
CALIFORNIA

SUSTAINABLE FREIGHT INITIATIVE



Update on Sustainable Freight Strategy

April 23, 2015

California Environmental Protection Agency

 **Air Resources Board**

Overview

- Freight transport system overview
- Air quality impacts
- Sustainable Freight Strategy
- Pathways to Zero and Near Zero Emissions



Freight Transport System

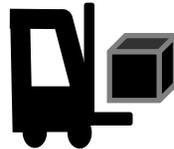
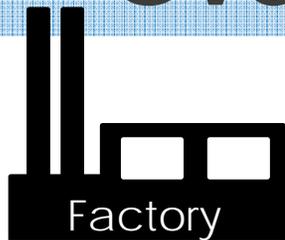
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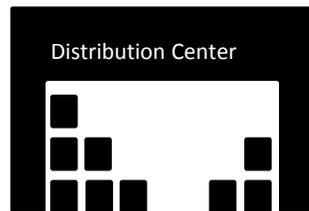
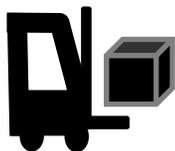
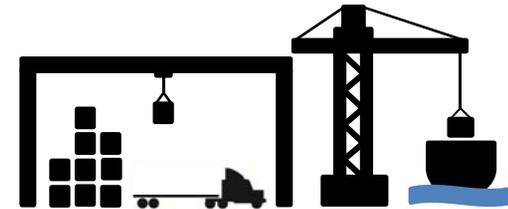
Facilities:

- Seaports
- Airports
- Rail yards & lines
- Distribution centers
- Warehouses
- High traffic roads
- Border crossings

Freight Transport System Overview- Supply Chain



California transport:



E-Commerce Example- Overseas production

Video

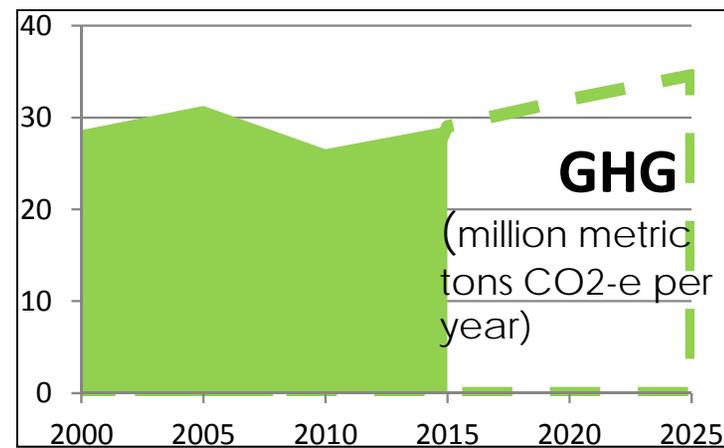
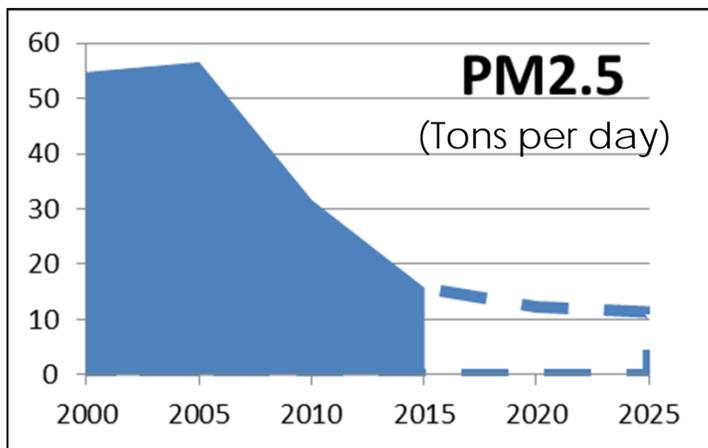
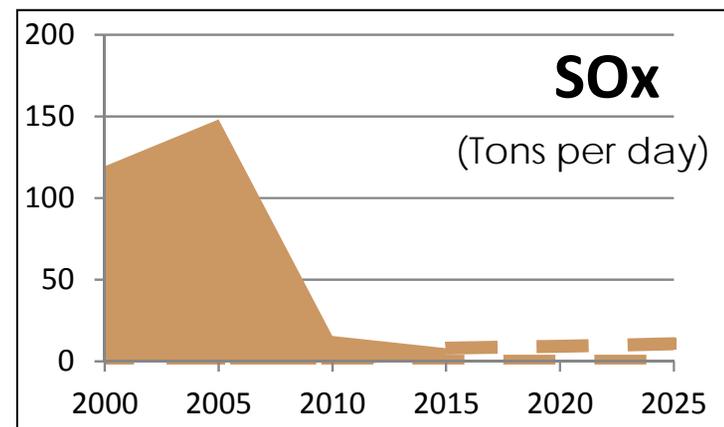
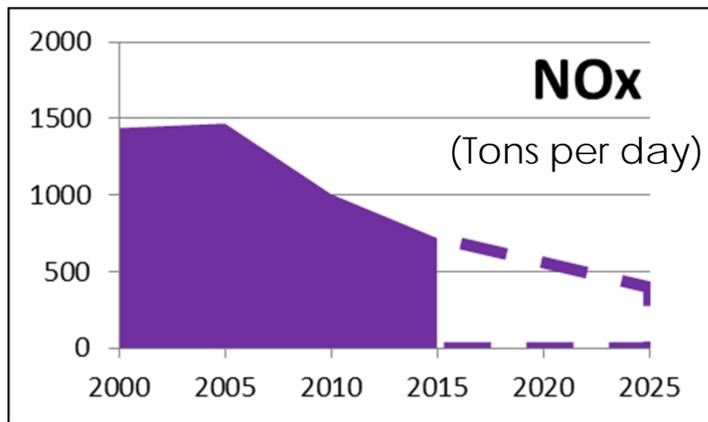
Brief Tour of Freight Hubs

