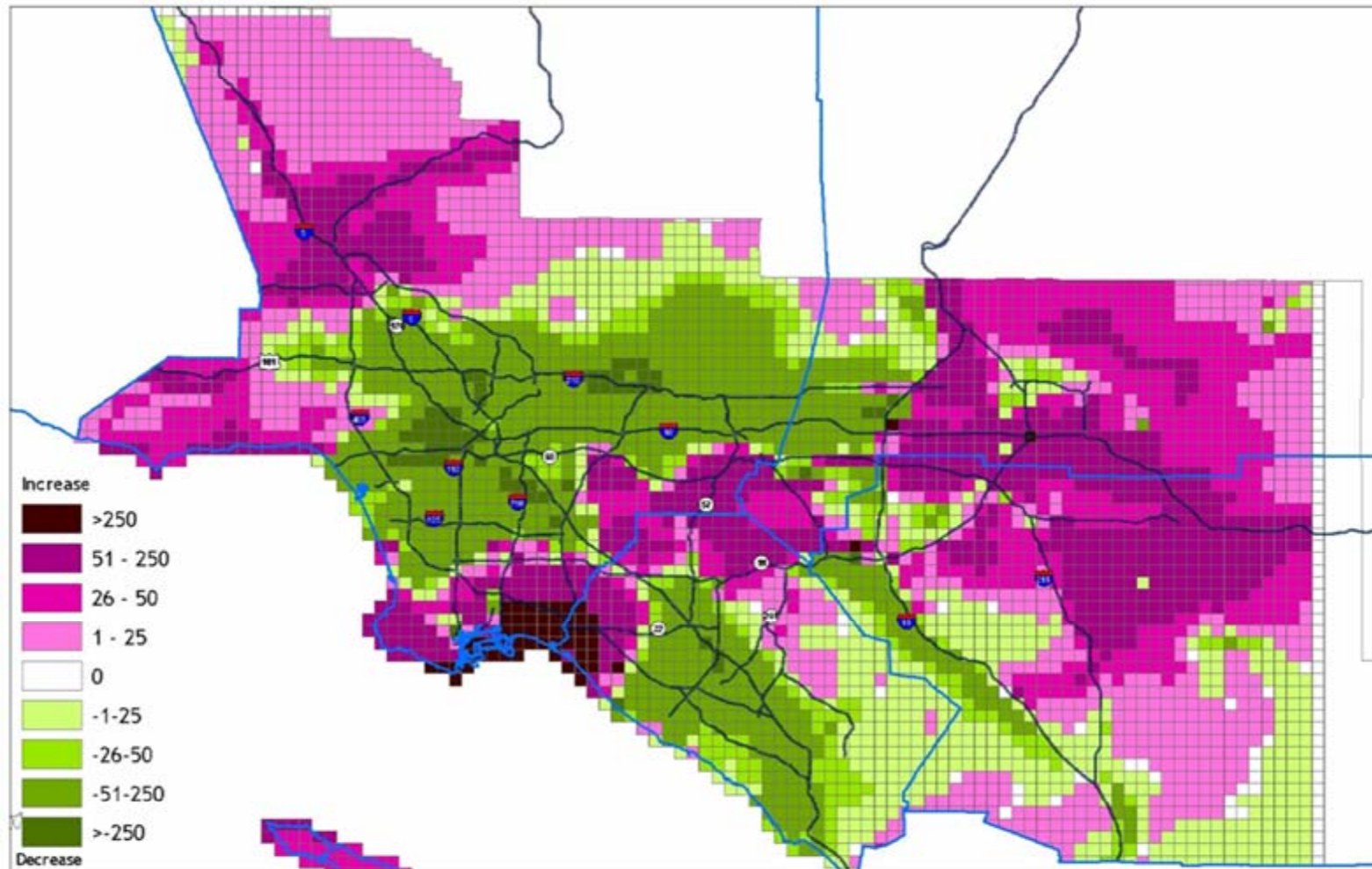
- 4-county region
- 11,000 sq. miles
- 16+ million residents
- Hundreds of thousands diesel vehicles
- Millions of gasoline vehicles
- Combined Ports of Long Beach and Los Angeles are nation's largest cargo gateway



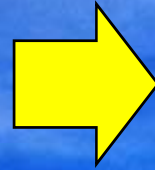
Worst Air Quality in the Nation



Change in Air Toxics Risk (per million) from 1998-99 to 2005 Using Back-Cast 1998 Emissions



Transition to
Sustainable
Mobility?

