



Highlights on Statewide Strategies to Control Emissions

Stockton

Community Steering Committee Meeting

September 9, 2020

Air Quality Agencies

Federal



U.S. EPA

*Sets/enforces national air quality standards.
Regulates interstate transportation.*



Trains



Ships



Planes

State



CARB

*Regulates mobile sources of air pollution,
greenhouse gases, and consumer products.*



Cars



Trucks



Buses

Local

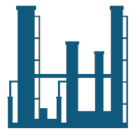


Local Air Districts

*Regulate stationary and
local sources of air pollution.*



Factories



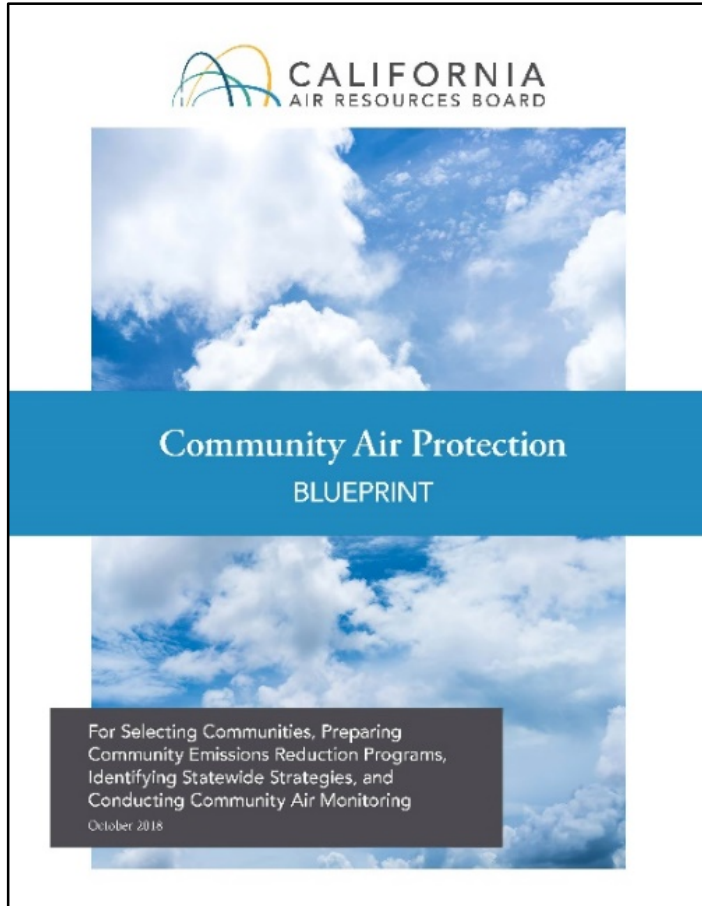
Refineries



Residential
woodstoves



CARB STATEWIDE STRATEGIES



**APPENDIX F.
STATEWIDE STRATEGIES, TOOLS,
AND RESOURCES**

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COMMUNITY AIR PROTECTION PROGRAM F-1

