

National Clean Diesel Campaign

Clean Diesel Programs

FY09 Clean Diesel Program Program Overview



Why Clean Diesel?

- **Reducing diesel emissions is one of our country's most important air quality challenges**
- **Diesel engines are the workhorses of the nation; millions of diesel engines already in use continue to emit large amounts of nitrogen oxides, particulate matter and air toxics**
- **These emissions are linked to premature deaths, asthma attacks, lost work days, and other health impacts every year**
- **Clean diesel projects offer immediate public health and air quality benefits, especially important in areas of poor air quality such as nonattainment areas**



The Good News

- Cost-effective solutions are available now
- Funding is available for a second year (Fiscal Year 2009)
 - We're estimating \$50M will be available nationwide in FY 09
 - Possible stimulus \$ may be coming
 - Final budget amount → TBD
 - Watch EPA's web site for more information!

www.epa.gov/cleandiesel



Estimate Based on Last Year's Funds. FY 09 – Still TBD

National Clean Diesel Program

\$49.2 Million for 2008

National

\$34.4 Million (70%)



National Clean Diesel
Funding Assistance Program \$27.6 M

Clean Diesel Emerging Technologies Program ~\$3.4 M

SmartWay Clean Diesel Finance Program ~\$3.4 M

State

\$14.8 Million (30%)



State Clean Diesel Grant Program \$14.8 M

State Base

Matching Bonus



FY 08 Funding Overview

- **National Funding Assistance Program**
 - Over 230 applications requesting approx. \$144 million
 - \$5 requested for every available dollar
 - Approximately 56 awards will be made in the Fall-Winter nationwide
- **Emerging Technologies**
 - \$3.4 million available for nationwide RFP
 - 14 applications came in requesting \$10 million
 - Expect to award 5-7 grants this winter



FY 08 Funding Overview

- **SmartWay Clean Diesel Finance Program**
 - Three organizations received \$3.4 million for small trucking firms to lower fuel costs and shrink their carbon footprints through innovative loans and rebates
 - Community Development Transportation Lending Services, Washington, D.C.
 - Cascade Sierra Solutions, Oregon
 - Owner-Operator Independent Drivers Association, Missouri
- **State Clean Diesel Program**
 - For FY08 State Program was funded at \$14.8M
 - All 50 States are participating in the program
 - State grants range from approx. \$197K to \$492K (w/State match)
 - State matching funds leveraged approx \$7M in additional funding



Outlook for FY 09

- **There will be funds for clean diesel projects**
- **There will be a number of competitions**
 - **EPA Regional Offices**
 - **SmartWay Innovative Finance**
 - **Emerging Technologies**
- **Prepare now by organizing fleet information, forming partnerships, looking at past projects and...**
- **Learning to use the Diesel Emissions Quantifier to calculate emissions benefits**





**Environmental
Protection Agency**

Diesel Emissions Quantifier (DEQ):

An introduction and guide to the DEQ

Jennifer Went

National Clean Diesel Campaign

Office of Transportation and Air Quality

Environmental Protection Agency (EPA)

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January 29, 2008

Agenda

Purpose: To provide an informational webinar on how to best use the DEQ

Topics:

- Background
- Inputs
- Outputs
- Website Overview
- Examples
- Future work



Background

- In the past there was not an “easy-to-use” EPA approved method of calculating emission reductions for diesel engines
- For diesel users there were only two options to calculate your emission reductions from utilizing clean diesel strategies
 - Do it you yourself
 - National Mobile Inventory Model (NMIM)
- Today, the EPA has the Diesel Emission Quantifier (DEQ) to help companies and individuals determine their potential emissions reductions from employing emissions reduction strategies

