Welcome

Reducing Emissions from Trucks Operating at California’s Ports and Rail Yards

Town Hall Meeting
March 29, 2007

Air Resources Board
California Environmental Protection Agency
Agenda

- Introductions
- Background
- Regulation concept
- Implementation concept
- Future meetings
- Discussion
Background

Part of Statewide Effort

- **Diesel Risk Reduction Plan**
  - 85% Reduction in diesel PM by 2020

- **Goods Movement Action Plan**
  - ARB’s emission reduction plan - 2006

- **State Implementation Plan (SIP)**
  - 15 local areas violate the federal 8-hour ozone standard
  - 2 areas violate the federal annual PM2.5 standard
Area Designations for National Ambient Air Quality Standards for Ozone and PM2.5

8-Hour Ozone

PM2.5 Annual

Nonattainment

Unclassified/Attainment

Nonattainment

Unclassifiable/Attainment
SIP Strategy

- ARB will work with local districts and federal government to achieve reductions

- New reductions will be needed from all sources:
  - Consumer products
  - Stationary sources
  - Goods movement
  - Evaporative emissions
  - Mobile sources
    - On-road and off-road
Why a Port Truck Regulation?

- Administrative directive
- Part of overall goods movement plan
- Recognized as a main emission source
Goals/ Objectives

- Meeting goals/objectives
  - Devise a regulation that works
  - Meet with stakeholders
  - Implementation & enforcement
Previous Meetings

- Ports - all in California
- Rail Yards – all intermodal
- Trucks – all
- Discussed responsibilities
- Issues
  - Large port truck fleet
  - Dray-off
  - Economics
**Regulation Concept**

**Draft Port / Intermodal Truck Regulatory Concept – Major Milestones**

- **By end of 2011**
  - Pre-1994 MY trucks would be retired and replaced with 1998+ MY trucks with emission reduction technologies
  - 1995 – 2006 MY trucks would be equipped with emission reduction technologies

- **By end of 2017**
  - Pre-2003 MY trucks would be retired and replaced with trucks that meet or exceed 2010 federal engine standards

- **By end of 2019**
  - Pre-2007 MY trucks would be retired and replaced with trucks that meet or exceed 2010 federal engine standards

- **Phase 1**
  - By end of 2011
  - Trucks Entering Service through 2011
    - Meet or exceed 2003 federal engine standards with a DPF
  - Trucks Entering Service 2012 - 2014
    - Meet or exceed 2007 federal engine standards
  - Trucks Entering Service 2015 and later
    - Meet or exceed 2010 federal engine standards

- **Phase 2**
  - By end of 2017
  - By end of 2019
**Phase 1**

### Replacement and Retrofit Schedule

<table>
<thead>
<tr>
<th>Truck Model Year</th>
<th>Due Date</th>
<th>Replacement Truck Model Year</th>
<th>Retrofit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1986</td>
<td>By the end of 2008</td>
<td>1998 or newer</td>
<td>DPF + NOx catalyst</td>
</tr>
<tr>
<td>1986, 1987, 1988, 1989</td>
<td>By the end of 2009</td>
<td>1998 or newer</td>
<td>DPF + NOx catalyst</td>
</tr>
<tr>
<td>1990, 1991</td>
<td>By the end of 2010</td>
<td>1998 or newer</td>
<td>DPF + NOx catalyst</td>
</tr>
<tr>
<td>1992, 1993</td>
<td>By the end of 2011</td>
<td>1998 or newer</td>
<td>DPF + NOx catalyst</td>
</tr>
</tbody>
</table>

### Retrofit Schedule

<table>
<thead>
<tr>
<th>Truck Model Year</th>
<th>Due Date</th>
<th>Retrofit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000, 2001, 2002</td>
<td>By the end of 2008</td>
<td>DPF + NOx catalyst</td>
</tr>
<tr>
<td>1998, 1999</td>
<td>By the end of 2009</td>
<td>DPF + NOx catalyst</td>
</tr>
<tr>
<td>1996, 1997</td>
<td>By the end of 2010</td>
<td>DPF + NOx catalyst</td>
</tr>
<tr>
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</tbody>
</table>
Phase 1 - Examples

