

# CALIFORNIA



## *SUSTAINABLE FREIGHT INITIATIVE*



## Update on Sustainable Freight Activities

January 21, 2016

California Environmental Protection Agency



**Air Resources Board**

# Overview

- Pathways to Zero and Near-Zero Emissions
- California Sustainable Freight Action Plan



# Freight Is Important to California's Economy

Freight-dependent industries account for:

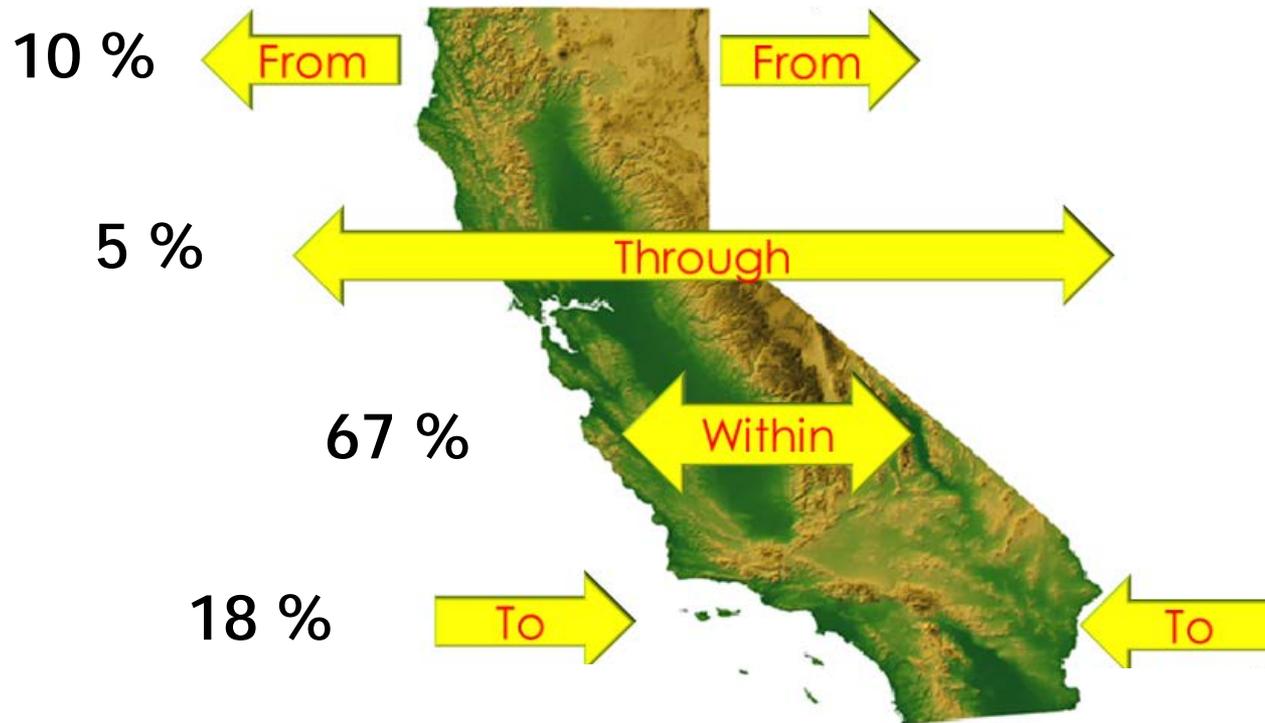
- Over \$700 billion, 32% of the California economy (2013)
- Over 5 million jobs, 33% of California jobs (2013)

California freight projections for 2025:

- 25% increase in volume
- 60% increase in commodity value

- Projections Source: Freight Analysis Framework Data by U.S. Department of Transportation, 2012

# 2/3 of Freight Transport *Within* California



- Source: Freight Analysis Framework Data by U.S. Department of Transportation, 2012