Freight Is Important to California's Economy

Freight-dependent industries account for:

- Over \$700 billion, 32% of the California economy (2013)
- Over 5 million jobs, 33% of California jobs (2013)

Progress in Reducing Freight Emissions in California



Sources: EMFAC 2014, Off-Road Emission Inventory Model, and ARB's GHG emission inventories

Need to Accelerate Progress



Cut air
toxics
health risk



Attain air
quality
standards



Mitigate
climate
change

← Zero-emission technology/ renewable energy →

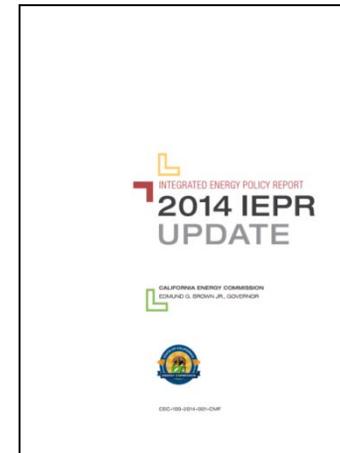
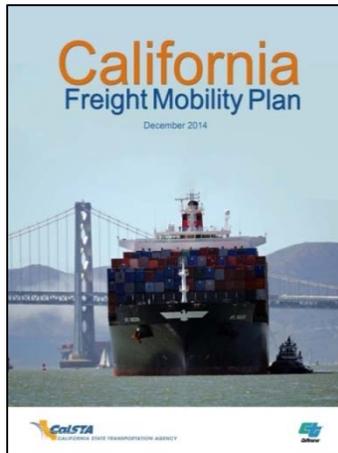
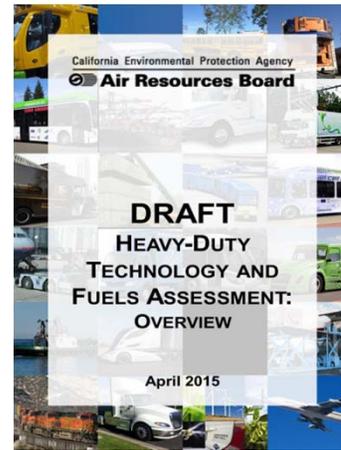
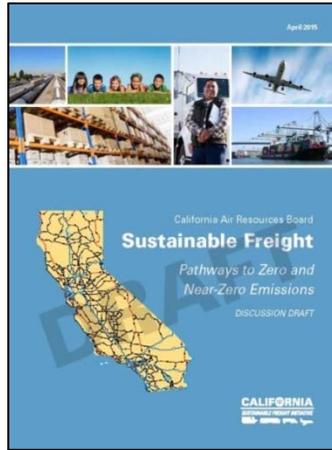
Air Quality Needs for Future Freight System

