

National Clean Diesel Campaign: Clean Diesel Funding

November 2, 2010

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National Clean Diesel Campaign

PRESENTATION OUTLINE

- Why Diesel Matters
- Regulatory Efforts
- National Clean Diesel Campaign
- West Coast Collaborative
- SmartWay Transport
- Tools, Resources, Links

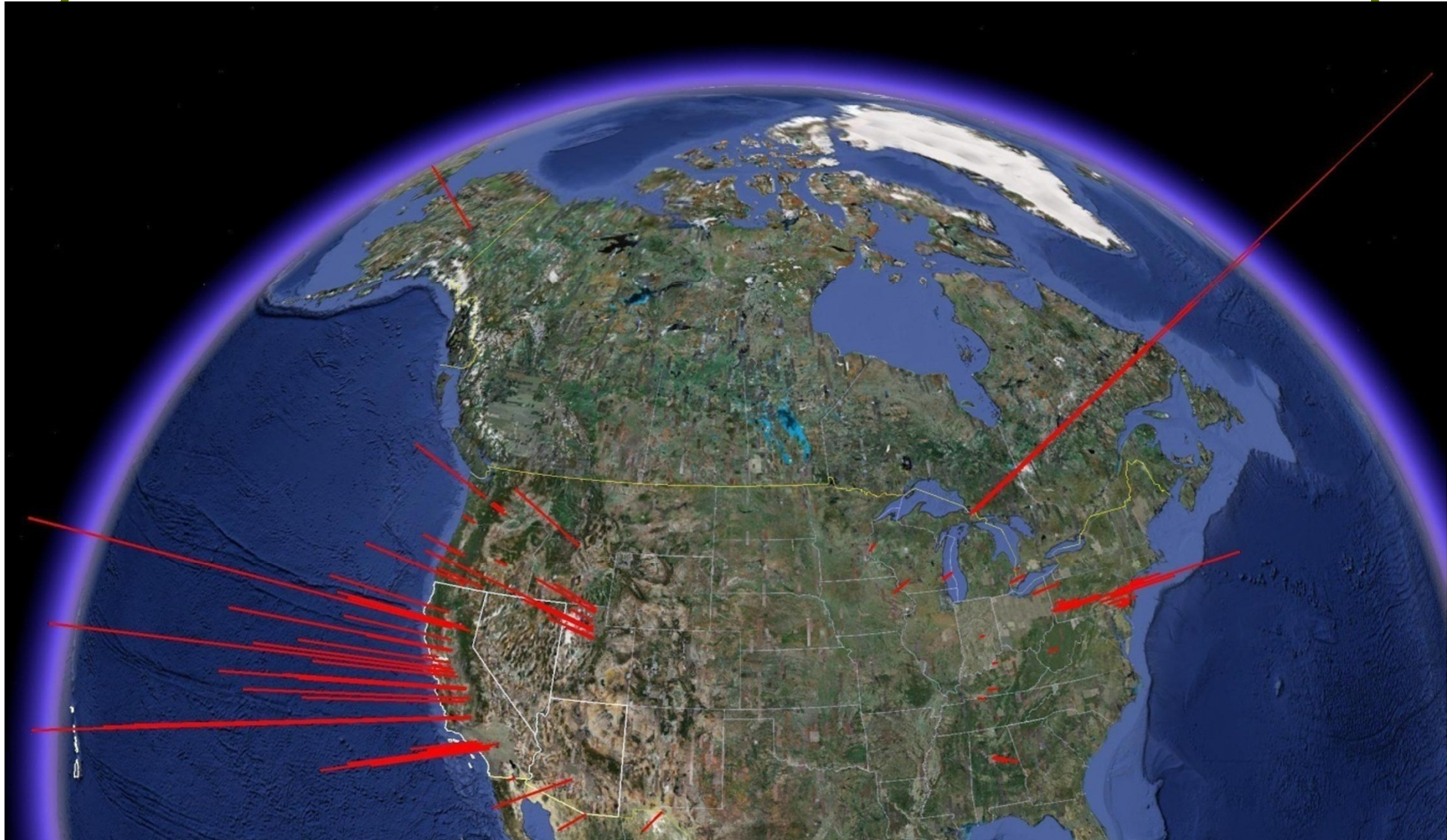
Health Effects of Diesel Emissions

- Decreased lung function
- Aggravated asthma
- Respiratory ailments
- Premature death

Sensitive populations such as children and the elderly are particularly susceptible to these effects.



