



Mobile Source Update



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South Coast Air Quality Management District

2013 State and Federal Regulatory Activities

- CARB

- GHG Standards for Heavy-Duty Vehicles (EPA Phase I Standards)
- Off-Road Recreational Vehicle Evaporative Emission Standards
- ZEB Amendments to the Transit Bus Regulation
- Heavy-Duty Engine Optional NO_x Standards

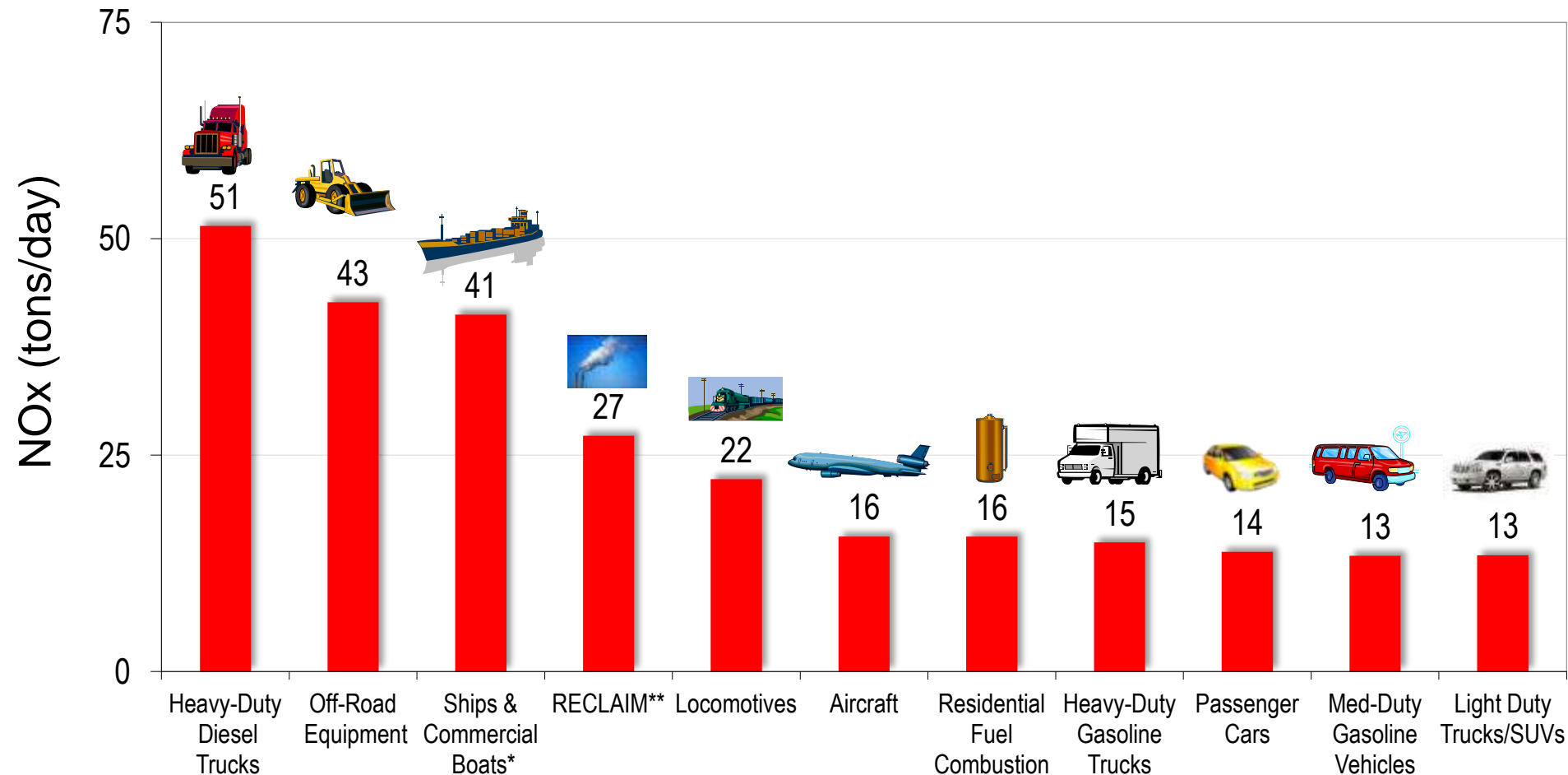
- Federal

- Tier 3 Standards for Light- and Medium-Duty Vehicles

Federal Fuel Economy and GHG Emissions Standards for Medium and Heavy-Duty Vehicles

- Final Rule - Sept. 15, 2011
- MY 2014 – 2018 Medium- and Heavy-Duty Vehicles
 - Line Haul Tractors (Class 7 & 8)
 - Engine Standards (g/mi and g/bhp-hr CO₂)
 - 10 – 23% Reduction in CO₂
 - Vocational Vehicles (Class 2b – 8)
 - Vehicle Standards (g/ton-miles)
 - 6 – 9% Reduction in CO₂
 - Pickups & Vans
 - Fuel Efficiency Standards
 - 12 – 17% Reduction in CO₂