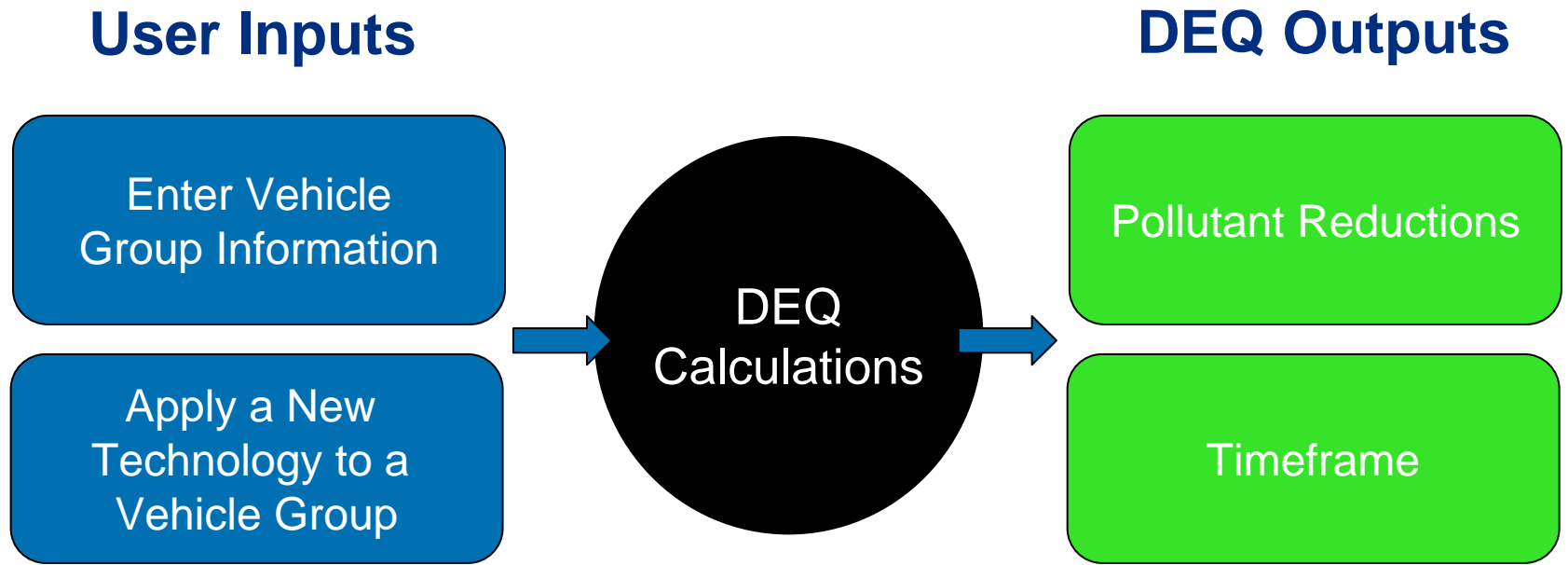


Background

- **First developed in 2006, the DEQ is a uniform tool to provide consistency among all interests regarding emission reduction calculations**
- **The DEQ is an online calculator that estimates emissions reductions for fleets of vehicles from various clean diesel strategies by using data inputted by users**
- **Built upon existing EPA modeling tools and guidance**
 - **National Mobile Inventory Model**
 - **Mobile6.2 and Nonroad Model**
 - **2008 Locomotive and Marine Diesel Emission Standards**



DEQ Process Flow Diagram




DEQ User's Guide

<http://cfpub.epa.gov/quantifier/view/UserGuide.pdf>



How Do You Access the DEQ?



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New! **Save the Date!** Join us Thursday, January 29, 2009, 2:00 p.m. - 3:00 p.m. EST for the Webinar: The Diesel Emissions Quantifier (DEQ) -- A Tutorial. [Register Now](#)

Clean Diesel Program Quick Finder

Grants – Funding	Technologies	Tools and Resources
2009 Opportunities Funded Projects Funding Archive	Verification Program Verified Technology List Emerging Technologies Idle Reduction Technologies	Diesel Emissions Quantifier Maintenance Tips EPA Regional Collaboratives Trucker Information





National Clean Diesel Campaign

Reducing emissions from diesel engines is one of the most important air quality challenges facing the country today. EPA established the National Clean Diesel Campaign (NCDC) to promote diesel emission reduction strategies. NCDC includes regulatory programs to address new diesel engines as well as innovative programs to address the millions of diesel engines already in use.

Diesel engines power the movement of goods across the nation, help construct the buildings in which we live and work, help build the roads on which we travel, and carry millions of children to school each day. While diesel engines provide mobility and are critical to the nation's economy, exhaust from diesel engines contains pollutants that negatively impact human health and the environment. Diesel engines emit large amounts of nitrogen oxides, particulate matter and air toxics, which contribute to serious public health problems.

