

Diesel Emission Reduction Act Overview

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Overview

- What is DERA?
- Who is eligible to apply?
- What can be funded under DERA?
- Emission control retrofits
- Idle reduction retrofits



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What is DERA

- Diesel Emission Reduction Act
- Given authority under the Energy Policy Act of 2005
- DERA funding may only be used for the implementation of clean diesel technology
- Funding is broken into four different pools of funding



DERA Funding Pools



- **State Allocated Funding (~ 30%)**
 - Non-competitive funding available to all 50 states and the District of Columbia
- **National Clean Diesel Funding Assistance Program (~ 60%)**
 - Competitive grant available to eligible entities
- **Emerging Technology Grant (~ 5%)**
 - Competitive grant that funds the implementation of emerging technology
- **SmartWay Innovative Finance Grant (~ 5%)**
 - Competitive grant that funds innovative finance programs and revolving loan programs for eligible DERA projects



State Allocated Funding

- Divided evenly among all 50 states and the District of Columbia
- Available without competition as long the state issues an acceptable work plan
- Matching incentive
 - If the state can match the initial award amount dollar for dollar, then an additional 50% of the original award amount is granted to the state.



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How Does This Apply to School Districts?

- School Districts are eligible to apply directly for the National Clean Diesel Funding Assistance Program
- The Department encourages partnerships between our program and school districts throughout the state on applications for projects
- School districts could receive funding that will improve their school bus fleet, thus reducing fuel costs and improving air quality.



National Clean Diesel Funding Assistance Program



- Competitive grant program for the implementation of approved technologies
- Eligible Entities Include:
 1. A regional, state, local or tribal agency or port authority with jurisdiction over transportation or air quality
 2. A non-profit organization that:
 - Represents or provides pollution reduction or educational services to persons or organizations that own or operate diesel fleets; or
 - Has as its principal purpose, the promotion of transportation or air quality



Emerging Technology Grant

- Same eligible entities as the National Grant may apply
- Must include the implementation of an emerging technology listed on EPA's emerging technology list
- Requires that an eligible entity partner with an emerging technology manufacturer to apply for the grant



Emerging Technology Example

- School district partners with an emerging technology manufacturer on EPA's emerging technology list.

<http://epa.gov/otaq/diesel/prgemerglist.htm>

- The school district would purchase and install the technology using the grant funding
- The manufacturer would record emission data throughout the grant period.
- The RFA may be found at:

http://www.epa.gov/air/grants/emergtech_10_7_09_final.pdf

- Applications are due December 6, 2009.

National Clean Diesel Funding Assistance Program



- Eligible technologies include
 - EPA or California Air Resources Board (CARB) verified emission control retrofits
 - EPA verified idle reduction, aerodynamic, and low rolling resistance tire retrofits
 - EPA certified engine configurations may be used for engine replacements and early vehicle replacements
 - Engine and early vehicle replacements require the scrappage of the original engine.
 - Early vehicle replacements also require that the vehicle chassis be disabled

National Clean Diesel Funding Assistance Program

- Allowable funding levels include
 - Emission control, idle reduction, aerodynamic, and low rolling resistance tire retrofits funded at 100%.
 - Engine Replacements (Repowers) funded at 75% of the equipment and installation cost.
 - Early Vehicle Replacements funded at 25% of the cost of the new vehicle.
 - Early School Bus Replacements are funded at 50% of the cost of the new bus, if the new bus meets 2010 EPA emission standards



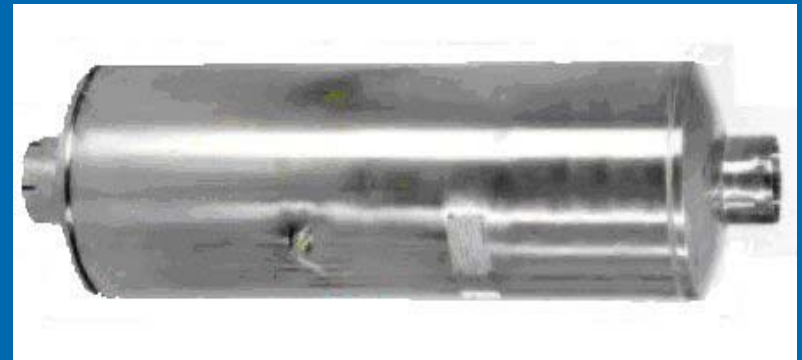
Emission Control Retrofits

- Diesel Oxidation Catalysts (DOCs)
- Closed Crankcase Ventilation Systems (CCVs)
- Partial Flow-through Filters (PFFs)
- Diesel Particulate Filters (DPFs)
- List of verified products may be found at <http://epa.gov/otaq/retrofit/verif-list.htm> and <http://www.arb.ca.gov/diesel/verde/vt/cvt.htm>

Diesel Oxidation Catalysts

- Achieve 20% - 40% Particulate Matter (PM) emission reductions
- Achieve 40% – 70% Hydrocarbon and Carbon Monoxide emission reductions
- Can replace the muffler, or be installed in line with the current exhaust system
- Maintenance free

Diesel Oxidation Catalyst



Closed Crankcase Ventilation System

- Eliminates nearly 100% of all crankcase emissions
- Dramatically reduces in cabin emissions
- Typically coupled with a DOC

Closed Crankcase Ventilation System



Partial Flow-Through Filters (PFFS) and Diesel Particulate Filters (DPFs)

- PFFs achieve 50% PM reductions
- DPFs achieve 85% - 90% PM reductions
- Both are muffler replacements
- PFFs do not require routine cleaning
- DPFs require routine cleaning



Diesel Particulate Filter



Idle Reduction Technologies

- Auxiliary Power Units/Generator Sets
- Fuel Operated Heaters
- Battery Operated A.C.
- Thermal Storage Systems
- List of verified products may be found at <http://epa.gov/otaq/smartway/transport/what-smartway/verified-technologies.htm>



Auxiliary Power Units (APUs)

- Typically used for Long Haul Trucks
- Offer air conditioning, heating and electrical outlets
- Consume 0.04 – 0.2 gallons per hour
- Many states have a weight exemption for APUs

Auxiliary Power Unit



Fuel Operated Heaters

- Offer heat using fuel from the fuel tank
- Can heat both the engine during the pre-trip warm up and the cabin before passengers load
- Automatic timers are available with some models
- EPA verified manufacturers:
Automotive Climate Control, Espar Heater Systems, Webasto, Teleflex and Volvo

Fuel Operated Heater



Block Heaters

- Can be purchased as an option with new buses
- Plug in capability, grid power is required
- Dramatically reduces pre-trip warm up time
- Uses no fuel, but does use electricity
- Not EPA verified as a retrofit



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Battery Operated Air Conditioners

- Offers air conditioning inside the cabin
- Uses no fuel
- Often coupled with a fuel operated heater
- EPA verified manufacturers may be found at:

- <http://epa.gov/otaq/smartway/transport/what-smartway/verified-technologies.htm>

Battery Operated Air Conditioner



Thermal Storage Systems

- Stores energy in cold storage as the vehicle is driven
- Provides air conditioning when the vehicle is turned off without consuming fuel
- Quits providing A.C. when it runs out of stored energy
- EPA verified manufacturers include:
 - Webasto and Autotherm Division Enthel Systems Inc.

Thermal Storage System



Questions ?

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