



Transportation Priorities

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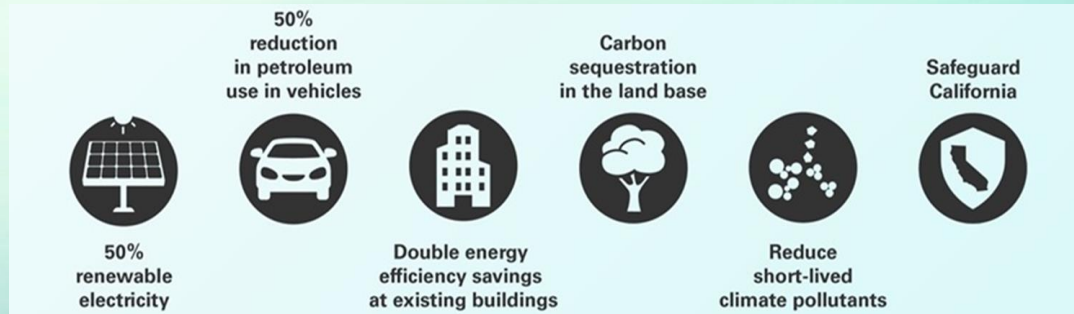
Mobile Source Control Division

California Air Quality

- Transportation is the largest source of many pollutants
 - 80% of NO_x
 - 95% of diesel PM
 - 50% of GHG
- NO_x and PM exposure has significant health impacts
- California is home to the busiest freight corridors – running through disadvantaged communities

GHG Emission Reduction Goals

- Reduce to 1990 levels by 2020
- Reduce 40 percent below 1990 levels by 2030
- Reduce transportation GHGs by 80 percent



NOx and PM Reductions Are Critical

- Harmful smog precursor
- Extreme nonattainment with national air quality standards
- Disproportional impacts to Disadvantaged Communities (DAC)



Health Impacts

- Premature mortality from ozone exposure
- Diesel PM and cancer
- Asthma
- Exacerbation of existing conditions
- Pulmonary and cardiovascular disease
- Children, elderly and individuals close to source most vulnerable

Drivers for Reducing NOx and PM Emissions

- >90% (34.6 million) of state's population in nonattainment area
- To reach National Ambient Air Quality Standards need 90% reduction in NOx from 2010 levels by 2030



Ways to Reduce Emissions

Policies

Regulations

Incentives

CARB Policies to Support Clean Transportation

- State Implementation Plan commits actions for NOx and PM reductions
- Mobile Source Strategy provides strategies to transform transport
- Sustainable Freight Action Plan provides pathway for freight by zero emission everywhere feasible, and near-zero emission everywhere else



Regulations and Real-World Results

- Efficiency and emissions standards are advancing
 - Pairing with more robust in-use, real-world compliance
 - Achieving better results in actual duty cycles
- Lower NOx standards



CARB On-Road Heavy-Duty Rulemakings

Rulemaking	Scheduled Hearing Date
Revisions to Periodic Smoke Inspection Program	May 2018
Revisions to the HD Warranty Regulations	June 2018
Revisions to Heavy-Duty OBD Regs	November 2018
Innovative Clean Transit Regulation	January 2019
Heavy-Duty Vehicle Zero Emission Certification Procedures	February 2019

CARB On-Road Heavy-Duty Rulemakings (continued)

Rulemaking	Scheduled Hearing Date
Zero-Emission Airport Shuttle Bus	April 2019
Advanced Clean Truck Regulation	Late 2019
Revisions to Warranty Information and Reporting Regs	Late 2019
Revisions to the <ul style="list-style-type: none">- NOx Standard and Test Procedures,- In-Use Compliance Program, and- Durability/Useful Life Requirements	Late 2019

Role of CARB Incentives

- Provide climate, air quality, and public health benefits
- Accelerate development of clean technologies
- Provide corresponding economic benefits
- Target funds for disadvantaged communities and low-income Californians
- Complement CARB's regulations

CARB Incentive Funding Portfolio

Low Carbon Transportation

GHG reductions

\$455M for FY 18-19

AQIP

Criteria pollutant and toxics reductions

\$28M for FY 18-19

AB 617	Carl Moyer	Prop 1B	Agricultural Incentives	VW Mitigation Trust
Criteria and toxics reductions for community goals	SIP emission reductions	PM and NOx reductions in goods movement corridors	Criteria pollutant, toxics, and GHG reductions	NOx mitigation
\$495M for FY 18-19	\$69 for FY 18-19	\$267M for 2015+	\$132M for FY 18-19	\$423M for 2017+

Bringing Technology to Market

- State's goals will require technology not currently available
- Low Carbon Transportation projects ensure technology availability and regulations ensure demand
- Demonstration and pilot projects accelerate commercialization
 - Low-NO_x, near zero-, zero-emission

Partnership with Achates

- OP engines have significant benefits – and potential
 - 0.02g/bhp NOx
 - >15% CO2 decrease
- \$5M from FY 2016-17 for four OP engines
 - 2 engines will be in revenue operation
 - Peterbilt tractors will operate with Walmart and Tyson Foods, operating regionally in Stockton, LA, and San Diego

Future Goals

- State needs many technologies to achieve goals
- Continue to drive innovation through regulation and incentives
- Partnerships will continue to be critical

