



**Air Resources Board
Regulatory Update**
Cal/ACT Spring Conference
Riverside, CA
April 6, 2005

Speaker: Kathleen Mead

Presentation Outline

- ◆ **Background**
- ◆ **Commercial Vehicle Idling**
- ◆ **School Bus Idling**
- ◆ **Fleet Rule For Transit Agencies**
 - ◆ Existing Urban Bus Requirements
 - ◆ New Transit Fleet Vehicle Requirements
- ◆ **Next Steps**

Health Impacts of Diesels in California

- ◆ Annual health impacts - 2001
 - ◆ 2,900 premature deaths
 - ◆ 3,600 hospital admissions
 - ◆ 240,000 asthma attacks/respiratory symptoms
 - ◆ 600,000 lost days of work
- ◆ By comparison - 2001
 - ◆ 3,700 deaths from car accidents
 - ◆ 2,000 homicides

Why Reduce In-use Diesel Emissions?

- ◆ Diesel Engines are Long Lived
- ◆ New Engine Standards Offer Long Term Reductions
- ◆ In-use Emission Rules Provide Near-Term Reductions
- ◆ Control Technology is Available

Diesel Risk Reduction Plan - In-Use Engine Measures

◆ Adopted

- ◆ Transit Fleets - Urban Buses (2000)
- ◆ Solid Waste Collection Vehicles (2003)
- ◆ Stationary Engines (2004)
- ◆ Transportation Refrigeration Units (2004)
- ◆ Commercial Motor Vehicle Idling (2004)
- ◆ Portable Engines (2004)
- ◆ Transit Fleet Vehicles (2005)

◆ In Development

- ◆ Public HDV Fleets (2005)
- ◆ Off-Road Engines (2006)
- ◆ Private HDV Fleets (2007)

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling



**Adopted
July 22, 2004**

**Effective
February 1, 2005**

AIR RESOURCES BOARD 
California Environmental Protection Agency

Applicability

- ◆ All commercial on-road diesel-fueled vehicles operating in California with GVWR > 10,000 pounds
- ◆ Applies to CA based and non-CA based vehicles operating in CA



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Requirements

- ◆ Targets non-essential idling
- ◆ Limit the primary engine idle time to five (5) minutes at any location
- ◆ Manually shut-off engine
- ◆ Buses
 - ◆ Allowed 10 minutes prior to passenger boarding
 - ◆ No limit when passengers onboard

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Exceptions

- ◆ Idling to prevent a safety or health emergency (e.g. special needs kids)
- ◆ Operate equipment such as wheelchair lift
- ◆ Queuing in the normal course of conducting business
- ◆ Adverse weather conditions or mechanical difficulties
- ◆ and several others

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Contacts

- ◆ **For enforcement or compliance questions:**

- ◆ Renae Hankins (916) 322-8275

- ◆ Jason Francis (916) 324-9683

- ◆ **For regulatory development questions:**

- ◆ John Kato (916) 322-2891

- ◆ John Gruszecki (916) 327-5601

- ◆ **Please Visit Our Website:**

<http://www.arb.ca.gov/toxics/idling/idling.htm>



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School Bus Idling at Schools

- ◆ **Applicable to:**
 - ◆ Buses and Heavy-duty Vehicles
 - ◆ All Fuel Types
 - ◆ At or Within 100 Feet of K-12 School
 - ◆ includes school bus stops and school activity destinations
- ◆ **Immediately turn off engine and restart 30 seconds before departing**
- ◆ **More Information:**
<http://www.arb.ca.gov/regact/sbidling/fro.pdf>