NCDC's Innovative Strategies

More than 11 million diesel engines in operation today do not meet EPA's new clean diesel standards, yet these engines can continue to operate for 20 to 30 years. EPA established innovative programs to accelerate emission reductions from older diesel engines to provide more immediate air quality benefits. The goal of these [innovative programs](#) is to address in-use diesel engines by promoting a variety of cost-effective emission reduction strategies, including: switching to cleaner fuels; retrofitting, repairing, repowering, and replacing equipment; and reducing idling. EPA has made significant progress toward this goal by engaging in partnerships, fostering innovative technologies, and providing funding assistance to accelerate the introduction of clean diesel technologies.

NCDC programs are creating demand for diesel emission reduction technologies. The purpose of EPA's [Verification Program](#) is to evaluate the emission reduction capabilities of a given technology. Through this process, EPA helps to instill confidence in our stakeholder community that the verified emission reductions will be achieved. The verification process includes a thorough technical review of the technology as well as tightly controlled testing to quantify emission reductions.

Through NCDC, EPA has [collaborated](#) with thousands of partners to reduce the health effects of diesel emissions across the nation. These diverse and committed partners include state and local governments that have created incentive programs to reduce emissions from both public and private fleets; businesses and industry groups that have provided technical assistance and devoted millions of dollars to retrofit diesel engines; and environmental or community groups that have successfully advocated for and managed effective projects to help reduce the public health impacts from diesel emissions.

EPA Clean Diesel News

Sign up to receive e-mail updates on technologies, funding, policy, and other issues related to reducing emissions from heavy-duty diesel engines.

E-mail:

Name:

(optional)

Clean Diesel News Releases

January 9, 2009:
North Texas, TCEQ awarded \$2 million for clean diesel projects.

October 23, 2008:
EPA Grant Helps South Carolina and North Carolina Promote State Clean Diesel Grant Programs.

October 10, 2008:
IMO Sets Sail for Global Action on Pollution from Large Ships.

<http://www.epa.gov/cleandiesel>



How Do You Access the DEQ?

Diesel Emissions Quantifier

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The Quantifier

The Diesel Emissions Quantifier (Quantifier) is an interactive tool to help state/local governments, fleet owners/operators, school districts, municipalities, contractors, port authorities, and others to estimate emission reductions and cost effectiveness for clean diesel projects. Estimates are made using specific information about a fleet. If you are applying to EPA, or some other Federal or state/local funding assistance program, this site will help you to prepare and submit your diesel emissions data to EPA. EPA has built the Quantifier based on existing EPA tools and guidance and it can be used by potential grantees, state and local governments, metropolitan planning organizations, and fleet owners and operators, among others. The Quantifier uses emission factors and other information from EPA's National Mobile Inventory Model (NMIM). NMIM includes the MOBILE 6.2 and NONROAD2005 models. Read more [basic information](#).

NOTE - due to the real-time calculations the site performs, these Web pages may pause and change while you are working, depending what you enter, to make your calculations more efficient. [Contact us](#) if you need help with accessibility of this site.

This Web site includes:

- [The Quantifier](#) - begin here to choose the "scenario" for your type of fleet, year, location, and other information, for example, school busses in Kansas. [Click here to begin now.](#)
- [Basic information](#) - get more information about the purpose and uses of the Quantifier, who should use this and why EPA collects diesel emissions data, how the "save" feature works, and more.
- [Instructions](#) - complete information about using the Quantifier. Start here to review the complete instructions, calculations, and assumptions.
- [Disclaimer](#) - there are certain [caveats about the Quantifier](#) that you need to be aware of.

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Last updated on Wednesday, January 21st, 2009.
<http://cfpub.epa.gov/quantifier/view/index.cfm>
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<http://cfpub.epa.gov/quantifier/view/index.cfm>



The Diesel Emissions Quantifier



Diesel Emissions Quantifier

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Complete the initial information for the Quantifier below. If you wish to save data and return to it at a later date, you must [register for an account](#) and log in. If you are logging in, enter your email address and password and click "login." If you are only quantifying emissions, select which U.S. state you are in. If you are preparing data for the EPA, you will also need to enter your contact information. Click "continue" to go to the next Quantifier page.

Please log in (Not Required)

Logging in is not required to use the Quantifier. Registering for an account adds the ability to save scenario information so that it can be retrieved at a future time.