Particulate Matter Levels in the US



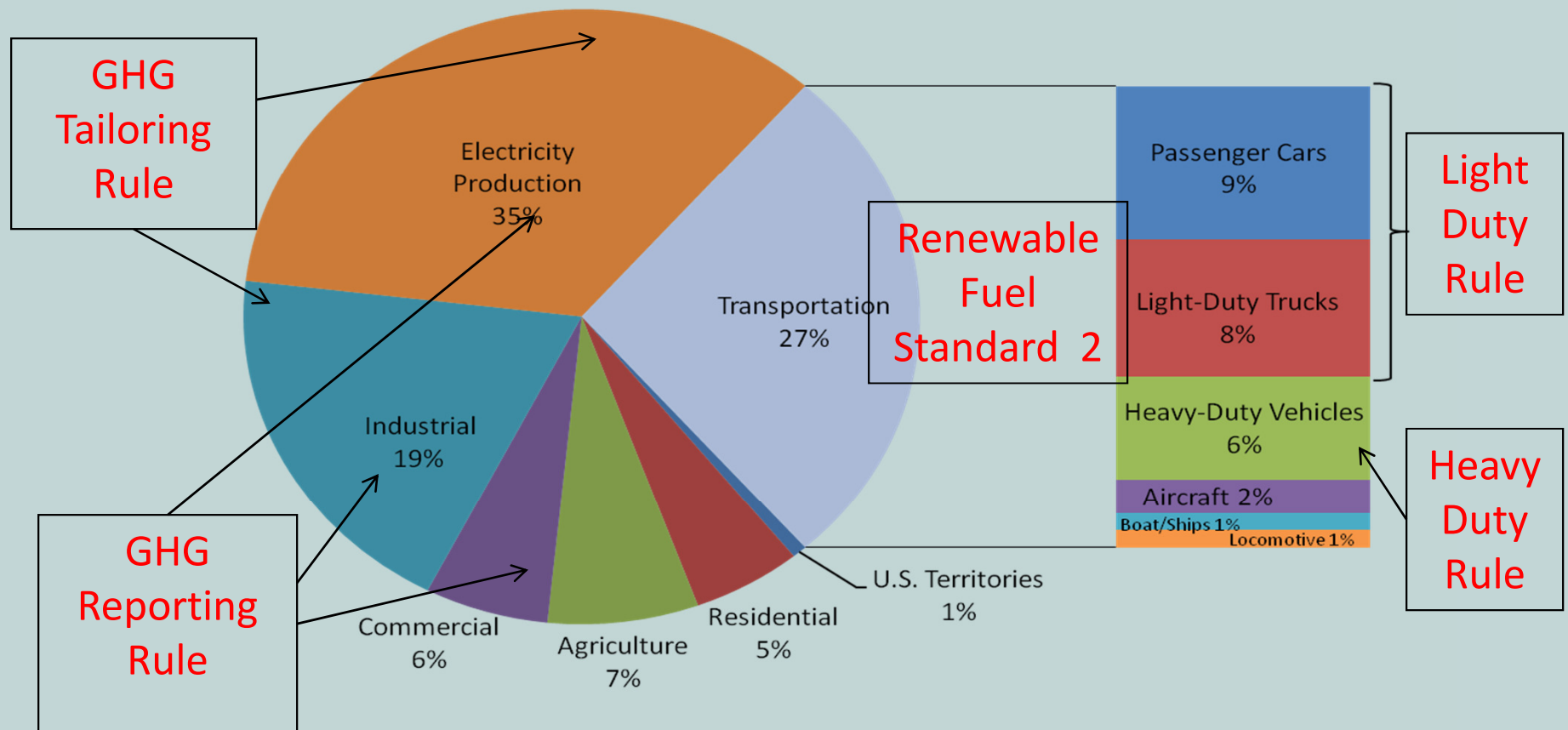
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EPA Greenhouse Gas (GHG) Rules

