

Wisconsin Clean Diesel Coalition

INTRODUCTION

Diesel-powered engines are the workhorse of our transportation economy playing a vital role in key sectors like freight movement, construction, public transportation, and agriculture.

However, diesel exhaust, which contributes to particulate matter (PM also called soot), ozone (also called smog) and air toxics, has been linked to a number of serious respiratory and cardiac health effects.¹ The State of Wisconsin has several counties that do not meet the United States Environmental Protection Agency's (U.S. EPA) health-based National Ambient Air Quality Standards (NAAQS) for ozone and PM 2.5. Reducing emissions from diesel engines is one of the most important air quality and public health challenges facing the United States.

Under the Clean Air Act, U.S. EPA has set stringent standards for diesel fuels and new diesel engines, including heavy-duty trucks, buses, and nonroad equipment. For on-road vehicles, in 2006 ultra low sulfur diesel fuel (ULSD) became available and beginning in model year 2007, cleaner truck standards went into effect. For non-road equipment, in 2008 the Clean Air Non-Road Diesel Rule began making reductions from non-road heavy duty diesel engines in construction, agriculture, and industrial equipment and from 2009-2015 the Clean Locomotive and Marine Diesel Rule will have significant impacts on new and existing engines.²

The existing diesel engines or "legacy fleet" need to be addressed since diesel engines last for decades and most of the existing engines are unaffected by new rules. To spur public health benefits, U.S.EPA Region 5 is leading the Midwest Clean Diesel Initiative (MCDI), a public-private partnership to voluntarily reduce diesel emissions prior to, or in addition to mandatory deadlines. A diesel program initiative in Wisconsin will help support the Midwest Clean Diesel Initiative. To accelerate emission reductions from the legacy diesel fleet, a collaborative of public and private stakeholders, known as the *Wisconsin Clean Diesel Coalition*, was created to voluntarily explore, develop and implement mobile diesel emission reduction strategies in Wisconsin.

GOAL

The Wisconsin Clean Diesel Coalition will use educational outreach and funding mechanisms to accelerate emission reductions from diesel fleets.

PROPOSED FLEETS & PROGRAMS

While clean diesel actions will be pursued across the state and with all interested and cooperative fleets, efforts will be concentrated on specific initiatives selected by members of the *Wisconsin Clean Diesel Coalition* (outlined below), and/or cost-effective approaches within the largest emitting fleet sectors (trucking, agricultural, and construction), and/or with fleets that impact sensitive areas or sensitive populations. Some sensitive areas include the lakeshore counties that are making efforts to meet attainment status for ozone and/or PM2.5 (Kenosha, Racine, Milwaukee, Waukesha, Ozaukee, Washington, and Sheboygan).

¹ United States Environmental Protection Agency. Health Assessment Document for Diesel Engine Exhaust. May 2002.

² Proposed Rule: Control of Emissions of Air Pollution from Locomotives and Marine Compression-Ignition Engines Less than 30 Liters per Cylinder. March 2, 2007. www.epa.gov/otaq/locomotv.htm

Specific initiatives that the *Wisconsin Clean Diesel Coalition* will undertake beginning in 2011 include:

1. Exploration and implementation of a green corridor program to address diesel emissions along a stretch of busy highway in Wisconsin. Projects in a corridor program may include establishing or expanding alternative fuel infrastructure, idling education, reducing emissions at construction sites, improving freight transport, etc.
2. Use of voucher type funding for clean diesel projects.

Educational and financial strategies undertaken by the coalition will continue to address both operational and idling emissions. Strategies will need to be selected by the fleets depending on their needs, abilities, and funding. The following types of emission reduction options will be evaluated, encouraged, and implemented where possible:

- Idling reduction devices, specifically for high idle vehicles (trucks, buses, rail)
- Adopting statewide idling regulations
- Fleet idle reduction and freight management training
- Recognition and incentives for equipment operators
- Engine rebuilds and repowers for older off-road engines (Tier 0 targeted)
- Appropriate types of exhaust retrofits for the most cost-effective vehicle applications
- Alternative fuel vehicles for the most feasible and cost-effective applications
- Expanded use of cleaner fuels

The *Wisconsin Clean Diesel Coalition* will also look at internal programs (e.g. Green Tier) to further institutionalize clean diesel practices and technologies in environmental programs.

Fleets targeted under the *Wisconsin Clean Diesel Coalition* initiatives may include:

- Publicly owned on-road and non-road vehicles
- Trucks and truck stops/distribution centers
- Construction equipment
- Agricultural equipment
- School buses, publicly and private owned
- Transit buses
- Garbage trucks, publicly and privately owned
- Coach buses and other diesel-powered passenger vehicles
- Local delivery vehicles
- Rail, passenger and freight
- Port and marine equipment
- Airport equipment
- *Others*

POTENTIAL FUNDING SOURCES

There are several sources of funding which the State could potentially use to support the coalition initiatives through grants, loans, vouchers, or other means. Some sources include:

- U.S. Environmental Protection Agency – Diesel Emission Reduction Act funding
- U.S. Department of Transportation - Congestion, Mitigation, and Air Quality Grants
- Wisconsin Department of Safety & Professional Services- Truck Idling Reduction Grant
- U.S. Department of Transportation - State Infrastructure Banks

- Federal Supplemental Environmental Project Dollars
- State Supplemental Environmental Project Dollars
- Small Business Environmental Improvement dollars
- Tax incentives

RETROSPECT

The inception of the *Wisconsin Clean Diesel Coalition* increased awareness amongst all types of diesel fleets as to what they can do to reduce emissions and access to financial assistance to help them do so. Numerous projects have occurred throughout the state in private and public fleets, with private funding, state and federal assistance. Over 25,000 diesel engines have been impacted as of 2011 just including the grant-funded projects and U.S. EPA SmartWay® program projects. There are many fleets that have installed clean diesel technologies or are using alternative fuels with their own funds.

State and Federal clean diesel grant programs have been offered since 2000. Those used in Wisconsin include:

- Wisconsin Department of Safety & Professional Services (previously Wisconsin Department of Commerce) – Wisconsin Diesel Truck Idling Reduction Grant Program
- U.S. DOT – Congestion Mitigation and Air Quality Improvement Grant Program
- U.S. EPA – Diesel Emission Reduction Act (DERA) Grants
- U.S. EPA – Clean School Bus USA Grant Program
- U.S. EPA – National and MCDI Clean Diesel Demonstration Grants
- U.S. EPA – American Recovery & Reinvestment Act DERA Grants

A report released by the Wisconsin Department of Natural Resources in 2011 summarizes how some of these grants were used in Wisconsin and the associated benefits.

<http://dnr.wi.gov/air/pdf/CleanDieselGrantsSummaryReport.pdf>

Municipalities, schools, and private organizations have also invested in diesel projects by:

- Retrofitting long haul trucks, waste haulers, school buses, construction equipment, and other diesel equipment with exhaust controls and idle reduction devices
- Using alternative fuels such as biodiesel, compressed natural gas, and propane to displace the use of diesel fuel
- Replacing outdated engines and equipment with cleaner, more efficient models
- Switching to the use of cleaner on-road fuel in off-road equipment ahead of mandates
- Implementing EPA SmartWay Transport® program practices and technologies on freight equipment (improved logistics, aerodynamics, single wide or low rolling resistance tires, automatic tire inflation)
- Conducting driver training to improve driving habits and vehicle maintenance
- Implementing idling restrictions

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