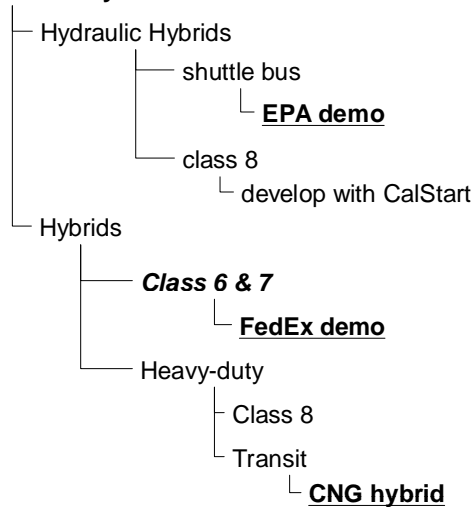


*Near-term and
Longer-term
Technologies*

Technologies that Provide Co-Benefits

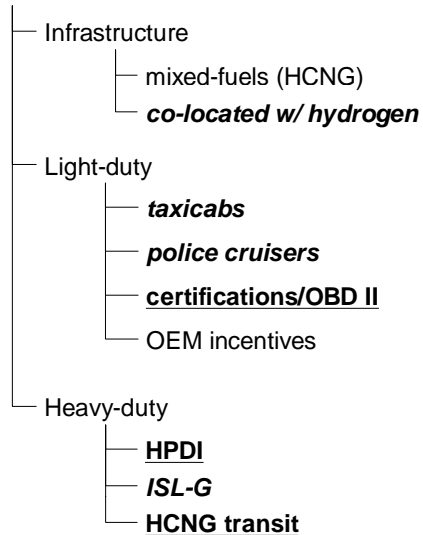
Fuel Economy Improvements

Vehicle Efficiency



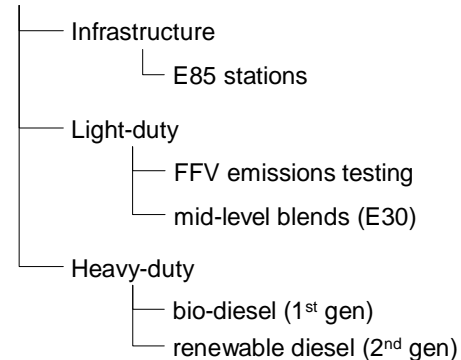
Low Carbon Vehicles

Natural Gas



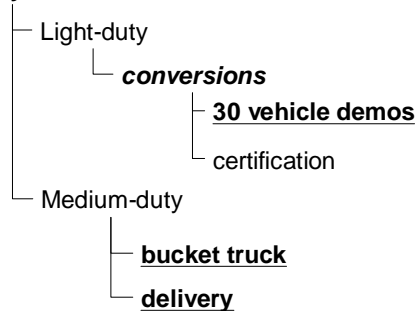
Ultra Low Carbon Vehicles

Biofuels

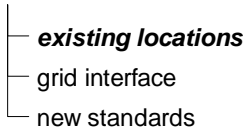


Super Ultra Low Carbon Vehicles

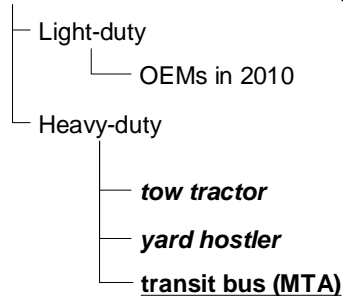
Plug-In Hybrid EVs



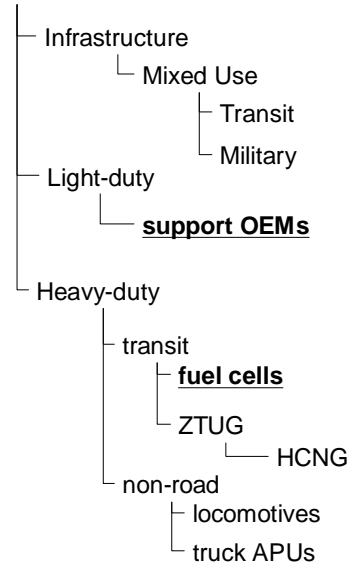
Infrastructure



Electric Vehicles



Hydrogen Fuel Cells



Ongoing Demonstration *Possible Deployment Incentive*

SCAQMD Programs

Incentive Programs

Commercial Technologies
(near-term reductions)

- Carl Moyer (\$56M/yr)
- School Bus
- Proposition 1B (\$138M/yr for 4 years)

Research, Development, Demonstration & Deployment Program

Pre-commercial Technologies
(longer-term reductions)

- Clean Fuels (\$12M/yr)



AQMD Technology Portfolio

- Near-term to longer-term
- Develop pathways & transitions
- Leverage existing tech & infrastructure