2010 US GHG Inventory (data 2008), US EPA

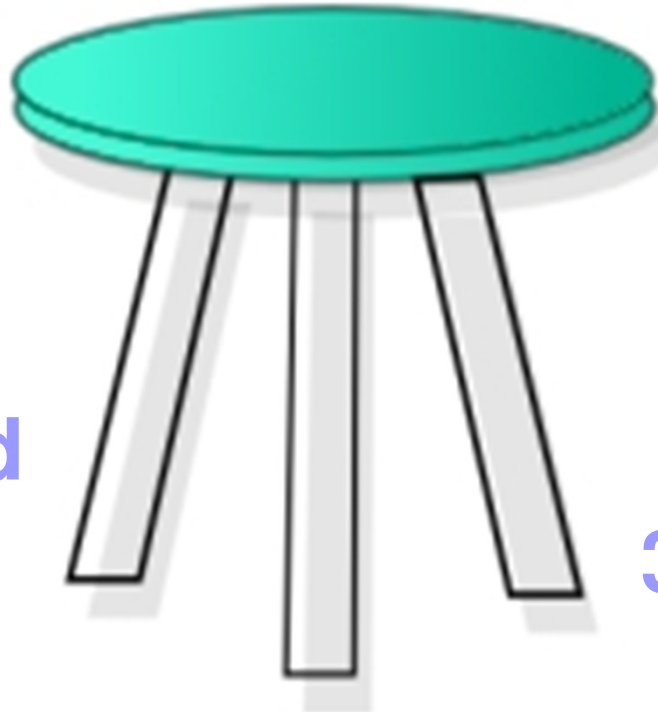
Total GHG Emissions: 6,950 Million Metric Tons



EPA Activities Around Transportation GHG Emissions

1. Engine and Vehicle Efficiency

Light, Medium and Heavy-Duty Vehicles Rules



2. Fuel Type

Renewable Fuel Standard 2 Rule

3. Activity Levels

Vehicle Miles Traveled and Partnership Programs

1. Engine & Vehicle Efficiency

Final Rule: Light-Duty Vehicles

- Joint rulemaking by DOT and EPA
- Set fuel economy and vehicle emission standards to start in model year 2012, ramp up by 2016
- Shift national standard from 27.5 to 38 MPG