APPENDIX F – STATEWIDE STRATEGIES, TOOLS, AND RESOURCES

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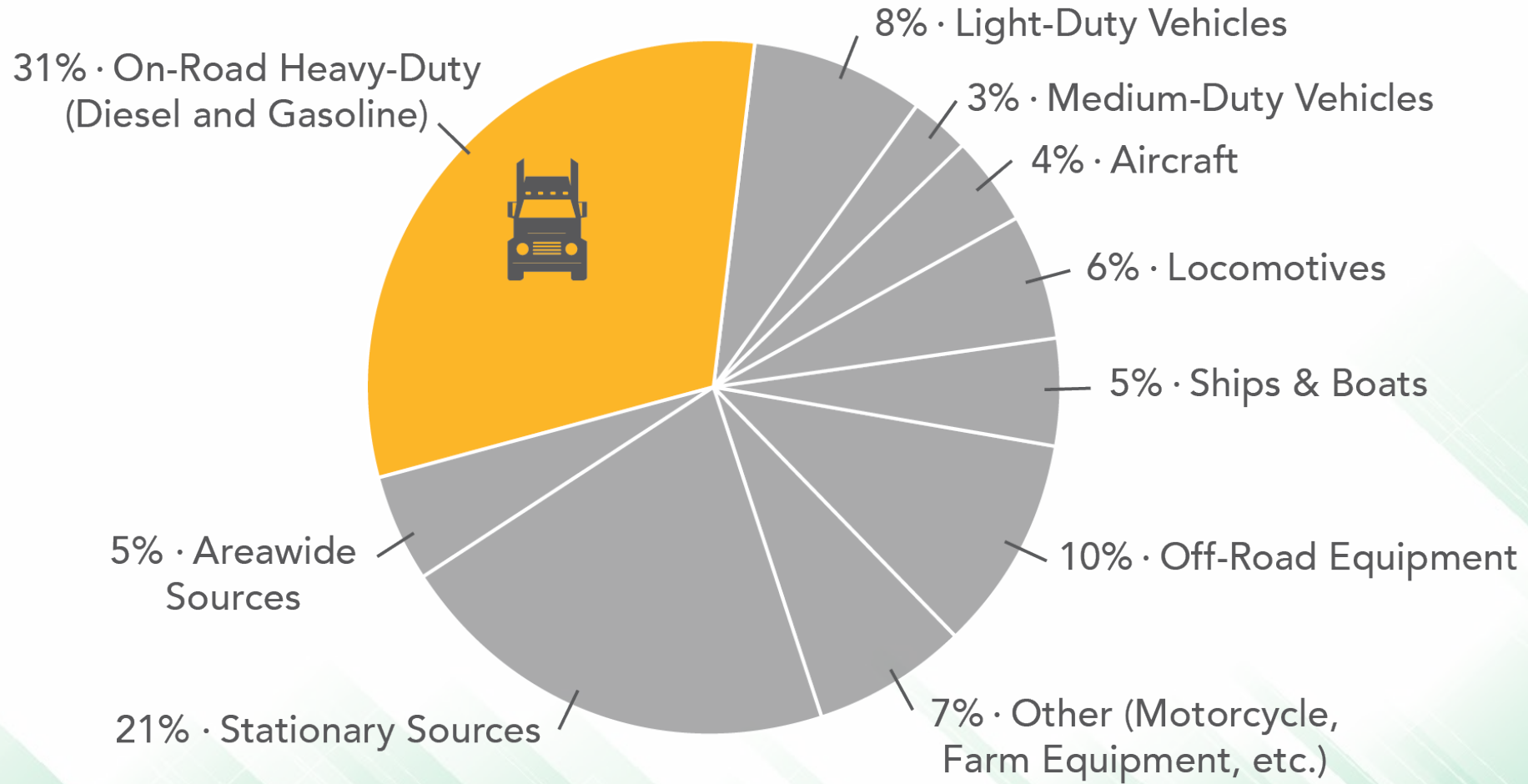
F-2 FINAL COMMUNITY AIR PROTECTION BLUEPRINT – October 19, 2018

CARB Statewide Measure	Latest/Upcoming Activities
Advanced Clean Cars 2	Workshop 9/16/2020. Present to Board planned 2021.
Advanced Clean Fleets	Workshop 9/18/2020.
Advanced Clean Trucks	Approved by CARB Board 6/2020
Cargo Handling Equipment Transition to Zero Emissions	Workshops planned 2021. Board consideration planned 2022.
Chrome Plating Control Measure	Work group 9/11/2020. Toxics update to Board 9/2020.
Commercial Cooking Suggested Control Measure	Discussions planned 2021.
Commercial Harbor Craft	Workshop 3/5/2020. Board consideration planned 2021.
Composite Wood Control Measure	Workshop 3/2020. Toxics update to Board 9/2020.
Heavy-Duty Inspection & Maintenance	Workshop 2/2020.
Heavy-Duty Low NOx Omnibus	Approved at CARB Board Hearing 8/2020
Locomotives/Rail Emissions Reductions	Workshop 9/3/2020. Present to Board planned Fall 2021.
Ocean-Going Vessels At Berth	Approved by CARB Board 8/2020
Real Emissions Assessment Logging System	Adopted by CARB Board 11/2018.
Small Off-Road Engines	Workshop 6/2020.
Transport Refrigeration Unit Regulation	Board consideration planned 2021.



