



# 2018 State Clean Diesel Grant Program Diesel Emissions Reduction Act (DERA) Funding

# Background

Diesel Engines are being used in every aspect of our lives from construction equipment to public transportation. Diesel engines have found their way into so many useful functions because they are reliable and efficient. Unfortunately, older diesel engines are known to emit significant amounts of exhaust including particulate matter 2.5 (PM2.5) and nitrogen oxides (NOX).

These two gases when released into the air can cause a great deal of harm to human health. Recent strict emission standards have aided in reducing their use, but unfortunately there are still more than 10.3 million older diesel engines still in use within the United States.

As a way to counteract the diesel exhaust issue, the Environmental Protection Agency (EPA) began to award grants in 2008 under the Diesel Emissions Reduction Act (DERA). DERA funds are designated for use on projects that reduce diesel exhaust from older engines. Since the DERA program was initiated, the EPA has reported significant reductions in pollution.

# Background Continued

## Investment of DERA Program Since 2009

\$520 million funds awarded

58,800 engines retrofitted or replaced

Up to \$11 billion in monetized health benefits

Up to 1,700 fewer premature deaths

81% of projects targeted to areas with air quality challenges

3:1 leveraging of funds from non-federal sources

*Third Report to Congress: Highlights from the Diesel Emission Reduction Program, EPA, February 2016*  
<https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OHMK.pdf>



# Background Continued

## Emission and Fuel Reductions Since 2009

312,500 tons of NOx

12,000 tons of PM2.5

18,900 tons of hydrocarbon

58,700 tons of carbon monoxide

4,836,100 tons of carbon dioxide

431 million gallons of fuel

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# Benefits to Grantees

1. Reimbursement to upgrade your vehicle/fleet.
2. Ability to have part of your vehicle/fleet replaced with federal aid.
3. If you switch to a an alternative fuel vehicle you could potentially increase your fuel consumption costs savings.
4. Play a part in the improvement of air quality in Maricopa County, reduce environmental impacts and reduce the health effects of diesel exhaust.

# 2018 Clean Diesel Program

EPA Projected Funds for Fiscal Year 2018

\$8.6-\$14.9 Million available nationally

These moneys will be distributed throughout all 50 states and territories.

Tentatively MCAQD is anticipating an FY18 award of approximately \$520,000.

# Eligible Entities

- Regional, State, Local, Tribal or any other agency with jurisdiction over transportation or air quality.
- Non Profits or institutions which represent or provide pollution reduction or educational services to persons that operate diesel fleets.
- For Profits
- School Districts
- Government agencies and municipalities

# Eligible Vehicles, Engines and Equipment

- Buses
- Class 5-8 Heavy Duty Highway Vehicles
- Locomotives
- Non-road engines
  - Construction equipment and vehicles
  - Vehicles that handle cargo
  - Agricultural equipment
  - Mining Equipment
  - Energy production equipment



# Eligible Diesel Emission Reduction Solutions

## Verified Emission Control Technologies

- Exhaust Controls
- Cleaner Fuels
- Engine Upgrades
- Verified Idle Reduction Technologies
- Verified Aerodynamic Technologies
- Low Rolling Resistance Tires
- Certified Engine Replacements
- Certified Vehicle/Equipment Replacements

# Restrictions

Current Engine Model Year (EMY)	DOC +/- CCV	DPF	SCR	Verified Idle Reduction	Vehicle or Engine Replacement: EMY 2017+ (2012+ for Drayage)	Vehicle or Engine Replacement: Electric
	+/- Tires and Aerodynamics					
older - 1994	No	No	No	No	No	No
1995 - 2006	Yes	Yes	Yes	Yes	Yes	Yes
2007 to 2010	No	No	Yes	Yes*	No	Yes
2011 - newer	No	No	No	No	No	No

\* Auxiliary Power Units and generators are not eligible on vehicles with EMY 2007 or newer.

# Reimbursement Percentages

DERA Eligible Activities	DERA Funding Limits (DERA Funds + Voluntary Match)	Minimum Mandatory Cost-Share (Fleet Owner Contribution)
Exhaust Control Retrofit	100%	0%
Engine Upgrade / Remanufacture	40%	60%
Highway Idle Reduction	25%	75%
Locomotive Idle Reduction	40%	60%
Marine Shore Power	25%	75%
Electrified Parking Space	30%	70%
Engine Replacement– Diesel or Alternative Fuel	40%	60%
Engine Replacement– Low NOx	50%	50%
Engine Replacement– All-Electric	60%	40%
Vehicle/Equipment Replacement– Diesel or Alternative Fuel	25%	75%
Vehicle/Equipment Replacement – Low NOx	35%	65%
Vehicle/Equipment Replacement – All-Electric	45%	55%