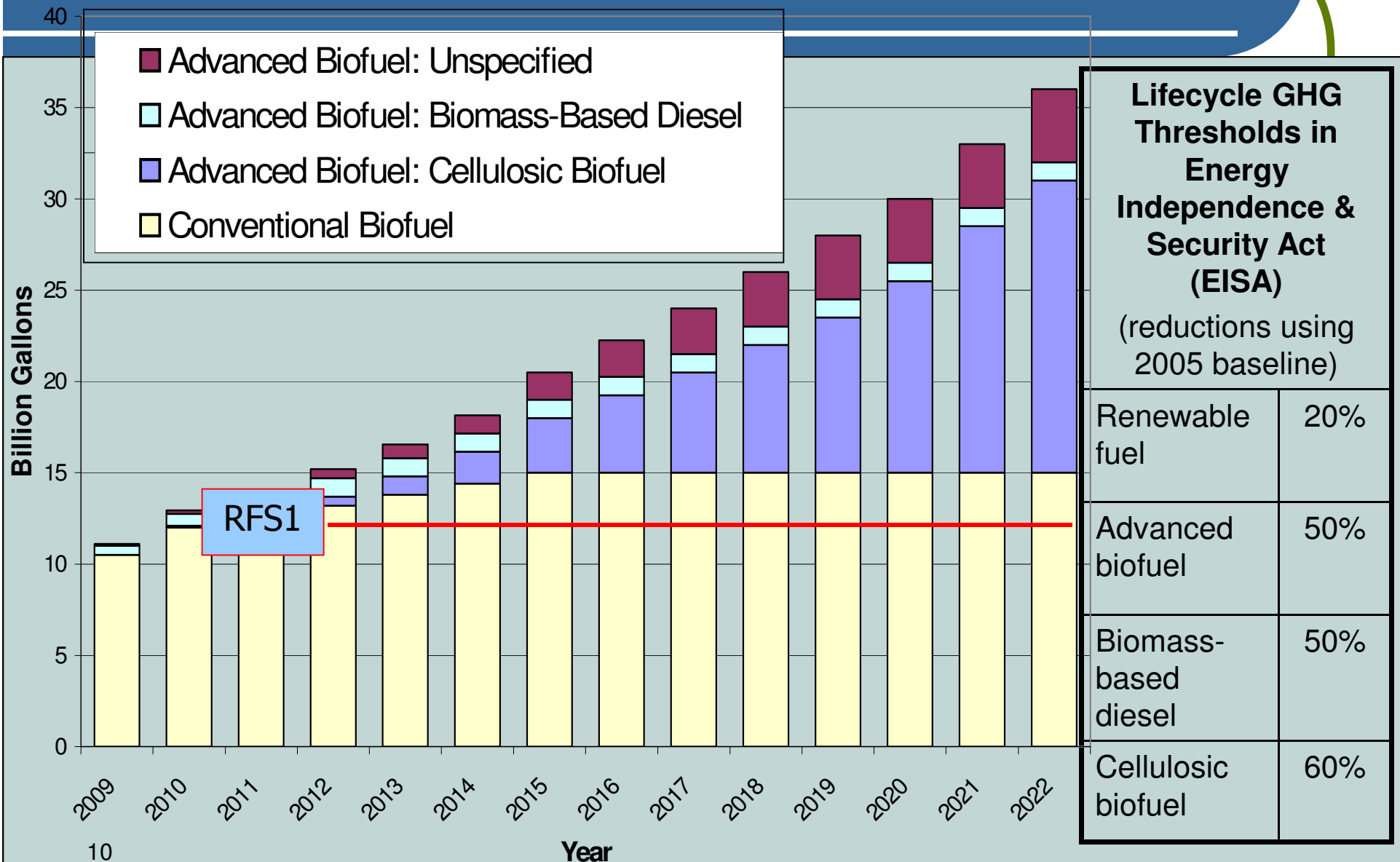
1. Engine & Vehicle Efficiency

Proposed: Medium and Heavy-Duty

- New GHG and fuel efficiency standards starting 2014
- Proposing fleetwide corporate average standards (like light-duty)
 - Phasing in gradually over 2014-2018 model years
- CO₂/fuel consumption reductions vary pending type of vehicle
- Technologies that May be Used to Comply with Rule:
 - Fuel-efficient engines
 - Reduction in extended idle operation (for tractors with sleeper cabs)
 - Vehicle speed limiter (not assumed for standard-setting)
 - Reduced tire rolling resistance, for “steer” tires and “drive” tires
 - Aerodynamic packages
 - Weight reduction



2. Final Renewable Fuel Standard (RFS 2)



2. Support for Alt Fuels & Electrification

- Federal Government Incentives
 - EPA: Diesel Emission Reduction Act (DERA)
 - DOE: \$2.4B ARRA Battery, Electrification
 - DOE \$300M ARRA Clean Cities

3. Vehicle Miles Traveled

- Department of Transportation (DOT), Housing and Urban Development (HUD), and EPA Partnership
 - \$75M Joint DOT/HUD Funding: Integrate Transportation, Housing and Economic Development
 - National City Sustainability Project
- SmartWay Transport

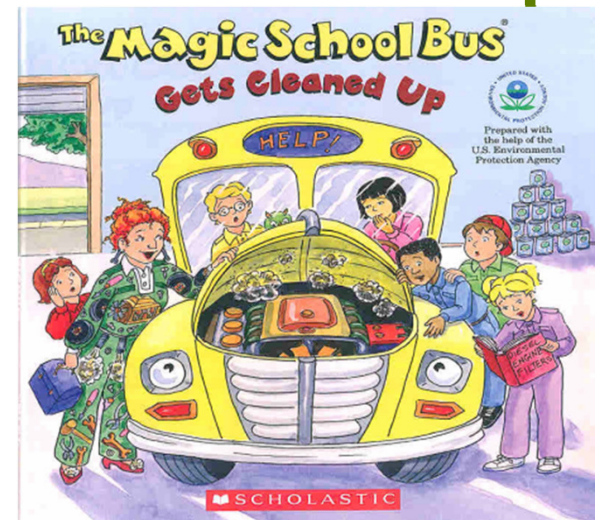
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Innovative Strategies: National Clean Diesel Campaign

But what about the remaining 11 million engines in the legacy existing fleet?