Heavy-Duty Engine and Vehicle Omnibus Regulation

Current Heavy-Duty Truck NOx Emissions

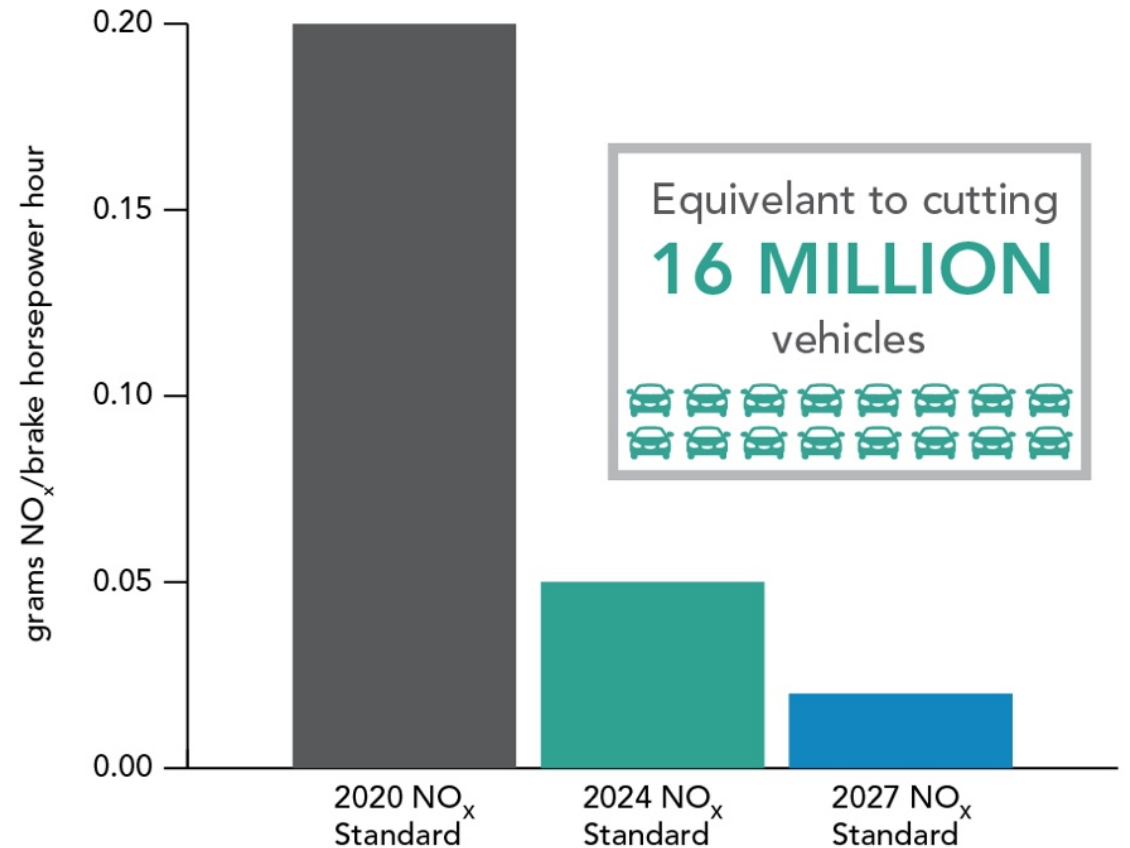


Reducing Heavy-Duty Truck NOx Emissions

- Holistic reduction strategy
 - Applicability: 2024 and subsequent model year engines
 - New certification standards and test procedures
 - 2024-2026 MY: 75% below current
 - 2027+ MY : 90% below current
 - Control over a wider range of truck operation
 - Vehicle Idle, Port, Traffic, and Highway Speeds
 - Enhanced in-use compliance testing requirements
 - Longer warranty and useful life requirements
 - Incentives for early introduction

Significant Emission and Health Benefits

- NOx emission benefits
 - 2031: 23 tons per day (5.7 in SJV)
 - 2050: 76 tons per day (19.0 in SJV)
- Health benefits (2022-2050)
 - 3,900 avoided premature deaths
 - 3,150 avoided hospitalizations
 - Value (2018\$): \$36.8 billion



Truck and Bus Regulation

- Fleet rule approved in 2008
- Required PM filters and all 2010 engines by January 1, 2023*
 - Reduces PM, and NOx
- Affects about 1,000,000 diesel trucks
- Automatic DMV registration denials began 2020



<https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation>

Advanced Clean Trucks

- Manufacturer rule approved June 2020
- Increasing percent of California sales* must be zero-emissions
- Partial credit for plug-in hybrids
- Reduces NOx and PM
- Establishes pathway to 2045 carbon neutrality goal
- One-time fleet reporting