Email address [Create a Password](#)

Password [Reset Password](#)

Please select a scenario

Are you... ... quantifying emissions?
 ... preparing data for the EPA? (contact information required)

Please select a state

Choose the U.S. state for which you want to enter your information:

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[Complete Quantifier User's Guide \(HTML\)](#)

The Diesel Emission Quantifier should not be used for the calculation of any emission reductions to be incorporated in a State Implementation Plan (SIP) or conformity determination, and certain other technical applications. Please do not continue using the Quantifier until you have read the [important usage information](#).

[Complete Quantifier User's Guide \(PDF, 42 pages, 152K, About PDF\)](#)

[Bookmark](#)

<http://cfpub.epa.gov/quantifier/view/welcome.cfm>



The Diesel Emissions Quantifier

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Diesel Emissions Quantifier

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Diesel Emissions
Quantifier Home

Basic Information

Use The Quantifier

Instructions

Disclaimer

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updating user... **Enter Fleet Information**

On this page you enter new vehicle group information, then scroll down further to apply a technology to a new vehicle group. At the very bottom, you can save different sets of vehicles and applied technologies before you submit information.

This includes the types of vehicles in the fleet, the number, model year, and retrofit year of each vehicle group; fuel and usage information; the type of technology applied; and cost information. Depending on the type selected, on-highway or nonroad, other fields will appear specific to the type selected.

For more information and explanations of the inputs, refer to the User Guide, [2.2 Fleet Information](#). For information on adding multiple vehicle groups/technologies refer to the User Guide, [2.2.3 Save a New Vehicle Group and Technology](#). A list of all dropdown menus is in [Appendix A](#).

[Go back to Start](#) | [Jump to Current Vehicle Group Listing](#) | You are logged in as Jennifer. [Log out](#)

Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:	MI
Select type:	<input type="text" value="(Please Select)"/>
Select sector:	<input type="text" value=""/>
Application:	<input type="text" value=""/>
Quantity:	<input type="text" value=""/>
Model Year:	<input type="text" value=""/>
Retrofit Year:	<input type="text" value=""/>
Select fuel type:	<input type="text" value="(Please Select)"/>
Enter fuel volume:	<input type="text" value=""/> gal/yr for group
Calculated fuel volume:	<input type="text" value=""/> diesel gal/yr for group

[Click here to enter funding information.](#)

[Complete Quantifier User's Guide \(HTML\)](#)

The Diesel Emission Quantifier should not be used for the calculation of any emission reductions to be incorporated in a State Implementation Plan (SIP) or conformity determination, and certain other technical applications. Please do not continue using the Quantifier until you have read the [important usage information](#).

[Complete Quantifier User's Guide \(PDF, 52 pages, 236K, About PDF\)](#)



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Type: On Highway



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Sector: School Buses



Sector

- **On Highway: Class 5-8b**
 - School Buses
 - Transit Buses
 - Refuse Hauler
 - Short Haul Trucks
 - Long Haul Trucks
 - Delivery Trucks
 - Emergency Vehicles
 - City & County Vehicles
- **Non Road**
 - Construction Equipment
 - Agriculture Equipment
 - Ports and Airports
 - Locomotives

The DEQ does not support gasoline engines or light duty diesel engines such as retail pick up trucks or vans.



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Application: School Buses



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Quantity: 10



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Model Year: 2001



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Retrofit Year: 2009



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Fuel Type: ULSD 15 ppm



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Fuel Volume: 15,970



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Vehicle Miles Traveled: 13,000



Input: Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State:

MI

Select type:

On Highway

Select sector:

School Buses

Application:

School Buses

Quantity:

10

Model Year:

2001

Retrofit Year:

2009

Select fuel type:

Regular Diesel (ULSD), 15 ppm

Enter fuel volume:

15970 gal/yr for group

Calculated fuel volume:

15970 diesel gal/yr for group

Vehicle miles traveled:

13000 miles/vehicle/year

Idling hours (including hours saved):

270 idle hours/vehicle/year

[Click here to enter funding information.](#)

Idling Hours: 270



Optional Funding Information

Enter New Vehicle Group Information

Enter or edit information about this Vehicle Group.

