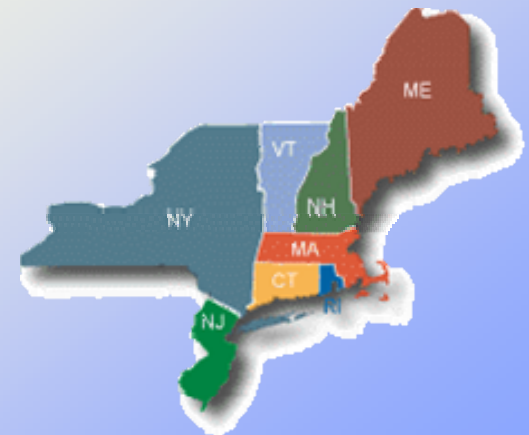


# Northeast Diesel Collaborative

Partnerships to reduce diesel  
emissions in the Northeast

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# Why the Northeast?



- The Northeast has some of the highest asthma rates in the country –
  - All six New England states have childhood asthma rates above 10 percent
  - Areas of NYC have childhood asthma rates near 15 percent
- 25 counties - with more than 21 million people in CT, NJ and NY - do not meet the standard for fine particles, and other urban areas just meet the standard
- Reducing diesel exhaust is part of a comprehensive approach to improving air quality and helps us address:
  - Urban environmental issues
  - Environmental justice concerns
  - Asthma and children's health issues

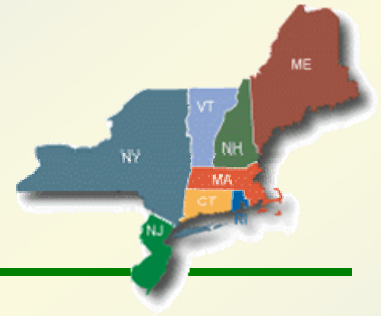
# Air Quality Collaboration in the Northeast



- EPA Regions 1 and 2 and the Northeast states have successfully collaborated for more than 30 years to address air quality challenges
  - Northeast has been a proving ground for clean diesel innovation over the past ten years
- State commissioners are concerned about elevated levels of fine particles and support aggressive action to reduce diesel emissions now
- Robust partnerships are already addressing diesel emissions in communities throughout the region

# The Northeast Diesel Collaborative

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- EPA Regions 1 and 2, NESCAUM and the eight Northeast states have established the Northeast Diesel Collaborative to:
  - Significantly expand existing, and develop new, regional partnerships to reduce diesel emissions and protect public health
  - Build on success to further reduce emissions from the on-road, construction, transit and port sectors
  - Identify areas in the Northeast where new programs and partnerships can yield the greatest public health benefit
  - Leverage new funding for initiatives to reduce emissions in key sectors

# Building on Success: Construction

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- **Central Artery (Big Dig), Boston**
  - Country's first major construction retrofit project
  - Partnership with the Massachusetts Highway Department, Department of Environmental Protection, MECA, Johnson Matthey, Engelhard, Engine Control Systems, NESCAUM and EPA
  - 200 engines retrofitted with oxidation catalysts or PM filters
  - 8 tons of PM and HC reduced annually
- **7 World Trade Center Reconstruction**
  - Used retrofitted equipment
    - First tower crane retrofit in the nation

**Diesel Oxidation Catalyst**



# Building on Success: Construction Contract Requirements

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- Many public agencies in the northeast have established requirements to retrofit diesel construction equipment
  - NY City Local Law 77
    - All city-owned or city-contracted construction equipment
  - Massachusetts Highway Department
    - All construction projects statewide
  - Connecticut Department of Transportation
    - Vehicles used in I-95 Q Bridge Reconstruction (200 to date)
  - New York Transit Authority
    - All transit construction projects
  - Massachusetts Bay Transportation Authority
    - All transit construction projects

# Building on Success: School Bus Fleets

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- EPA, NESCAUM and the states have built partnerships with state departments of education, school transportation associations, school districts, and community and health advocacy organizations to:
  - Retrofit buses with advanced pollution controls
    - More than 4000 school buses in the northeast are being equipped with either filters or catalysts
    - Projects underway in every northeast state
    - Many buses are transporting children living in EJ communities
    - More than \$26 million invested with funding from federal and state grants, federal and state enforcement action settlements and state bonds
  - Reduce Idling
    - Every northeast state has a program to reduce school bus idling
    - The Asthma Regional Council’s “Diesel Toolkit” provides states, schools, and communities with information on school bus idling & retrofit strategies



# Building on Success: Transit

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- **Buses**

- More than 5,000 buses in the major Metro areas (New York, Boston, Providence, Stamford) use filters and ULSD

- **Locomotives**

- Massachusetts Bay Transportation Authority is testing a diesel oxidation catalyst on one commuter train
- First locomotive retrofit project in the nation
- 55 trains are fueling with LSD
- With funds from Region 1 enforcement settlement, will retrofit 15-20 additional locomotives

- **Ferries, New York Harbor**

- Every ferry fleet in New York harbor is being retrofitted
- Staten Island Ferry is being retrofitted with SCR to reduce NOx emissions