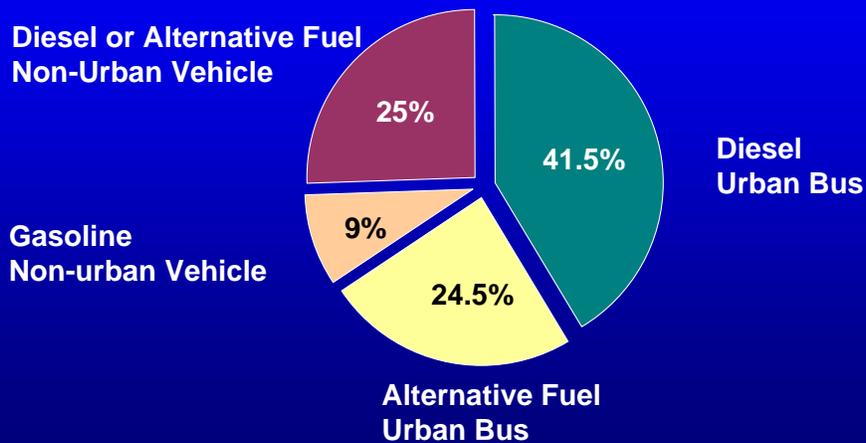
Fleet Rule For Transit Agencies

- ◆ **Adopted February 2000**
 - ◆ Applies to Public Transit Agencies
 - ◆ Regulates Urban Buses
 - ◆ powered by a heavy heavy-duty diesel engine or a type normally powered by a heavy heavy-duty diesel engine
 - ◆ New Engine Emission Standards for Urban Buses
 - ◆ In-Use Fleet Requirements

Fleet Rule For Transit Agencies

- ◆ **In-Use Fleet Requirements for UB**
 - ◆ Fuel Path Selection & Purchasing Requirement
 - ◆ ZEB Purchasing Requirement
 - ◆ Ultra Low Sulfur Diesel Fuel Use
 - ◆ Maximum Allowable Fleet NOx Average
 - ◆ Percentage Reductions of Diesel PM Emissions

Not All Transit Vehicles Are Covered by the Fleet Rule



New Requirements Covers Transit Fleet Vehicles

- ◆ Adopted February 24, 2005
- ◆ Covers “Transit Fleet Vehicles”



Transit Fleet Vehicles (TFV)

- ◆ Passenger Carrying Vehicle or Non-Revenue Vehicle
- ◆ Vehicle Greater than 8,500 GVWR
- ◆ Powered by Heavy-Duty Engine
- ◆ Diesel and Alternative-Fuels
- ◆ Owned/Operated by a Transit Agency
- ◆ Not an Urban Bus

Commuter Service Bus

- ◆ Powered by a heavy heavy-duty diesel engine or a type normally powered by a heavy heavy-duty diesel engine
- ◆ Operates on a fixed route schedule, primarily during peak commute hours
- ◆ No more than 10 stops per day
- ◆ Defined as a transit fleet vehicle, not an Urban Bus



TFV Requirements

- ◆ In-Use Fleet Requirement Only
 - ◆ Emission Reductions Through Retrofit or Fleet Modernization
- ◆ Not Required
 - ◆ Stricter Urban Bus Engine Emission Standard
 - ◆ Ultra Low Sulfur Diesel
 - ◆ Path Selection or Purchasing Requirements

TFV Requirements In-Use Fleet Emission Reduction

- ◆ Maximum Allowable NOx Fleet Average
- ◆ Percentage Reduction in PM Emissions
- ◆ Two-Phase Implementation
 - ◆ December 31, 2007
 - ◆ December 31, 2010

UB and TFV NOx Fleet Average Requirement

Fleet Type	Compliance Date		
	10/01/02	12/31/07	12/31/10
Urban Bus	4.8*		
Transit Fleet Vehicles		3.2*	2.5*

* in g/bhp-hr

TFV NOx Average Calculation

- ◆ Sum of the NOx engine certification standard (g/bhp-hr) of each transit fleet vehicle engine
 - ◆ include diesel and alternative fueled vehicles, not gasoline or urban bus.
- ◆ Divide by the total numbers of vehicles in the TFV fleet
- ◆ Example: 1 (1995 MY), 4(2000 MY), 5 (2007MY)
 - ◆ calculation: $(1 \times 5g) + (4 \times 4g) + (5 \times 1.2g) / 10 = 2.7$

UB and TFV Percentage Diesel PM Reduction

Fleet Type	Baseline	% Reduction From Baseline				
	Year	2004	2005	2007	2009	2010
Urban Bus						
Alternative	2002	20	40	60	85*	
Diesel	2002	40	60	85*		
TFV	2005			40		80*

*In the final year of compliance and beyond the transit agency can meet a fleet average of 0.01 g/bhp-hr times the number of vehicles in the fleet (same as if all your vehicles are retrofitted with a Level 3 DECS or of a MY 2007 or newer).