- Zero tailpipe emissions everywhere possible, and near-zero emissions with renewable fuels everywhere else
- Increased efficiency at the equipment, sector, and system levels



California Sustainable Freight Strategy

Actions and milestones that transition California to a sustainable freight system supporting environmental, energy, transportation, and economic objectives.



Foundation for Continuing Efforts on the California Sustainable Freight Strategy

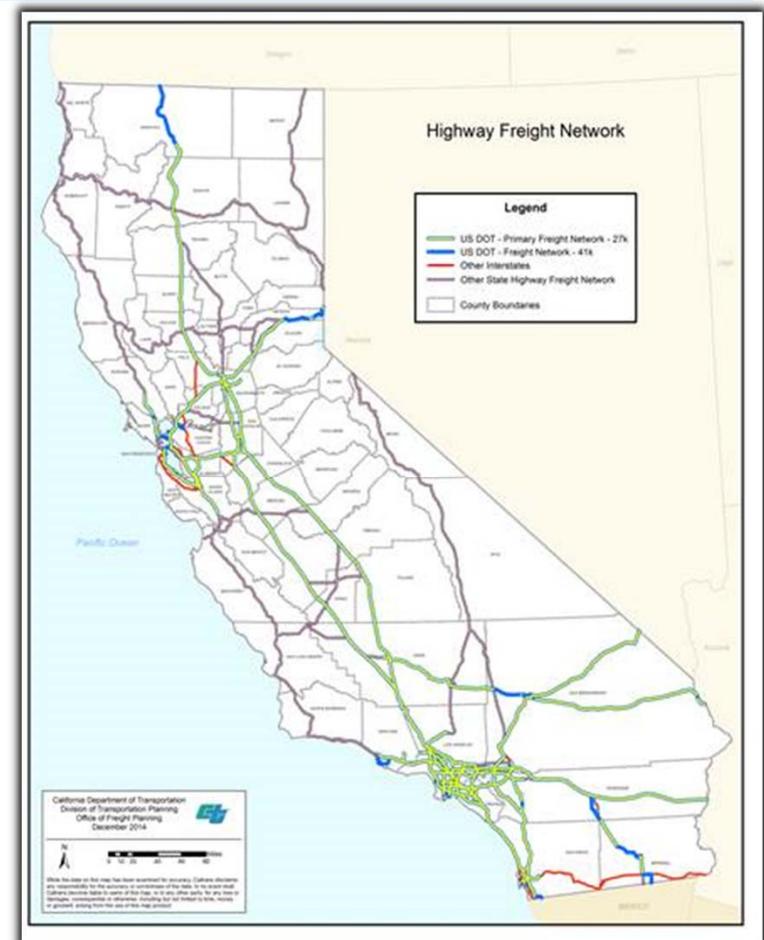
Environmental Objectives

- Meet federal air quality standards
- Minimize near-source exposure
- Lower carbon intensity



Transportation Objectives

- Increase efficiency of freight transport
- Identify dedicated funding
- Prioritize investments
 - Fix-it-first
 - New technology
 - Smart logistics
 - Infrastructure



Economic Objectives

- Enhance competitiveness
- Lead green markets
- Attract investments
- Reduce congestion costs



