Update on Emission Reduction Plan for Ports and Goods Movement in California

Air Resources Board Meeting
November 16, 2006
San Francisco

Overview
- Scope of goods movement
- Progress on plan strategies
- Local focus
- Updates to health analysis
- Funding mechanisms
- What's next

Across California
On a typical day:
- 30,000 containers arrive/leave via ship
- 250,000 big-rig trucks plus 380,000 diesel local delivery trucks on roads
- 1,200 locomotives operating
Supported by:
- 3,700 pieces diesel cargo equipment
- 4,100 commercial harbor craft

Key Source of Community Health Risk
- High traffic freeways: 300-1,700/million
- Port of LA/Long Beach: 10-500+/million
- Roseville Railyard: 10-500/million

International Cargo Triples by 2020

California's Growth Adds to Demand
- Population: 25%
- Truck Travel: 50%
- Rail Cargo: 110%
**ARB Goals for Goods Movement**  
*(April 2006 Emission Reduction Plan)*

**Reverse growth in emissions**
- By 2010, reduce emissions as much as possible, at least to 2001 levels

**Reduce diesel PM risk**
- Rapid reduction in community risk
- By 2020, reduce statewide risk 85%

**Attain federal PM2.5 & ozone standards**

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**Ships**

**Accomplishments**
- Auxiliary ship engine fuel rule adopted
- Cruise ship incineration rule adopted
- Lower vessel speeds in S. California
- Retrofit demonstration in progress

**Ships**

**Upcoming through 2007**

**California**
- Main engine fuel rule (late 2007)
- Shore power rule (late 2007)
- Speed reduction rule (mid-2007)

**Harbor Craft**

**Accomplishments**
- Low sulfur diesel used in South Coast
- Draft harbor craft rule released
- Engine replacement continues
Harbor Craft
Upcoming through 2007
• Harbor craft rule (mid-2007)
• US EPA new harbor craft engine standards

Trucks
Accomplishments
✓ In-use compliance rule adopted
✓ Border trucks rule adopted
✓ Low sulfur diesel fuel used
✓ Cleaner 2007 engines introduced
✓ Inspections in impacted communities

Trucks
Upcoming through 2007
• Private truck fleets rule (mid-2007)
• Port trucks rule (late 2007)

Locomotives
Accomplishments
✓ Low sulfur diesel fuel requirements
✓ Tier 2 locomotive use increasing
✓ Cleaner switchers being introduced
✓ Technology demonstrations underway

Locomotives
Upcoming through 2007
• Railyard risk assessments
• US EPA standards for new and existing locomotives

Cargo Handling Equipment
Accomplishments
✓ Diesel equipment rule adopted
✓ Gas forklift rule adopted
✓ Low sulfur diesel fuel used
✓ Port fleet upgrades continuing
Localized Health Risk

- New risk assessments underway
  - Railyards & adjacent communities
  - Maritime Port of Oakland
  - Warehouse distribution center assessment study
- Wilmington community project

Railyard Risk Assessments
*Phase I*

- BNSF Commerce/Eastern
  - Hobart
  - Richmond
  - Stockton
  - Watson/Wilmington
- UP Commerce
  - LA Transportation Center
  - Mira Loma
  - Stockton

West Oakland Risk Assessments

1. Maritime Port of Oakland
2. UP Railyard
3. Adjacent West Oakland

Wilmington Community Project

- Explore community concerns
- Develop new tools to assess community risk
- Associated Harbor Communities Air Monitoring Study

Southern California

- San Pedro Bay Ports Plan for Los Angeles and Long Beach
  - Joint hearing November 20
- LA Metro Transportation Authority Multi-County Goods Movement Action Plan
San Pedro Bay Ports Plan

Changes since July briefing
- Ports: “fair share” targets
- New projects: ≤10 in million risk, cumulative effect within port targets
- Trucks: emblem for gate entry, prevailing wage concepts
- Locomotives: MOU for Tier 3 controls on port property and low sulfur fuel
- Funding: possible port tariffs

Northern California

- Port of Oakland and Bay Area Air District
- Northern California Trade & Mobility Corridor

Updates to Health Analysis

- Analysis in Emission Reduction Plan
- New PM studies on premature death
- Sulfate PM impacts to be assessed
- Board’s charge – reevaluate effect of new health studies and estimate impacts from sulfate PM

Health Impacts

Status
- Public process to update PM-premature death relationship on-going
  - New factor based on U.S. EPA’s Expert Elicitation for PM
  - Draft ARB report late November, followed by public and peer review
- Sulfate impacts to be based on SOx Emission Control Area (SECA) analysis

Funding Mechanisms
Proposition 1B

- $1 billion to reduce emissions from freight movement in trade corridors
- Reductions not required by law or regulation
- $200 million for cleaner school buses

Implementation
- Legislature sets conditions and criteria
- Legislature appropriates funds to ARB
- ARB staff employs public process to develop recommendations
- Board action on proposals
- Projects funded and implemented

Example Project Mix
Potential cost-effectiveness: $3,000/ton
- 20,000 port trucks – retrofit/replace
- 20,000 other short haul trucks – retrofit
- 600 harbor craft – replace engines
- 200 switch locomotives – replace
- 80 piers – electrify for shore power

Moyer Funding for Goods Movement
- District funding
  – Over 800 engines upgraded since 1998
  – South Coast targeting $22 million/year
- 10% ARB set aside focuses on multi-district projects and goods movement
  – $13 million funded in 2004-2006
  – Locomotives (Bay Area, Roseville, SJV)
  – Ship retrofit/fuel (Bay Area, South Coast)
  – Tug boat (San Diego)

Other Funding
- Ports of Los Angeles and Long Beach - about $200 million each over 5 years
- Possible port tariffs to raise additional monies
- Minimal federal funding so far

What’s Next
**Transitioning to New SIPs**
*Focus on South Coast & SJ Valley*

- Goods movement is core of strategy
- PM2.5 (2014): Ships, trucks, and locomotives key to SOx/dPM/NOx cuts
- Ozone (2020+): Trucks, ships, and locomotives key to NOx cuts
- Both areas may need additional, targeted NOx reductions for trucks

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**Goods Movement**
*ARB “To Do” List*

- Develop/enforce ARB rulemakings
- Implement $1 billion funding program
- Push federal/international standards
- Support local initiatives
- Conduct risk assessments
- Update health impacts analysis