Model Year	Class 2b-3	Class 4-8	Class 7-8 Tractors
2024	5%	9%	5%
2025	7%	11%	7%
2026	10%	13%	10%
2027	15%	20%	15%
2028	20%	30%	20%
2029	25%	40%	25%
2030	30%	50%	30%
2031	35%	55%	35%
2032	40%	60%	40%
2033	45%	65%	40%
2034	50%	70%	40%
2035+	55%	75%	40%

<https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>

Advanced Clean Fleets

- Proposed zero emission fleet rule
 - Initial focus on larger entities and the fleets they hire
- Achieve complete transition to zero-emissions where feasible
 - 2035 – Drayage, public fleets, last mile delivery
 - 2040 – Refuse, buses, utility fleets (may include NZEVs)
 - 2045 – For all other trucks and buses where feasible
- Next workshop September 18, 2020



Commercial Harbor Craft (CHC)

- Since 2009, commercial harbor craft owners have replaced older engines with newer, cleaner engines to comply with the existing regulation
- Emission reductions are needed from harbor craft additional to State Implementation Plan actions to:
 - Achieve reduction in community health risk
 - Attain regional air quality standards
 - Mitigate climate change

Commercial Harbor Craft

- The proposed regulation aims to include more vessel types and more stringent “in-use” requirements
- Compliance deadlines beginning in 2023 would require cleaner combustion “Tier 4 + DPF”
- Some advanced technology requirements: shore power at dock, full zero-emission short run ferries, zero-emission capability for new excursion vessels
- Proposed low use compliance pathway in the process of being modified
- Public workshop on CHC regulation coming soon





New Control Measure for Ocean-Going Vessels At Berth

Stockton AB 617 Meeting

September 9, 2020

Overview of At Berth Regulation

- Existing At-Berth Regulation reduced emissions from 13,000 visits since 2014
 - 80% reduction in emissions from cruise, container, and reefer vessels
- Why is a new regulation needed?
 - Provides further reductions in port communities
 - Includes additional ports and terminals (such as Port of Stockton)
 - Reduces emissions from additional 2300+ vessel visits per year
 - Adds tanker and roll-on/roll-off (auto carrier) vessels



New At Berth Regulation

- Adopted by CARB's Board on August 27, 2020
- Every vessel visiting a regulated terminal must connect to shore power or alternative control strategy
- Compliance required by:
 - January 1, 2023: Container, Reefer, Cruise
 - January 1, 2025: Auto carrier
 - January 1, 2025 (SoCal) and January 1, **2027 (NorCal)**: Tanker
- Alternative compliance pathway: Innovative Concepts
- Interim Evaluation - December 1, 2022



Questions?



Contact Us

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California Air Resources Board (CARB)
Website Links to CARB Statewide Strategies
Stockton Community Steering Committee Meeting

Advanced Clean Cars 2

<https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>

Advanced Clean Fleets

<https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>

Advanced Clean Trucks

<https://ww2.arb.ca.gov/index.php/our-work/programs/advanced-clean-trucks>

Cargo Handling Equipment Regulation to Transition to Zero Emissions

<https://ww2.arb.ca.gov/our-work/programs/cargo-handling-equipment>

Chrome Plating Control Measure

<https://ww2.arb.ca.gov/our-work/programs/chrome-plating-atcm>

Commercial Cooking Suggested Control Measure

Described in [Blueprint Appendix F](#) – pages F-8 & F-9.

Commercial Harbor Craft

<https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft>

Composite Wood Control Measure

Described in [Blueprint Appendix F](#) – page F-7

Link to Current Program:

<https://ww2.arb.ca.gov/our-work/programs/composite-wood-products-program>

Heavy-Duty Inspection & Maintenance

<https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program>

Heavy-Duty Low NOx Omnibus

<https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox>

Locomotives/Rail Emissions Reductions

<https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california>

Ocean-Going Vessels At Berth

<https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation>

Real Emissions Assessment Logging System

<https://ww2.arb.ca.gov/rulemaking/2018/heavy-duty-board-diagnostic-system-requirements-2018>

Small Off-Road Engines (SORE)

<https://ww2.arb.ca.gov/our-work/programs/small-off-road-engines-sore>

Transport Refrigeration Unit Regulation

<https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/new-transport-refrigeration-unit-regulation>

Truck and Bus Regulation

<https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation>

For detailed questions on specific CARB statewide strategies, please contact Skott Wall at (916) 323-0787 or skott.wall@arb.ca.gov, and he will connect you with the appropriate CARB staff to answer your questions.