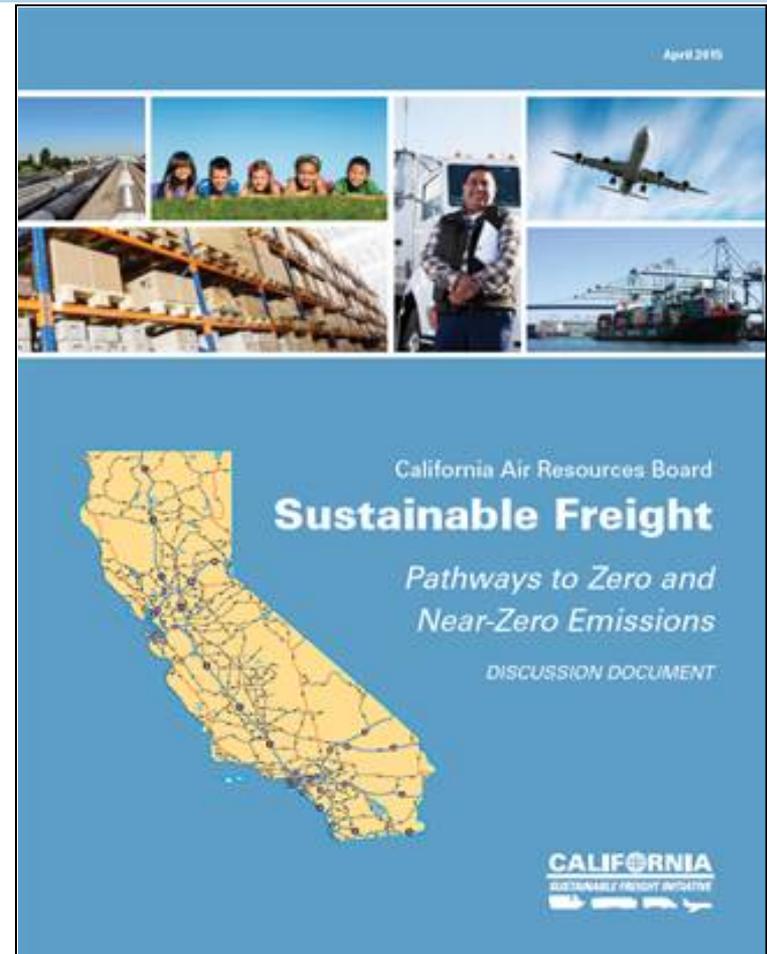
# Air Quality Objective

Zero emission equipment everywhere feasible, and near-zero emission equipment powered by clean low-carbon renewable fuels everywhere else



# Pathways to Zero and Near-Zero Emissions

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



# Immediate Actions

## Enforcement

- Presentation by program staff is next agenda item

## Cleaner equipment funded in 2015

- 1,470 Total vehicles and equipment
- 10 Tons per year of PM emissions reduced
- 980 Tons per year of NOx emissions reduced

# Progress on Development of Near-term Measures

- Truck Actions
- Ocean-Going Vessel Actions
- Locomotive Actions
- Zero Emission Technology Actions
- Data Collection for Freight Hubs

# Cleaner Combustion: Trucks

- Expected Board consideration in 2016:
  - Opacity limits
  - Certification procedures for aftermarket diesel particulate filters
  - Increased manufacturer certification flexibility on innovative and advanced technology
- Expected Board consideration in 2017:
  - New certification and warranty requirements
  - Revised Warranty Information Reporting regulation

# Cleaner Combustion: Trucks Continued

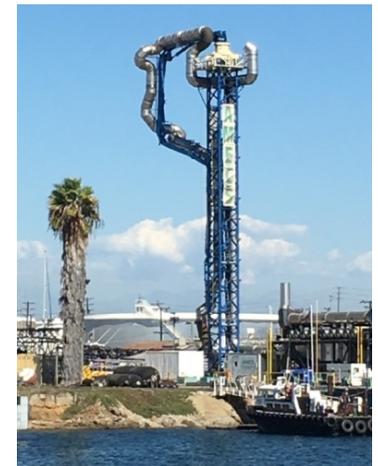
To pursue new emission standards:

- Commented on federal Phase 2
- May propose new, stringent CA Phase 2 greenhouse gas standards in 2016/2017
- Working with U.S. EPA to develop lower NOx standards



# Cleaner Combustion: Ocean Going Vessels

- Two alternative control technologies approved for container vessels
- Evaluating expansion of At-berth regulation to capture additional vessels/reductions
- Discussion of marine controls is being added to our agenda with States and other countries



# Cleaner Combustion: Locomotives

Preparing petition to U.S. EPA in 2016 on stricter standards on newly built and remanufactured engines

- New compact NOx control technology increases opportunity for upgrades upon remanufacture

# Development of Zero Emission Technology

- Advocating for zero emission technology at new and expanded freight hubs
- Maximizing zero emission technology in pilot project concepts
- Zero Emission Demonstration Projects:
  - Zero-emission drayage trucks
  - Seaport
  - Approximately \$24 million available for each

# Zero Emission

- Delivery Vans/Small Trucks: Deployment proposal expected to be workshopped in 2016
- Large Spark-Ignition Equipment:
  - Phase 1: Reporting and labeling
  - Phase 2: Increase deployment of zero emission
- Transport Refrigeration Units: Concept to phase out use of fossil-fuel TRUs for cold storage to begin workshops this Spring
- Airport Shuttles and Transit Buses

# Data Collection for Freight Hubs

- Need to continue reducing health risk near freight hubs
- Freight sector vs. freight facility
- Will inform which additional strategies are pursued, including efficiency improvements, amendments to source-specific rules, facility emissions cap, etc.
- Expected industry outreach and survey release in Spring 2016

# Integrated State Planning Effort



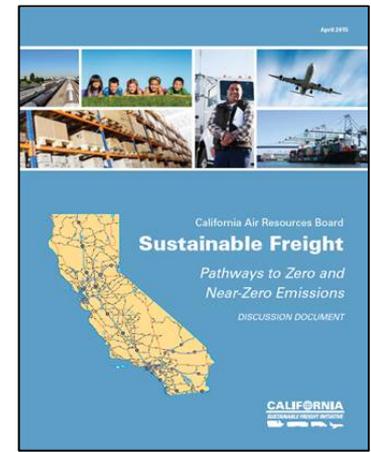
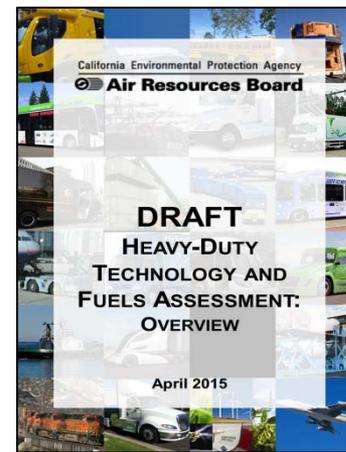
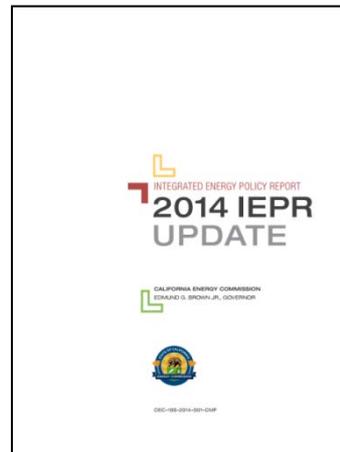
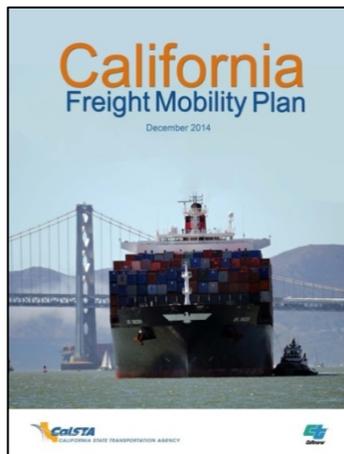
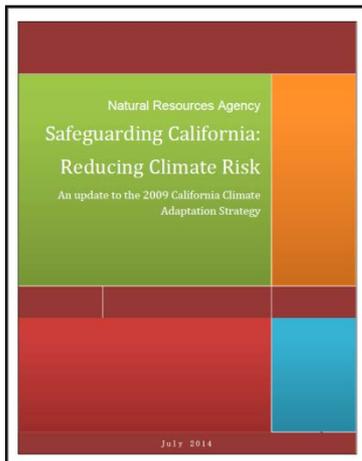
# Governor's Executive Order B-32-15: California Sustainable Freight Action Plan