Selected State: VA

Select type:

Select sector:

Vehicle or Equipment:

Quantity:

Model Year:

Retrofit Year:

Select fuel type:

Enter fuel volume: gal/yr for group

Calculated fuel volume: gal/yr for group

[Click here to continue without entering funding information.](#)

EPA	\$	<input type="text" value="0"/>	State	\$	<input type="text" value="0"/>
Private	\$	<input type="text" value="0"/>	SEP	\$	<input type="text" value="0"/>
Local	\$	<input type="text" value="0"/>	Match/Leveraged	\$	<input type="text" value="0"/>
CMAQ	\$	<input type="text" value="0"/>	Federal	\$	<input type="text" value="0"/>
Other	\$	<input type="text" value="0"/>	Unknown	\$	<input type="text" value="0"/>
Total Project Cost:		\$	<input type="text" value="0"/>		

Vehicle Group Actions

If you want to add a technology this group, proceed to enter technology information; if not, click on "Save". Use the "Save and Add Another" button any time a new vehicle group is required.



Input: Select Technology Type and Technology



Apply a Technology to New Vehicle Group

Enter or edit information about the Emissions Reduction Technology.

Select technology type:

Select technology:

This group has 10 vehicles. Enter the number of vehicles to which you would like this technology applied.

Apply to vehicles (out of 10) that do not currently have a technology.

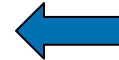
Pollutants:	NOx	PM	HC	CO	CO2
Reduction:	<input type="text" value="0.00"/> %	<input type="text" value="85.00"/> %	<input type="text" value="90.00"/> %	<input type="text" value="90.00"/> %	<input type="text" value="0.00"/> %

Unit cost: \$

Installation cost: \$

Note that the percent reduction associated with a particular retrofit technology or cleaner fuel may vary by manufacturer and application and may change as more information becomes available. Please refer to EPA's [verified technology web page](#) for the latest detailed information on verified emission reductions from retrofit technologies. Some of the technologies listed here are not yet verified by EPA or the California Air Resources Board (CARB). Emission reductions calculated by this model based on user-entered percent reductions not based on EPA or CARB's verified technology list should not be used for any official purposes or to meet any reporting requirements.

Technology Actions



Technology Types & Technology

- **Emission Control Devices**
 - Diesel Particulate Filters
 - With close crankcase ventilation system
 - Diesel Oxidation Catalysts
 - CNG Replacement*
 - Hybrid Replacement*
- **Engine Replacement/Repower**
- **Fuel Options**
 - Biodiesel
 - Emulsions
- **Idling Control**
 - Auxiliary Power Units
 - Engine Shutdowns
 - Direct Fired Heater



Input: Pollutants and Reductions

Apply a Technology to New Vehicle Group

Enter or edit information about the Emissions Reduction Technology.

Select technology type:

Select technology:

This group has 10 vehicles. Enter the number of vehicles to which you would like this technology applied.

Apply to vehicles (out of 10) that do not currently have a technology.

Pollutants:	NOx	PM	HC	CO	CO2
Reduction:	<input type="text" value="0.00"/> %	<input type="text" value="85.00"/> %	<input type="text" value="90.00"/> %	<input type="text" value="90.00"/> %	<input type="text" value="0.00"/> %



Unit cost: \$

Installation cost: \$

Note that the percent reduction associated with a particular retrofit technology or cleaner fuel may vary by manufacturer and application and may change as more information becomes available. Please refer to EPA's [verified technology web page](#) for the latest detailed information on verified emission reductions from retrofit technologies. Some of the technologies listed here are not yet verified by EPA or the California Air Resources Board (CARB). Emission reductions calculated by this model based on user-entered percent reductions not based on EPA or CARB's verified technology list should not be used for any official purposes or to meet any reporting requirements.

Technology Actions



Input: Unit Cost and Installation Cost

Apply a Technology to New Vehicle Group

Enter or edit information about the Emissions Reduction Technology.

Select technology type:

Select technology:

This group has 10 vehicles. Enter the number of vehicles to which you would like this technology applied.

Apply to vehicles (out of 10) that do not currently have a technology.

Pollutants:	NOx	PM	HC	CO	CO2
Reduction:	<input type="text" value="0.00"/> %	<input type="text" value="85.00"/> %	<input type="text" value="90.00"/> %	<input type="text" value="90.00"/> %	<input type="text" value="0.00"/> %

Unit cost: \$

Installation cost: \$



Note that the percent reduction associated with a particular retrofit technology or cleaner fuel may vary by manufacturer and application and may change as more information becomes available. Please refer to EPA's [verified technology web page](#) for the latest detailed information on verified emission reductions from retrofit technologies. Some of the technologies listed here are not yet verified by EPA or the California Air Resources Board (CARB). Emission reductions calculated by this model based on user-entered percent reductions not based on EPA or CARB's verified technology list should not be used for any official purposes or to meet any reporting requirements.