- Incentive-based, non-regulatory approach
 - Began with just a few projects (urban and rural school bus fleets, and delivery type vehicles)
- Focuses on five main sectors
 - School Buses
 - Ports
 - Construction
 - Agriculture
 - Freight (SmartWay Transport Partnership)
- Broad support from large group of stakeholders
 - Environmental organizations and other NGOs
 - Industry, fleet owner/operators
 - State/regional/local government



Strategies for the 11 Million Diesel Engines Currently in Use

- Use Cleaner Fuels
- Retrofit
- Repower
- Replace
- Reduce Idling
- Maintenance



National Clean Diesel Campaign

Summary of the Diesel Emissions Reduction Act (DERA) Funding

- Fiscal Year 2008 **\$49.2M** Awarded
- ARRA Stimulus Bill 2009 **\$294M** Awarded
- Fiscal Years 2009 & 2010 **\$120M** Awarded
- Fiscal Year 2011 **~\$60M** RFP out Nov.



EPA Administrator Lisa Jackson and CA Governor Schwarzenegger, Port of Long Beach, June 2009

Diesel Emission Reduction Act (DERA) Funding- DRAFT

Proposed \$60M for FY2011- pending the final EPA budget

National

Estimated \$42 Million (70%)

State

Estimated \$18 Million (30%)

National Clean Diesel
Funding Assistance Program
\$32 Million

Clean Diesel Emerging
Technologies Program
\$4 Million

SmartWay Clean Diesel
Finance Program
\$6 Million

State Clean Diesel Grant Program \$18M

State Base
Bonus

Matching

Budget amounts for FY 2011 are
estimated

National Clean Diesel Funding Assistance Program

- Anticipating ~\$60M again throughout the nation
- National Clean Diesel Funding Assistance Program
 - One national RFP
 - Target date for posting = Nov.
 - Applications due mid Jan.
- Automatic state program continuation
 - ~ Jan-May 2011 timeframe

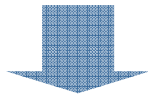
National Clean Diesel Funding Assistance Program: In EPA Region 9

Diesel Emission Reduction Act (DERA) Funding- DRAFT

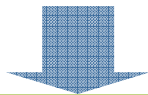
Proposed \$60M for FY2011

National

Estimated \$42 Million (70%)



National Clean Diesel
Funding Assistance Program
\$32 Million



\$500,000 - \$3,000,000

Anticipated that 3-6 grants awarded

National Clean Diesel Funding Assistance Program: Priority Projects

Project proposals that align with these priorities may rank higher in the evaluation process:

- Maximize public health benefits
- Are the most cost-effective
- Are in areas with high population, air quality issues, and air toxic concerns
- Are in areas that receive a disproportionate quantity of air pollution (i.e. truck stops, ports)

National Clean Diesel Funding Assistance Program: Eligible Entities

- Regional, state, local, tribal or port agency with jurisdiction over transportation or air quality; and
- Nonprofit organization or institution which
 - Represents or provides pollution reduction or educational services to persons or organizations that operate diesel fleets; or
 - Has, as its principal purpose, the promotion of transportation or air quality

National Clean Diesel Funding Assistance Program: How can Funds be Spent?

- Technologies and engines must be verified and/or certified by U.S. EPA or CARB

www.epa.gov/cleandiesel

- Verified Retrofit Technologies include:
 - Exhaust Controls
 - Engine Upgrades
 - Cleaner Fuels
 - Idling Reduction Technologies

National Clean Diesel Funding Assistance Program: How can Funds be Spent?