Fuel Cell



Plug-ins



Clean Transit



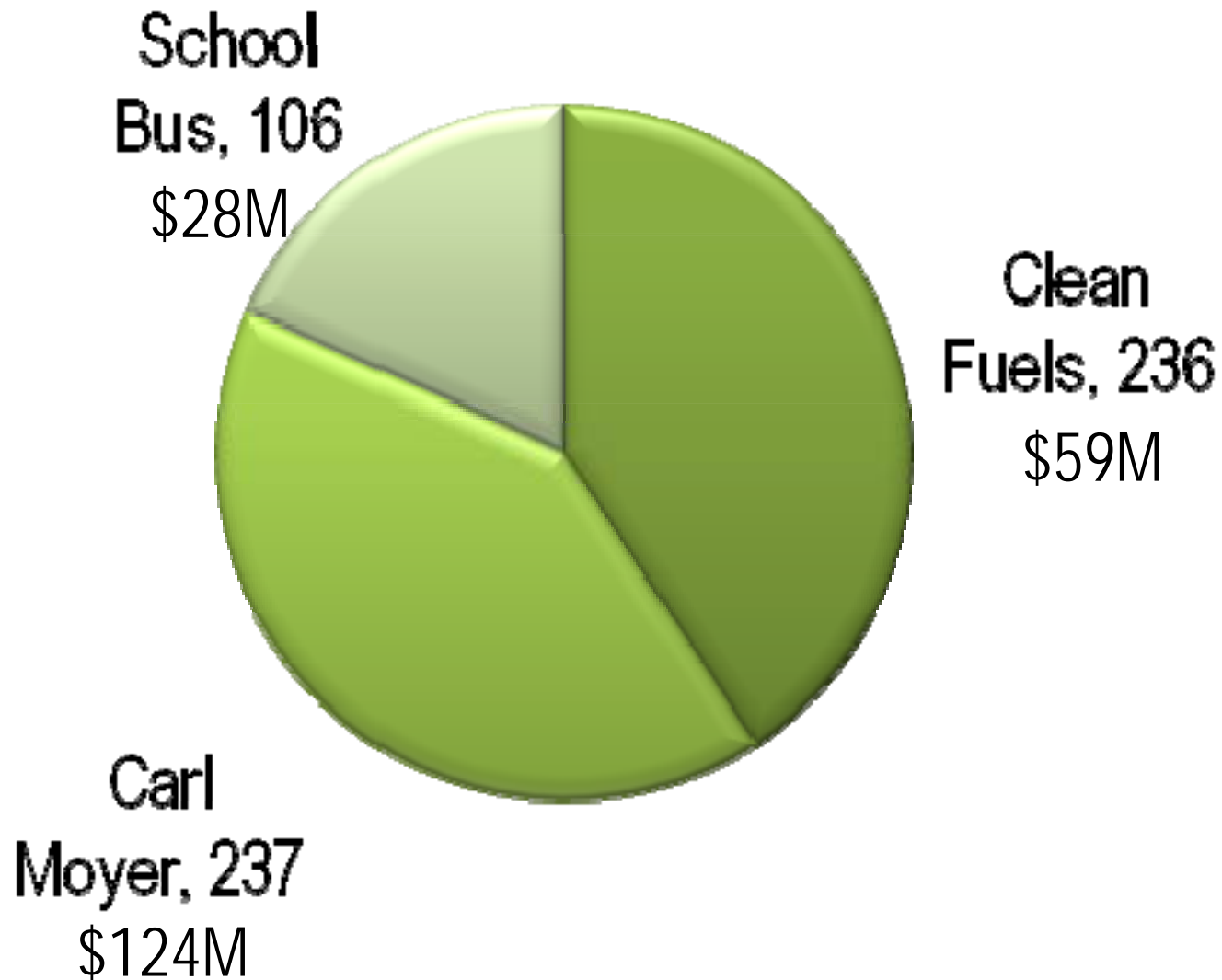
Heavy-Duty
Natural Gas



CNG



Program Delivery: Contracts (2002-2007)



Capabilities

- Staff resources
- Administrative processes
- Experience
- Stakeholder network
 - Technology providers
 - Demonstration sites
- Outreach and education



Suggested Low Carbon Projects (2009-2010)

Low Carbon Tech	SCAQMD	CEC AB 118
HD NG incentives		\$18M
NG School Bus incentives		\$14M
NG conversions or OEM intro	\$1M	\$2M
HD NG engine development	\$1M	\$2M
NG infrastructure	\$2M	\$4M



Suggested Electric SULC Projects (2009-2010)

Super Ultra Low Carbon Tech	SCAQMD	CEC AB 118
LD PHEV development/demo	\$4M	\$10M
MD PHEV development/demo	\$3M	\$5M
EV infrastructure	\$1M	\$2M
EV incentives	\$1M	\$2M



Suggested Hydrogen SULC and Fuel Economy Improvement Projects (2009-2010)

Super Ultra Low Carbon Tech	SCAQMD	CEC AB 118
Hydrogen infrastructure	\$3M	\$6M
Transit bus demos	\$1M	\$2M
Fuel Economy Improvements	SCAQMD	CEC AB 118
Hydraulic hybrid demos	\$2M	\$4M



SCAQMD Strategic Alliance

- Support early reductions
- Synergies and alignment with programs
- Offer experience, resources and co-funding
- Project areas with immediate potential
- Collaborate with CEC to implement