Technology Actions



Technology Actions

Technology Actions

Save



Click "Save New" keep this entry in case you want to go back and work on others. You can call it up later in this session and use it or edit it. Please note you cannot save calculations once you log off this Web site. Click "Save New and Add Another" if you want to add another technology to this vehicle group.

Current Vehicles and Applied Technologies

Any vehicle groups and technologies that you may have saved are listed here. Use the edit and delete buttons to make any changes before proceeding to the results.

ID Qty. Equipment/Technology Action

None

You are not currently logged in. [Log in](#)

Quantify Emissions >>



Quantify Emissions

Technology Actions

Save to V1

Click "Save New" keep this entry in case you want to go back and work on others. You can call it up later in this session and use it or edit it. Please note you cannot save calculations once you log off this Web site. Click "Save New and Add Another" if you want to add another technology to this vehicle group.

Current Vehicles and Applied Technologies

Any vehicle groups and technologies that you may have saved are listed here. Use the edit and delete buttons to make any changes before proceeding to the results.

Saved Scenario: webinar

ID	Qty.	Equipment/Technology	Action
Vehicle Group 1 (V1): 10 x School Bus			Edit Delete
	Technology 1 (T1): 10 x	Diesel Particulate Filter	Delete
	0 vehicles with no technology		

Scenario Name:

Store this scenario

Open a different scenario

Quantify Emissions >>



Outputs: Emissions Results

Emissions Results:

Annual	NOx (tons/year)	PM (tons/year)	HC (tons/year)	CO (tons/year)	CO2 (tons/year)	Diesel-Equivalent (gallons/year)
Baseline of Entire Fleet	1.8743	0.0322	0.1053	0.2831	177.2670	15,970.0000
Baseline of Vehicles Retrofitted	1.8743	0.0322	0.1053	0.2831	177.2670	15,970.0000
Percent Reduced (%)	0.0%	85.0%	90.0%	90.0%	0.0%	0.0%
Amount Reduced Per Year	0.0000	0.0274	0.0948	0.2548	0.0000	0.0000
Daily	NOx (kg/day)	PM (kg/day)	HC (kg/day)	CO (kg/day)	CO2 (kg/day)	Fuel (gal/day)
Kilograms Reduced Per Day (kg/day)	0.0000	0.0681	0.2356	0.6333	0.0000	0.0000
Lifetime	NOx (tons)	PM (tons)	HC (tons)	CO (tons)	CO2 (tons)	Diesel-Equivalent (gallons)
Baseline of Entire Fleet	25.5461	0.4392	1.4354	3.8590	2,416.1492	217,671.1000
Baseline of Vehicles Retrofitted	25.5461	0.4392	1.4354	3.8590	2,416.1492	217,671.1000
Percent Reduced(%)	0.0%	85.0%	90.0%	90.0%	0.0%	0.0%
Amount Reduced	0.0000	0.3733	1.2918	3.4731	0.0000	0.0000
Amount Emitted After Retrofit, Retrofitted Vehicles	25.5461	0.0659	0.1435	0.3859	2,416.1492	217,671.1000
Amount Emitted After Retrofit, Entire Fleet	25.5461	0.0659	0.1435	0.3859	2,416.1492	217,671.1000
Capital Cost Effectiveness (\$/ton), Retrofitted Vehicles	\$ 0.00	\$ 66,970.54	\$ 19,352.39	\$ 7,198.25	\$ 0.00	\$ 0.00
Total Cost Effectiveness (\$/ton), Retrofitted Vehicles	\$0.00	\$ 133,941.08	\$ 38,704.79	\$ 14,396.49	\$0.00	\$0.00



Outputs: Detailed Results

Detailed Results

You have the option to download the results and inputted data in a Comma Separated Value (CSV) format which can be opened in Excel. The downloaded information will appear as it does in the Detailed Results and will include any funding and contact information in the data. For more information on downloading data, refer to the User's Guide [3.3 Preview/Download Data](#).