- Incremental cost of engine/vehicle replacement (old engine must be remanufactured or scrapped), engine repower, engine rebuild
- Covers incremental costs of cleaner fuel versus conventional diesel fuel
- Funds may **NOT** be used for the following:
 - Projects required under Federal, State or Local law
 - Emissions testing (except for the Emerging Technologies Program)
 - Fueling infrastructure costs, (i.e.: acquisition cost of tanks, construction or acquisition costs of fuel depot or biodiesel manufacturing facilities)

National Clean Diesel Funding Assistance Program: Applying

- One national Request for Proposals
- Submit proposals to EPA regional office for projects that take place solely within that EPA Region
- There is a recommended format for the narrative proposal
- See Request for Proposals for how to apply

National Clean Diesel Funding Assistance Program: Region 9 Priorities

- Achieves and clearly quantifies fuel savings, greenhouse gas reductions *and* diesel criteria pollutant reductions
- Reduces emissions along interstate and international goods movement corridors
- Clearly demonstrates inclusion of community, neighborhood, and/or tribal organizations in disproportionately impacted areas as active partners in the project

Past Grants

Examples National Clean Diesel
Funding Assistance grant
projects that have been funded in
the past...

Arizona Department of Environmental Quality



Electrified Parking Spaces at Truck Stops Near Ports of Entry and Along Interstates in Arizona

Deployed truck stop electrification facilities with HVAC, to reduce engine idling by heavy-duty diesel trucks and helped reduce toxic diesel emissions in Arizona counties adjacent to the U.S.-Mexico

Annual
Emission
Reduction

282 tons PM
25 tons NO_x



■ EPA



Overhead truck stop electrification system



Arizona Department of Commerce

Clean Delivery Trucks Program

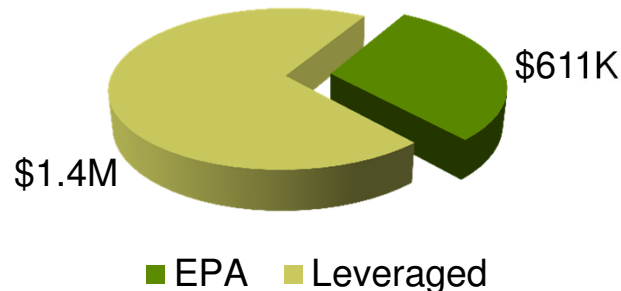
- Replace 10 heavy-duty trucks with compressed natural gas (CNG)
- Replace 2 medium-duty with battery-electric, zero-emission trucks
- Retrofit 48 trailers and tractors with SmartWay low-rolling tires
- The fleets operate in the greater Phoenix area in AZ

Annual
Emission
Reduction

0.1 tons PM

6.5 tons NO_x

203 tons CO₂



ARIZONA DEPARTMENT
OF COMMERCE

*The center for
economic advancement*



WEST COAST COLLABORATIVE
A public-private partnership to reduce diesel emissions

Cascade Sierra Solutions

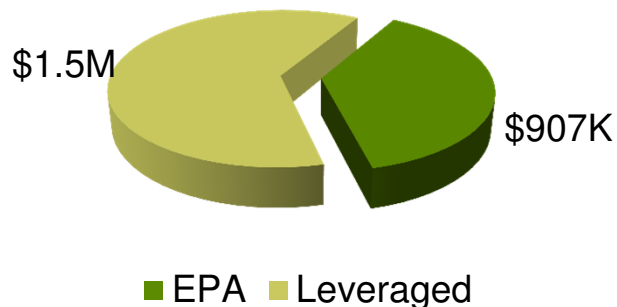


Trailer Aerodynamics Project

- Retrofitting 1,801 heavy-duty trailers with verified aerodynamic technologies.
- Fleet partner: Gordon Trucking, Pacific, WA, traveling primarily on Interstate 5 in ID, OR, and WA
- The grant paid $\frac{1}{3}$ cost of trailer skirts, saving seven percent of fuel at highway speed.