# Building on Success: Fleets

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- **NYC Sanitation Department**
  - Retrofitted 250 vehicles with DPFs and 2 trucks with SCR
- **Hospital Shuttle Buses, Boston** — Fleet of 17 buses
  - First privately funded retrofit project in New England
- **Tourist Trolleys, Boston** — 35 trolleys
  - First such retrofit project in the Northeast
- **Mack Truck**
  - Installed 158 DOCs and 30 DPFs
  - Purchased 5 SCR heavy-duty diesel trucks and 5 combination SCR & DPF

**UPS SCR/DPF Combination Truck  
with Urea Filling Station**



# Building on Success: Ports and Railyards

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- **Ports**

- **Tugboats, New York Harbor**

- Replacing engines in 5 tugboats

- **Conley Container Terminal, Boston**

- Retrofitting 36 vehicles (operating in yard & tractors hauling containers) and using ULSD



- **Switchyard Locomotives**

- 30 locomotives in Massachusetts and Connecticut have installed auxiliary power units (APUs) to reduce idling



# Building on Success: Idle Reduction

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- **Hunts Point Market, New York City**
  - First truck stop electrification project in the U.S.
  - Installed 30 electric/HVAC/cable-ready bays at largest produce market in the U.S.
- **New York State Thruway and New Jersey**
  - 5 truck stops, 238 spaces
  - Represents a small fraction of truck stop spaces in the Northeast
- **Anti-Idling Laws**
  - 5 of the 8 northeast states have rules that limit idling time
  - EPA Regions 1 & 2 are collaborating w/states on enforcement



# Northeast Diesel Collaborative: Strategies

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- Strong foundation of success but represents a fraction of the problem we face in the Northeast
- Conduct a strategic analysis of the existing projects, and the air quality and public health impacts of diesel exhaust to:
  - Identify new communities to target air quality improvements
  - Determine types of vehicles contributing to elevated public exposure in both urban and rural areas
    - Likely to target different vehicle types in each setting
      - Buses and delivery vehicles in urban areas
      - Trucks and school buses in rural areas
- Use existing partnerships to:
  - Enhance regional and state initiatives
  - Expand local partnerships
  - Engage new stakeholders and new communities



# Enhance Regional and State Initiatives



- Regional strategies
  - Launch new initiatives to reduce emissions in major corridors and/or urban communities through:
    - Truck Stop Electrification in major corridors
    - Idle reduction
    - Construction retrofit requirements
    - Cleaner diesel fuel – e.g. early adoption of ULSD, increased use of biodiesel
- Expand and strengthen state regulations
  - Develop tool box with public health and environmental information, possible strategies and model language
    - Promote anti-idling regulations in states without them
    - Establish heavy duty vehicle emissions testing programs
    - Strengthen opacity standards



# Expand Local Partnerships



- In the Northeast, multi-stakeholder collaborations are reducing pollution in local communities
  - Greater Boston Breathes Better (GB3)
  - New England Asthma Regional Council (ARC)
  - New York Metro Area Air Quality Initiative (NYMAQI)
  - Clean Air Communities
- NEDC will expand these partnerships to promote additional local strategies:
  - Construction retrofit contract requirements
  - Cleaner diesel fuel
  - Idle reduction measures
  - Vehicle retrofits and early replacement



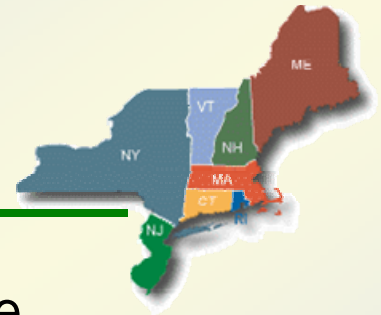
# Engage New Stakeholders

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- To expand diesel programs, the NEDC will actively engage stakeholders from key sectors and communities:
  - Port Authorities and Terminal Operators
    - Workshop planned for February 1, 2006, New York City
  - State and Federal Departments of Transportation
    - Workshops on strategies for leveraging CMAQ and other funds
      - Stamford CT and Providence RI have already successfully used CMAQ funds to pay for the retrofit of transit vehicles
  - Private Industry
    - Use existing partnerships to target specific sectors and leverage private funding
      - First Student and Laidlaw to reach additional school districts
      - States and construction industry partners to involve more of the construction industry in these programs
      - Clean diesel fuel providers such as Sprague Energy and Burke Oil to bring cleaner diesel to new communities

# Conclusions

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- High levels of exposure to diesel particulate matter in the Northeast pose a serious public health risk
- Reducing diesel emissions is a top priority for EPA Regions 1 and 2 and the Northeast states
- Through partnerships built over time, more than 9,000 engines have been retrofitted
- Despite success, hundreds of thousands of diesel engines continue to contribute to poor air quality in the Northeast
- The Northeast Diesel Collaborative is prioritizing its activities to:
  - Maintain momentum on projects and programs already underway
  - Target new areas in which additional partnerships and funding can have the most significant impact on public health

For More Information:

[www.northeastdiesel.org](http://www.northeastdiesel.org)