Top NOx Sources in the South Coast Air Basin in 2023



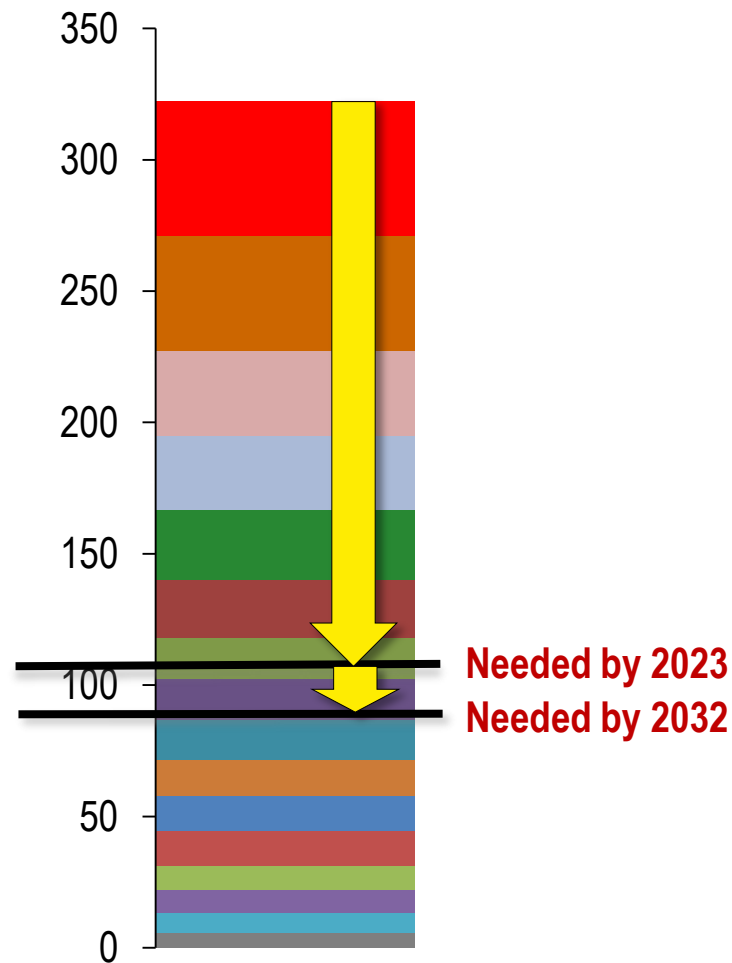
* Oceangoing vessels = 32 tons/day

**RECLAIM: 320 largest stationary sources, including all refineries and power plants

Source: (SCAQMD, 2012 Revised Draft Air Quality Management Plan)

Needed NOx Emission Reductions to Achieve 8-Hr Ozone Air Quality Standards in the South Coast Air Basin

- Heavy-Duty Diesel Trucks
- Off-Road Equipment
- Ocean-going Vessels
- Other
- RECLAIM (Large Stationary)
- Locomotives
- Aircraft
- Residential Fuel Combustion
- Heavy-Duty Gasoline Trucks
- Light-Duty Vehicles
- Medium-Duty Trucks
- Light-Duty Trucks
- Manufacturing and Industrial
- Commercial Boats
- Service/Commercial
- Recreational Boats



Vision for Clean Air: Framework for Air Quality and Climate Planning

- Follow-up to “Powering the Future”
- Short-, Mid-, and Long-Term Visioning to Integrate Multi-Pollutant, Multi-Deadline Air Quality Planning
- Resource Document for
 - SIP (PM2.5 & Ozone)
 - ✓ Targets (2023, 2032 – Ozone)
 - AB32 Scoping Plan Update
 - ✓ Targets (2020, 2050 - GHG)
 - CARB Freight Transport Plan
- Air Toxic Reduction - Co-Benefits



Proposed Actions

- Focus on Key Mobile Source Sectors
- Identify Zero- and Near-Zero Emission Technologies, Where Appropriate
- Identify Cleaner Combustion Technologies, Where Appropriate

Key Mobile Source Sectors

- Light-Duty Vehicles
- Transit and School Buses
- On-Road Heavy-Duty Vehicles
- Agricultural Vehicles
- Locomotives
- Ocean-Going Marine Vessels
- Harbor Craft
- Off-Road Equipment – Construction; Industrial
- Cargo Handling Equipment
- Aircraft

Timeline for Actions

	2012	2013	2014	2015	2016	2017	2018	2019	2020+
Scoping and Planning	[Black bar spanning 2012 to 2015]								
Prototype Development and Demonstration	[Black bar spanning 2013 to 2016]								
Select Technologies and Conduct for Field Evaluation	[Black bar spanning 2014 to 2017]								
Full Scale Demonstration and Commercial Deployment	[Black bar spanning 2015 to 2020+]								

2012 AQMP

Advanced Technology Measures

- **ADV-01** – Actions for the Deployment of Zero- and Near-Zero Emission On-Road Heavy-Duty Vehicles



- **ADV-02** – Actions for the Deployment of Zero- and Near-Zero Emission Locomotives



- **ADV-03** – Actions for the Deployment of Zero- and Near-Zero Emission Cargo Handling Equipment

- **ADV-04** – Actions for the Deployment of Cleaner Commercial Harbor Craft



- **ADV-05** – Actions for the Deployment of Cleaner Ocean-Going Vessels

- **ADV-06** – Actions for the Deployment of Cleaner Off-Road Equipment



- **ADV-07** – Actions for the Deployment of Cleaner Aircraft

South Coast AQMD Activities

- Surplus Off-Road Opt-In for NO_x (SOON) Program
- Implementation of AQMD Fleet Rules
- Development of Mobile Source Emissions Reduction Credit Rules

SCAQMD Fleet Vehicle Rules

- 1191 - Light- and Medium-Duty Public Fleets
- 1192 - Transit Buses
- 1193 - Refuse Collection Vehicles
- 1194 - Commercial Airport Ground Access
- 1195 - School Buses
- 1196 - Heavy-Duty Public Fleet Vehicles
- 1186.1 - Less-Polluting Sweepers



Natural Gas Vehicles Operating in Fleets in Southern California

~ 3,692 Light- and Medium-Duty Public Fleet Vehicles



~ 526 Heavy-Duty Public Fleet Vehicles



~ 4,538 Transit Buses



~ 1,965 School Buses

~ 1,886 Refuse Trucks



~ 300 Street Sweepers



~ 856 Taxicabs and Airport Shuttles