Annual
Emission
Reduction
0.5 tons PM
19.2 tons NO_x



FreightWing Aeroflex skirts on Gordon Trucking trailers



WEST COAST COLLABORATIVE
A public-private partnership to reduce diesel emissions

Tools and Resources

- Webinar Wednesday, November 10 @ 12 pm PST (see web site for call-in number)
- Tips for a Successful Diesel Retrofit Project
- Diesel Emissions Quantifier
- State and Local Toolkit
- List of Funded Projects
- Helpline: 1-877-623-2322
- E-mail: cleandiesel@epa.gov

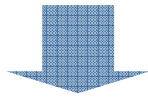
epa.gov/cleandiesel

Diesel Emission Reduction Act (DERA) Funding- DRAFT

Proposed \$60M for FY2011

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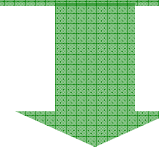
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State Clean Diesel Grant Program \$18M

State Base

Matching Bonus

Budget amounts for FY 2011 are
estimated

DERA Also Funds

- **Emerging Technology Grants**
 - Innovative, non-verified technologies
 - Eligible entities apply to use technologies listed on Emerging Technologies List
 - 14 emerging technologies listed
- **SmartWay Finance Grants**
 - Over-the-road and regional truck fleet upgrade
 - APU rebates for independent owner-operators
 - CNG retrofits of school buses
 - Retrofit and repower of port, construction, and agricultural equipment
- **Automatic State DERA Grants** –All states and DC



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National Clean Diesel Campaign



Northeast
Diesel Collaborative

Mid-Atlantic
Diesel Collaborative
on the route to cleaner air



What is the Collaborative?

The Collaborative is a public-private partnership that aims to reduce diesel emissions in the most impacted communities by:

- Supporting and bringing attention to the many highly successful existing efforts
- Creating a forum for information sharing along major transportation corridors in the West
- Leveraging new resources
- Developing and implementing projects



Other Projects

Examples projects
EPA has
supported...

Cow Manure to Fuel

- Generate purified biomethane produced from cow manure at Hilaride Dairy
- Converted diesel trucks to biomethane
- Trucks haul milk to the processor, over 300 miles roundtrip
- Significant environmental benefits



Altamont Landfill Gas to LNG Fuel

- World's largest landfill gas to liquefied gas plant
- Produce more than 10,000 gallons/day ultra low-carbon biofuel
- Currently powering over 300 of Waste Management's trash trucks and Southern CA trucks
- "Closed loop" approach to managing waste



U.S. Department of Energy



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The SmartWay Transport Partnership



Promoting cleaner, more efficient
transportation options

Proposal Builds on SmartWay Transport Partnership

- A non-regulatory program launched in 2004 to improve the efficiency of freight transportation while reducing fuel consumption and emissions
- SmartWay programs encourage the use of key truck technologies including idle reduction, aerodynamics, efficient tires
- Number of Partners has grown to over 2,600 members
 - 660,000 trucks (partners operate > 10% of all trucks)
 - Reduced CO₂ by nearly 15 million metric tons, NOx by 215,000 tons, and PM by 8,000 tons since beginning of program
 - Saved 1.5 billion gallons of diesel fuel
 - Saved the freight industry \$3.6 billion in fuel costs

The Partnership Dynamics

Carriers:

- Save fuel & money
- Attain preferred shipper status
- Get recognition
- Improve public image



EPA:

- Reduce emissions
- Improve energy security
- Establish agency / industry relationships

Shippers:

- Get better data on operations
- Understand options for increasing efficiency
- Shrink carbon foot print
- Get recognition

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In Closing...

- Encourage you to:
 - Apply for DERA grant funding
 - Partner with key stakeholders to provide clean diesel strategies
- EPA is committed to:
 - Provide assistance to state and local governments
 - Test, certify and deploy the cleanest diesel technologies
 - Develop innovative financing approaches
- We need your help to:
 - Secure continued funds for emission reduction activities

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www.epa.gov/cleandiesel

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Other Resources

- **Grant Opportunities**
 - www.grants.gov
- **EPA Renewable Fuels and GHG**
 - www.epa.gov/climatechange
- **EPA National Clean Diesel/DERA**
 - www.epa.gov/cleandiesel
- **EPA SmartWay**
 - www.epa.gov/smartway
- **Trina Martynowicz, U.S. EPA Region 9**
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