Vehicle Class Number	Sector	Vehicle/Equipment Type	Model Year	Retrofit Year	Number of Vehicles	Usage Rate/Year	Horsepower	Fuel Type	Fuel Usage (gal)
1	School Bus	School Bus	2001	2009	10			Regular Diesel (ULSD), 15 ppm	15970.0

Vehicle Class Number	Sector	Vehicle/Equipment Type	Model Year	Retrofit Year	Number of Vehicles	Usage Rate/Year	Horsepower	Fuel Type	Fuel Usage (gal)
1	School Bus	School Bus	2001	2009	10			Regular Diesel (ULSD), 15 ppm	15970.0



Outputs: Detailed Results

- Reporting Formats
 - Excel
 - CSV File

[Return to start](#) | [Return to enter fleet information](#)

View/Download **detailed** report [as Microsoft Excel file](#) | [as CSV \(comma separated values\) file](#)

View/Download **summary** report [as Microsoft Excel file](#) | [as CSV \(comma separated values\) file](#)



Additional Examples To Try

- **Example 1: Multiple Vehicles per DEQ scenario- each vehicle group will have a separate technology**
- **Example 2: One vehicle group with multiple technologies applied**



Example 1: Inputs

- **School Bus**
 - State: **MI**
 - Type: **On-highway**
 - Sector: **School Bus**
 - Application: **School Bus**
 - Quantity: **10**
 - Model Year: **2001**
 - Retrofit Year: **2009**
 - Fuel Type: **ULSD 15ppm**
 - Fuel Volume: **15,970**
 - Vehicle Miles Traveled: **13,000**
 - Idling Hours: **270**
 - Funding Amount: **\$50,000**
 - Technology: **Diesel Particulate Filter**
 - Unit Cost: **\$2,500**
- **Backhoe**
 - State: **MI**
 - Type: **Non- road**
 - Sector: **Construction**
 - Application: **Tractor/Loader/Backhoe**
 - Quantity: **5**
 - Model Year: **1997**
 - Retrofit Year: **2009**
 - Horsepower: **175**
 - Fuel Type: **ULSD 15ppm**
 - Fuel Volume: **7,360**
 - Usage Rate: **1135**
 - Technology: **Diesel Oxidation Catalyst**



Example 1: Outputs

Emissions Results:

Annual	NOx (tons/year)	PM (tons/year)	HC (tons/year)	CO (tons/year)	CO2 (tons/year)	Diesel-Equivalent (gallons/year)
Baseline of Entire Fleet	2.88	0.14	0.23	0.66	258.96	23330.00
Baseline of Vehicles Retrofitted	2.88	0.14	0.23	0.66	258.96	23330.00
Percent Reduced (%)	0.00	34.77	68.16	55.72	0.00	0.00
Amount Reduced Per Year	0.00	0.05	0.16	0.37	0.00	0.00
Daily	NOx (kg/day)	PM (kg/day)	HC (kg/day)	CO (kg/day)	CO2 (kg/day)	Fuel (g/day)
Kilograms Reduced Per Day (kg/day)	0.00	0.12	0.39	0.91	0.00	0.00
Lifetime	NOx (tons)	PM (tons)	HC (tons)	CO (tons)	CO2 (tons)	Diesel-Equivalent (gallons)
Baseline of Entire Fleet	33.09	1.26	2.39	6.69	3029.43	272921.74
Baseline of Vehicles Retrofitted	33.09	1.26	2.39	6.69	3029.43	272921.74
Percent Reduced (%)	0.00	34.77	68.16	55.72	0.00	0.00
Amount Reduced	0.00	0.54	1.77	4.32	0.00	0.00
Amount Emitted After Retrofit, Entire Fleet	33.09	0.72	0.62	2.37	3029.43	272921.74
Amount Emitted After Retrofit, Retrofitted Vehicles	33.09	0.72	0.62	2.37	3029.43	272921.74
Capital Cost Effectiveness (\$/ton), Retrofitted Vehicles	0.00	92957.66	28294.20	11566.65	0.00	0.00
Total Cost Effectiveness (\$/ton), Retrofitted Vehicles	0.00	92957.66	28294.20	11566.65	0.00	0.00



Example 1: Outputs

Baseline of Entire Fleet (PM, tons/year)	Baseline of Vehicles Retrofitted (PM, tons/year)	Percent Reduced (PM, %) *	Amount Reduced Per Year (PM, tons/year)	Kilograms Reduced Per Day (PM, kg/day)	Baseline of Entire Fleet (HC, tons/year)	Baseline of Vehicles Retrofitted (HC, tons/year)	Percent Reduced (HC, %) *	Amount Reduced Per Year (HC, tons/year)
0.0322	0.0322	85.0%	0.0274	0.0681	0.1053	0.1053	90.0%	0.0948
0.1096	0.1096	20.0%	0.0219	0.0545	0.1266	0.1266	50.0%	0.0633