State agencies, in consultation with stakeholders, to develop plan by July 2016:

- Targets for efficiency, zero emission technology, and economics
- Potential actions to advance State objectives
- Corridor-level freight pilot projects

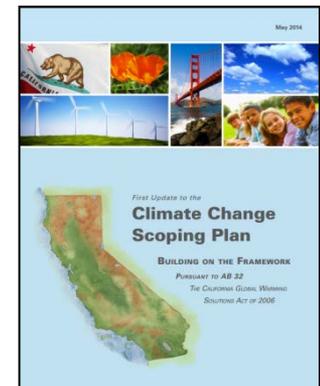


# Foundation for Action Plan



# Relation to Other Planning Efforts

- State Implementation Plans
- 2030 Target Scoping Plan Update
- Short-Lived Climate Pollutant Reduction Strategy
- California Transportation Plan



# Framework of Action Plan

- A long-term **vision** for California's future freight transport system
- **Guiding principles** to achieve the vision and prioritize projects for funding
- **2030 targets** to guide State progress
- **Agency actions** to help meet the 2030 targets
- Corridor-level **pilot projects** to demonstrate an integrated approach across agencies

# Draft 2050 Vision

Freight in California is moved on a modern, integrated, and resilient system that continues to support California's economy and livability. It is transported safely and efficiently by zero emission equipment everywhere feasible, and near-zero emission equipment powered by clean low-carbon renewable fuels everywhere else.



# Draft Freight Targets for 2030

- Improve freight system efficiency by 25% by 2030
- Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030
- Minimize negative economic impacts to the freight industry as the efficiency of the freight transport system improves.

# Possible Actions to Support 2030 Freight Targets

Action concepts the agencies are considering over the next five years:

- Advanced Technologies
- Freight and Fuel Infrastructure
- Alternative and Renewable Fuels
- System Efficiency
- Freight Facilities and Hubs

# Freight Efficiency “Think Tank”



- Convened by Caltrans
- Chaired by Dr. Sperling
- Participants: freight industry, academics, advocates, government
- Task: Examine and identify broad-based efficiency strategies to incorporate into the California Sustainable Freight Action Plan

# Freight Pilot Project Objectives

- Measureable progress towards freight targets within a 2030 timeframe
- System transformation potential
- Opportunity for integrated State agency support
- Scalability

# Potential Freight Pilot Projects (for discussion at workshops)

- Food Consolidation and Distribution Hub(N. CA)
- Urban Delivery (Bay Area)
- Dairy Biogas for Freight Vehicles (SJ Valley)
- Advanced Technology Truck Only Lane(S. CA)
- Advanced Technology Truck Fast Lane(Border)

# Action Plan Timeline

July 2015	Launch
Ongoing	Freight Advisory Committee Meetings
Ongoing	Efficiency Group Meetings
Oct. 2015	Public Webinar
January 25, 2016	Assembly Transportation Hearing
Jan./Feb. 2016	Public Workshops (9 locations)
Spring 2016	Draft Plan Release
May 2016	Informational Update to Board and others
July 2016	Final Plan Release

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