Replacement and Retrofit Schedule Handout

- **Example 1** - You have a 1990 model year truck
  - By the end of 2010, you must:
    - Replace with 1998 or newer MY truck
    - Install a diesel particulate filter AND a NOx reduction catalyst

- **Example 2** - You have a 2001 model year truck
  - By the end of 2008, you must:
    - Install a diesel particulate filter AND a NOx reduction catalyst

- **Example 3** - You have a 2004 model year truck
  - By the end of 2008, you must:
    - Install a diesel particulate filter
Phase 2

- **By end of 2017**
  Pre-2003 MY trucks would be retired and replaced with trucks that meet or exceed 2010 federal engine standards

- **By end of 2019**
  Pre-2007 MY trucks would be retired and replaced with trucks that meet or exceed 2010 federal engine standards
Trucks New to Service

- **Trucks Entering Service through 2011**
  Meet or exceed 2003 federal engine standards with a DPF

- **Trucks Entering Service 2012 - 2014**
  Meet or exceed 2007 federal engine standards

- **Trucks Entering Service 2015 and later**
  Meet or exceed 2010 federal engine standards
Technologies

- Retrofit Technologies
  - Must be ARB Verified

  - Hardware Diesel Emission Control Strategies:
    - Diesel Particulate Filters –
      - Level 3 (85% reduction)
        - Passive
        - Active
    - NOx Catalyst (Minimum 25% reduction)
Technologies (cont.)

Diesel Particulate Filters

- Reduces Diesel PM
- Passive
  - Cost ~$8,500
  - Installation: ~3 Hours
- Active
  - Cost ~$15,000
  - Installation: ~3 Hours
NOx Reduction Catalysts

- Reduces Oxides of Nitrogen (Smog)
  - Installed as a package with DPF
  - Cost ~$20,000 (NOx catalyst + DPF)
  - Installation: ~3 Hours
Implementation Concept

- Port Authority / Rail Authority: Works directly with ARB and stakeholders to ensure program success.
- Truck Owner: Responsible for modernizing truck.
- Port Terminal Operators: Collect and provide license plate, PMC and shipping company information.
- Shipping Companies: Contract with only approved PMCs. Can be fined for using non-approved PMCs.
- Primary Motor Carriers (PMC): Ensure dispatched trucks are compliant. Submit list of compliant trucks and place medallion on vehicle. Can be fined for non-compliant trucks.
- ARB: Primary enforcement entity. Utilize plate and PMC information. Inspections. Coordinate with ports. Outreach. Collect and maintain information as required. Maintain list of approved motor carriers and compliant trucks.
Implementation Concept (cont.)

- Works directly with ARB and stakeholders to ensure program success
Implementation Concept (cont.)

- Responsible for modernizing truck

Truck Owner
Implementation Concept (cont.)

- Collect and provide license plate, PMC and shipping company information
Implementation Concept (cont.)

Shipping Company:
Any company of any size or type that contracts with motor carriers or dispatchers to provide trucks to be used at the ports or rail yards

- Contract with only approved PMCs
- Can be fined for using non-approved PMCs
Implementation Concept (cont.)

- Ensure dispatched trucks are compliant
- Submit list of compliant trucks
- Can be fined for non-compliant trucks
Implementation Concept (cont.)

- Primary enforcement entity
- Utilize plate and registration information
- Inspections
- Coordinate with ports
- Outreach
- Collect and maintain information as required
- Maintain list of approved motor carriers and compliant trucks
ARB’s Two Truck Measures

Port/ Intermodal
November 2007

Private Fleet
Late 2007/ Early 2008
Action Items

Future Meetings/ Contact Info

- Staff Report Including Draft Regulation – Sept. 2007
- Board Consideration – November 2007

- Future Public Workgroup Meeting:  
  - To be Determined

- Contact Information:
  Michael Miguel, Manager
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Website:  
http://www.arb.ca.gov/msprog/onroad/porttruck/porttruck.htm
Preliminary Survey Results

Gross Annual Income
- $75,000 to $100,000: 29%
- $50,000 to $75,000: 31%
- $40,000 to $50,000: 27%
- Below $40,000: 5%
- Above $100,000: 8%

Annual Truck Expenses
- $0 to $13,000: 12%
- $14,000 to $24,000: 16%
- $25,000 to $36,000: 38%
- $25,000 to $36,000: 38%
Questions/ Comments