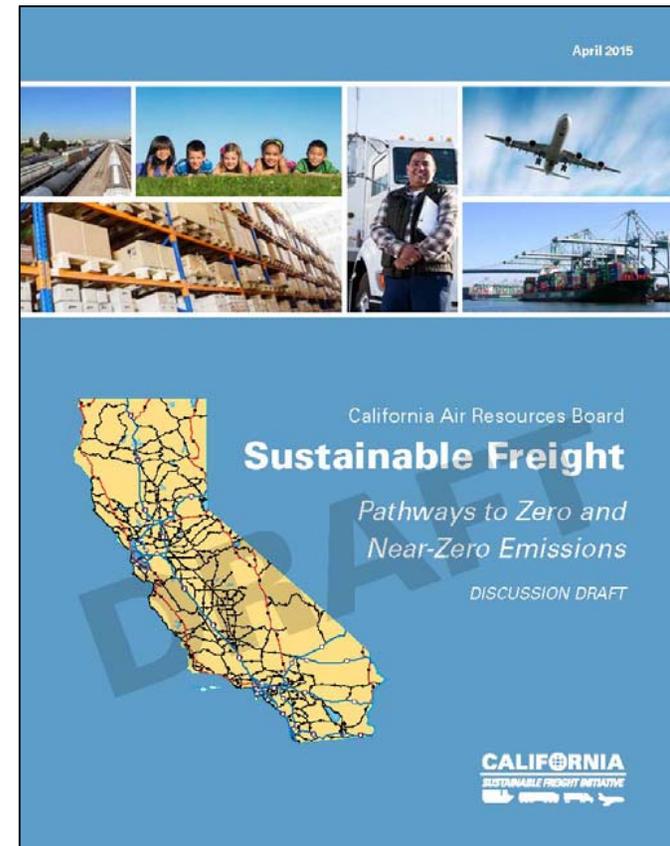
Photo credit: E2 Managetech

ARB Planning Processes Working Together

- State Implementation Plans
- Climate Change Scoping Plan
- Short-lived Climate Pollutants Plan
- Technology Assessments
- Sustainable Freight

Pathways to Zero and Near-Zero Emissions

- Immediate ARB actions
- Near-term ARB measures
- Vision for the future
- Broad-based approaches



Immediate ARB Actions

ARB actions to deliver new emission reductions and further reduce health risks in 2015



Immediate ARB Actions- Enhanced Enforcement

- Expanding enforcement presence
- Focusing on freight hubs
- Increasing enforcement efficiency of Truck & Bus Rule
- Leveraging technology



Immediate ARB Actions- Incentives

- Proposition 1B
- Carl Moyer
- Hybrid and Zero Emission Truck and Bus Voucher Incentive Project



Near-Term ARB Measures

Measures that begin development in 2015 for Board consideration or Executive Officer implementation in the future

Near-Term ARB Measures- Cleaner Combustion

- Trucks
- Ocean-going vessels
- Locomotives
- Data collection from freight hubs



Near-Term ARB Measures- Zero Emissions

- Delivery vans/trucks
- Forklifts
- Transit buses
- Airport shuttles
- Transport refrigeration units
- Incentive programs



Vision for the Future

Vision: Opportunities to accelerate progress toward zero emissions in each equipment category

ARB levers: Regulations, partnerships, incentives, and demonstration programs; may encourage technology transfer

Expanding Our Focus

Potential broad based approaches:

- Land use and transportation planning mechanisms
- Systemwide efficiency improvements
- Facility-based emissions cap

Next Steps

April 23	Initiate immediate actions & develop near-term measures
May	Launch development of California Sustainable Freight Strategy
Summer/Fall	Stakeholder engagement
Late 2015	Board update on freight activities
Mid-2016	Board hearing on California Sustainable Freight Strategy

Recommendation

Recommend approval of Resolution 15-22, which includes direction to staff:

- Continue engaging stakeholders
- Evaluate and develop potential measures and levers
- Work with State partners on the California Sustainable Freight Strategy

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