TFV PM Calculation

◆ Baseline

- ◆ Based on your TFV Fleet as of January 1, 2005

- ◆ Example: 10 diesel TFV (MY 1994-2006) @ 0.1 g/bhp-hr. Baseline = 1.0g

- ◆ Sum of the PM engine certification standard (g/bhp-hr) of each diesel transit fleet vehicle

- ◆ no alternative fuel, gasoline engines or urban bus engines

◆ Reductions are from the 2005 PM Baseline

- ◆ Example: On 12/31/2007: 40% reduction from Baseline (10g), therefore your total fleet PM must equal 0.6g.

Technical Feasibility

◆ Experience with Current Rule

- ◆ Diesel Particulate Filters: approximately 1100 installed on California Urban Buses

◆ Verified Diesel Emission Control Strategies

- ◆ Particulate Filters
- ◆ Fuels

◆ <http://www.arb.ca.gov/diesel/verdev/verdev.htm>

- ◆ Starting with MY 2007 the PM emission standard equals 0.01 g/bhp-hr

Reporting Requirements

- ◆ **January 31st of each year thru 2016**
 - ◆ **Contain number, manufacturer, make, and model of engines and fuel type used**
- ◆ **January 31, 2006 Report**
 - ◆ **Transit Fleet Vehicles as of January 1, 2005**
 - ◆ **TFV NOx Fleet Average**
 - ◆ **TAs proposed actions to achieve 12/ 31/ 2007 PM and NOx requirements**
- ◆ **Late Penalty of \$100 per day**

Next Steps

Changes to the Urban Bus Requirements

- ◆ **Transit Fleet Vehicle Requirements**
 - ◆ Preparing finalization and submittal to OAL
- ◆ **Upcoming Urban Bus Changes**
 - ◆ Revisit the 2007 Urban Bus Standards
 - ◆ Bring Proposals for Four SCAQMD Fleet Rules

UB Standard Alignment with HDT Standards: Proposal

- ◆ **Need for Change**
 - ◆ No Diesel Urban Buses Available for 2004-2009
 - ◆ Keeps the Oldest, Dirtiest Diesel Buses on the Road
- ◆ **Proposal to Modify Section 1956.1 and 1956.8**
 - ◆ Harmonize Urban Bus Engine Emissions Standards with California's 2007 HHD Truck Engine Standards

Changes to the Urban Bus Requirements

- ◆ Adoption of SCAQMD 1192 Requirements
- ◆ Only for Transit Agencies within the SCAQMD

SCAQMD Rule 1192

- ◆ Adopted 2000
- ◆ Applies to Public Transit Fleets With 15 or More Transit Vehicles
- ◆ Alt Fuel Purchase/Lease Requirement Beginning 2001

SCAB Urban Bus: Proposal

- ◆ Require Transit Agencies Operating in the SCAB to Move to the Alternative Fuel Path Beginning 1/1/2006.

No Change Proposed for Transit Fleet Vehicles

- ◆ Emission Reductions Obtained Through the Current ARB TFV Rule
- ◆ ARB's Rule Achieves Additional Reductions Beyond 1192

Public Process

- ◆ **Public Workshop 04/07/05 (Tomorrow!)**
 - ◆ El Monte 1:30-4:00
- ◆ **New workshop added on 4/27/05**
 - ◆ Sacramento 1:00 to 3:00
- ◆ **Comments Requested by 04/15/05**
- ◆ **Staff Report Released by 06/03/05**
- ◆ **Board Hearing 07/21-22/05**

COMMENTS REQUESTED

- ◆ **E-Mail To:**
 - ◆ David Salardino, dsalardi@arb.ca.gov
 - ◆ Please cc: Nancy Steele, nsteele@arb.ca.gov
- ◆ **Or Mail To: 9528 Telstar Avenue, El Monte, CA 91731**
- ◆ **Or Fax To: (626) 459-4480**

Contact Information

Fleet Rule For Transit Agencies (Implementation)