Baseline of Entire Fleet (PM, tons)	Baseline of Vehicles Retrofitted (PM, tons)	Percent Reduced (PM, %) *	Amount Reduced (PM, tons)	Amount Emitted After Retrofit, Entire Fleet (PM, tons)	Amount Emitted After Retrofit, Retrofitted Vehicles (PM, tons)	Capital Cost Effectiveness (\$/ton), Retrofitted Vehicles (PM)	Baseline of Entire Fleet (HC, tons)	Baseline of Vehicles Retrofitted (HC, tons)	Percent Reduced (HC, %)
0.4392	0.4392	85.0%	0.3733	0.0659	0.0659	66,970.5417	1.4354	1.4354	90.0%
0.8230	0.8230	20.0%	0.1646	0.6584	0.6584	0.0000	0.9507	0.9507	50.0%



Example 2: Inputs

- Long-haul Truck
 - State: MO
 - Type: On-highway
 - Sector: Long Haul
 - Application: Class 8a
 - Quantity: 20
 - Model Year: 2005
 - Retrofit Year: 2009
 - Fuel Type: ULSD 15ppm
 - Fuel Volume: 333,340
 - Vehicle Miles Traveled: 100,000
 - Idling Hours: 2,400
- Technology 1
 - Technology Type: Engine Replacement/Repower
 - Technology: Engine Replacement
 - New Model Year: 2009
- Technology 2
 - Technology Type: Idling Control Strategies
 - Technology: Auxiliary Power Unit (APU)
 - Idling Hours Reduced: 1200



Example 2: Outputs

Emissions Results:

Annual	NOx (tons/year)	PM (tons/year)	HC (tons/year)	CO (tons/year)	CO2 (tons/year)	Diesel-Equivalent (gallons/year)
Baseline of Entire Fleet	20.67	0.63	1.11	7.54	3700.07	333340.00
Baseline of Vehicles Retrofitted	20.67	0.63	1.11	7.54	3700.07	333340.00
Percent Reduced (%)	65.89	99.71	25.39	89.89	0.00	0.00
Amount Reduced Per Year	13.62	0.63	0.28	6.78	0.00	0.00
Daily	NOx (kg/day)	PM (kg/day)	HC (kg/day)	CO (kg/day)	CO2 (kg/day)	Fuel (g/day)
Kilograms Reduced Per Day (kg/day)	33.85	1.56	0.70	16.84	0.00	0.00
Lifetime	NOx (tons)	PM (tons)	HC (tons)	CO (tons)	CO2 (tons)	Diesel-Equivalent (gallons)
Baseline of Entire Fleet	312.72	9.54	16.76	114.04	55982.12	5043434.20
Baseline of Vehicles Retrofitted	312.72	9.54	16.76	114.04	55982.12	5043434.20
Percent Reduced (%)	65.89	99.71	25.39	89.89	0.00	0.00
Amount Reduced	206.04	9.51	4.25	102.51	0.00	0.00
Amount Emitted After Retrofit, Entire Fleet	106.68	0.03	12.50	11.53	55982.12	5043434.20
Amount Emitted After Retrofit, Retrofitted Vehicles	106.68	0.03	12.50	11.53	55982.12	5043434.20
Capital Cost Effectiveness (\$/ton), Retrofitted Vehicles	0.00	0.00	0.00	0.00	0.00	0.00
Total Cost Effectiveness (\$/ton), Retrofitted Vehicles	0.00	0.00	0.00	0.00	0.00	0.00



Future DEQ Improvements

- Marine Vessels
- Health Benefits



Conclusion

- The DEQ has evolved since its inception and will continue to evolve and improve to meet your needs to calculate emission reductions
- Thank you for your time and consideration



For More Information

Thank you for attending the Diesel Emissions Quantifier Webinar –
For a recorded version of this Webinar, go to:

<http://epa.gov/cleandiesel/>

If you have further questions, please email us at:

cleandiesel@epa.gov

DEQ Step-by-step instructions

<http://cfpub.epa.gov/quantifier/view/stepbystep.cfm>

DEQ User's Guide

<http://cfpub.epa.gov/quantifier/view/UserGuide.pdf>



National Clean Diesel Campaign

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