# Reimbursement Percentages Continued

- 100% of the costs are covered for the installation of exhaust controls for retrofit devices such as a diesel oxidation catalysts (DOC), crankcase emission control devices, verified idle reduction technologies on school buses and particulate matter filters.
- 40% of the costs are covered for the repower of engines.
- 40% of the costs are covered for Verified Idle Reduction Technologies on locomotives.
- 30% of the costs are covered for Electrifying Parking Spaces. Electrified Parking Spaces (EPS), also known as Truck Stop Electrification (TSE), operates independent of the truck's engine and allows the truck engine to be turned off as the EPS system supplies heating, cooling and/or electrical power. The EPS system provides off-board electrical power to operate either:
  - an independent heating, cooling and electrical power system
  - a truck-integrated heating and cooling system
  - a plug-in refrigeration system that would otherwise be powered by an engine.
- 25% of the costs are covered for high way idle reduction technologies for long-haul trucks and school buses.
- 100% of the costs are covered for Verified Aerodynamic Technologies and Verified Low Rolling Resistance Tires.

# Reimbursement Percentages Continued

- The costs breakdown as follows for replacing a diesel engine for a locomotive, marine, or non-road diesel vehicles and equipment
  - 60% of the costs are covered to replace a diesel engine with an electrical motor or electrical power source for a locomotive, marine or non-road diesel vehicle and equipment.
  - 40% of costs are covered for highway diesel vehicles
  - 50% of costs are covered if replacing a diesel engine with a 2018 model year or newer engine that is certified to CARB's Optional Low-NOx Standards of 0.1 g/bhp-hr, 0.05 g/bhp-hr, or 0.02 g/bhp-hr NOx. Engines certified to CARB's Optional Low NOx Standards may be found by searching CARB's Executive Orders for Heavy-duty Engines and Vehicles, found at: [www.arb.ca.gov/msprog/onroad/cert/cert.php](http://www.arb.ca.gov/msprog/onroad/cert/cert.php).
- The costs breakdown as follows for vehicle and equipment replacements
  - 25% of the costs are covered for locomotives and non-road diesel
    - 45% of the costs will be covered if the equipment or vehicle is replaced with an all-electric
  - 25% of the costs are covered for highway diesel and buses
    - 35% of the costs will be covered if the replacement vehicle is powered by a 2018 model year or newer engine certified to meet CARB's Optional Low-NOx Standards of 0.1 g/bhp-hr, 0.05 g/bhp-hr, or 0.02 g/bhp-hr NOx. Engines certified to CARB's Optional Low NOx Standards may be found by searching CARB's Executive Orders for Heavy-duty Engines and Vehicles, found at: [www.arb.ca.gov/msprog/onroad/cert/cert.php](http://www.arb.ca.gov/msprog/onroad/cert/cert.php).
    - 45% of the costs are covered if the replacement vehicle is all-electric.

# Additional Things to Consider

- The DERA program aims at removing older, higher polluting vehicles out of service completely.
  - If the engine is replaced, it's proper destruction would need to be completed by drilling a hole in the engine block to ensure it can no longer be used.
  - If the vehicle is to be replaced, a hole will need to be drilled in the engine block and the frame would need to be cut to ensure the vehicle is no longer in use.
  - Proof of destruction would need to be submitted with report.
  - Selling the bus for scrap metal is considered program income
- All projects must use verified technologies or certified engine configurations.
  - EPA's List: <https://www.epa.gov/verified-diesel-tech/verified-technologies-list-clean-diesel>
  - CARB'S List: <https://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>
- Normal Attrition: Engine, vehicle, and equipment replacements that would have occurred through normal attrition are considered to be the result of normal fleet turnover and are not eligible for funding under this program. Normal attrition is generally defined as a replacement that is scheduled to take place within 3 years of the project start date.

# Additional Things to Consider

- Fleet Expansion: No funds awarded under the Program may be used for the purchase of vehicles, engines, or equipment to expand a fleet.
- Highway: The replacement vehicle must not be in a larger weight class than the existing vehicle (Class 5,6,7, or 8)
- An Intergovernmental Agreement (IGA) will need to be signed between Maricopa County and the awardee organization.
- The awardee will need to have the ability to register as a vendor with Maricopa County.
- All activities listed in the work plan must be completed by September 30, 2019.
- A technical data worksheet is required for all proposed and completed work
- Quarterly and final grant reporting is required

# Timeline

Notice of Intent to Participate - Due May 18, 2018

Application with Work Plan and Budget - Due May 25<sup>th</sup>  
2018

Application Review - June and July 2018

Awardees Selected - August 2018

Grant Cycle - October 1, 2018 through September 30, 2019





# Thank you.

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<https://www.maricopa.gov/4509/Clean-Diesel-Program>

[www.aqgrants.net](http://www.aqgrants.net)