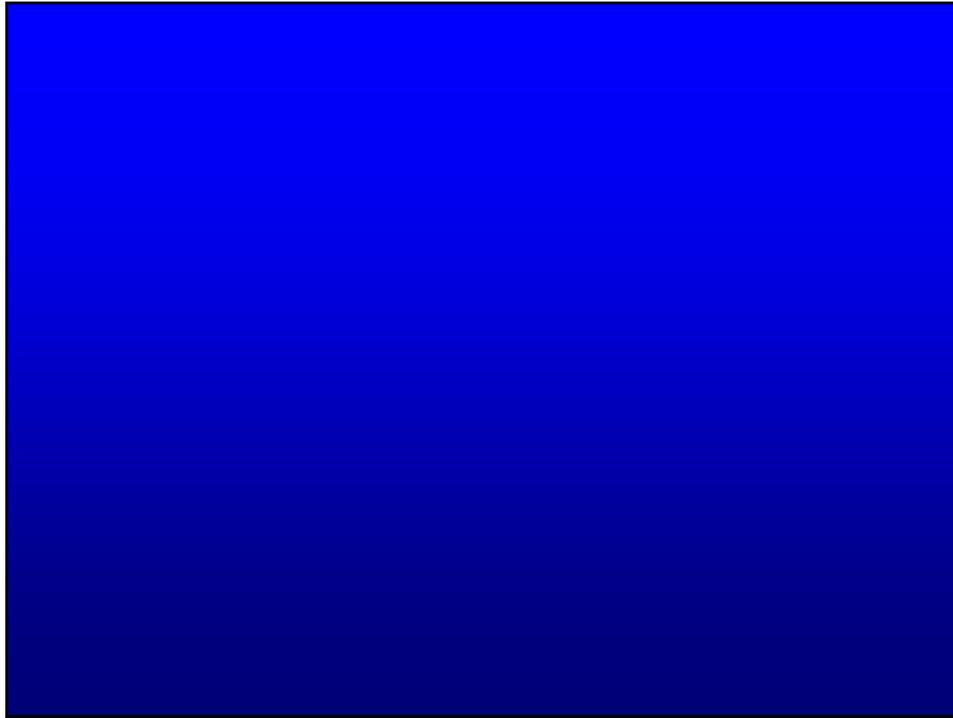
Kathleen Mead

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Questions ?





**Air Resources Board
Incentive Funding**
Cal/ACT Spring Conference
Riverside, CA
April 6, 2005

Speaker: Kathleen Mead

A yellow outline map of California is positioned on the left side of the slide. To its right, the text is centered and reads: "Air Resources Board Incentive Funding" in bold yellow font, "Cal/ACT Spring Conference" in white font, "Riverside, CA" in white font, "April 6, 2005" in white font, and "Speaker: Kathleen Mead" in yellow font at the bottom.

What is Incentive Funding? \$\$\$\$\$\$\$\$

Carl Moyer Program

- ◆ Incentive grants to reduce air pollution emissions from heavy-duty diesel vehicles and equipment
 - ◆ Trucks, buses, off-road construction equipment, marine vessels, ag pumps, locomotives
- ◆ ARB sets guidelines
- ◆ Districts make the grants

Carl Moyer Program

- ◆ In 2004, the Legislature passed increased, continuous funding
 - ◆ Statewide funding
 - ◆ 2004-05 – \$30.5 million
 - ◆ 2005-06 – \$86 million annually (through 2015)
 - ◆ Local funds from \$2 DMV fee increase – up to \$55 million

Carl Moyer Program

- ◆ Who is eligible?
 - ◆ Public or private owners of vehicles or equipment
- ◆ How much are the grants for?
 - ◆ Cover up to the incremental cost – project cost minus a baseline cost that would have been incurred anyway (e.g., rebuild cost)
 - ◆ Based on emission reductions – limited to \$13,600 per ton of pollution reduced

Carl Moyer Program

- ◆ What projects are eligible?
 - ◆ Purchases of new low-emission vehicles, repowers, and retrofits that bring early or extra reductions
- ◆ Where and when do you apply?
 - ◆ Contact your local district
 - ◆ <http://www.arb.ca.gov/msprog/moyer/contacts.htm>

Motor Vehicle Registration Fee Program

- ◆ Administered by Air Districts
- ◆ Up to \$6 per vehicle
- ◆ \$\$ used to reduce emissions from motor vehicles
- ◆ Each district sets criteria for funding approval / RFP Process

More Information

- ◆ **Implemented by Your Local Air Districts**
 - ◆ <http://www.arb.ca.gov/capcoa/roster.htm>
- ◆ **Carl Moyer Program**
 - ◆ <http://www.arb.ca.gov/msprog/moyer/moyer.htm>
 - ◆ **New Guidelines**
 - ◆ Workshops: April and May 2005
 - ◆ Board Hearing in November 2005
- ◆ **Air Quality Motor Vehicle Transportation Planning**
 - ◆ <http://www.arb.ca.gov/planning/tsaq/tsaq.htm>