



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

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# Background

Older diesel engines are known to emit significant amounts of exhaust including particulate matter 2.5 (PM2.5) and nitrogen oxides (NOx).

Per the 2019 EPA *DERA Fourth Report to Congress*, “nearly 10 million older diesel engines are still in use in communities across the United States.”

Many of these older engines no longer meet current EPA standards for pollutant emissions

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.

# Background Continued

## Investment of DERA Program Since 2008 - 2016

\$629 million in funding awarded

67,300 engines retrofitted or replaced

Up to \$19 billion in monetized health benefits

Up to 2,300 fewer premature deaths

64% of projects targeted to areas with air quality challenges (from 81%)

*Forth Report to Congress: Highlights from the Diesel Emission Reduction Program, EPA, July 2019*  
<https://www.epa.gov/sites/production/files/2019-07/documents/420r19005.pdf>



# Background Continued

## 4 DERA Programs - Emission and Fuel Reductions Since 2008

472,700 tons of NOx

15,490 tons of PM2.5

17,700 tons of hydrocarbon

61,550 tons of carbon monoxide

5,089,170 tons of carbon dioxide

454 million gallons of fuel

*Forth Report to Congress: Highlights from the Diesel Emission Reduction Program, EPA, July 2019*  
<https://www.epa.gov/sites/production/files/2019-07/documents/420r19005.pdf>



# Outcomes

## Emission and Fuel Reductions for ARIZONA Grant Years 2016 - 2019

31.025 tons of NOx

1.969 tons of PM2.5

3.566 tons of hydrocarbon

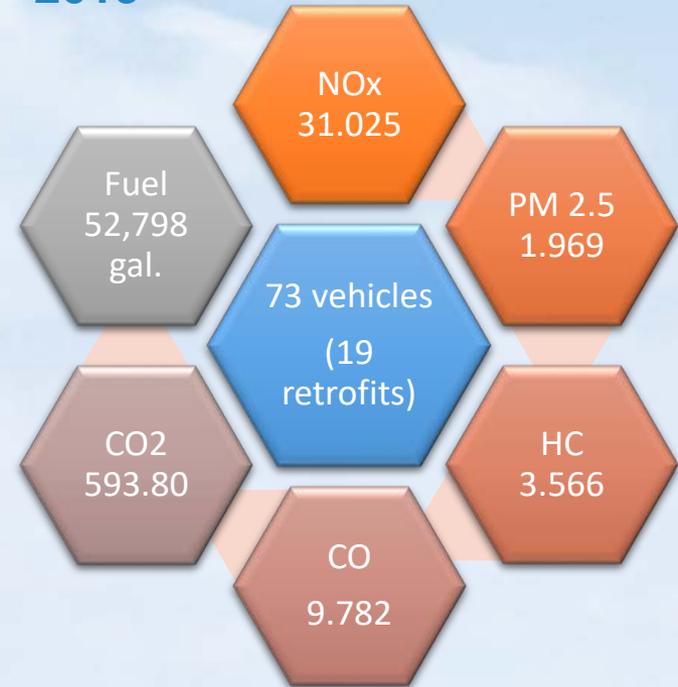
9.782 tons of carbon monoxide

593.80 tons of carbon dioxide

52,798 gallons of fuel

EPA Federal Funds: \$2,037,417

Local Match Funds: \$6,097,483



# Outcomes

## Upgrade Types Grant Years 2016 - 2019

73 Vehicles Total in 4 years

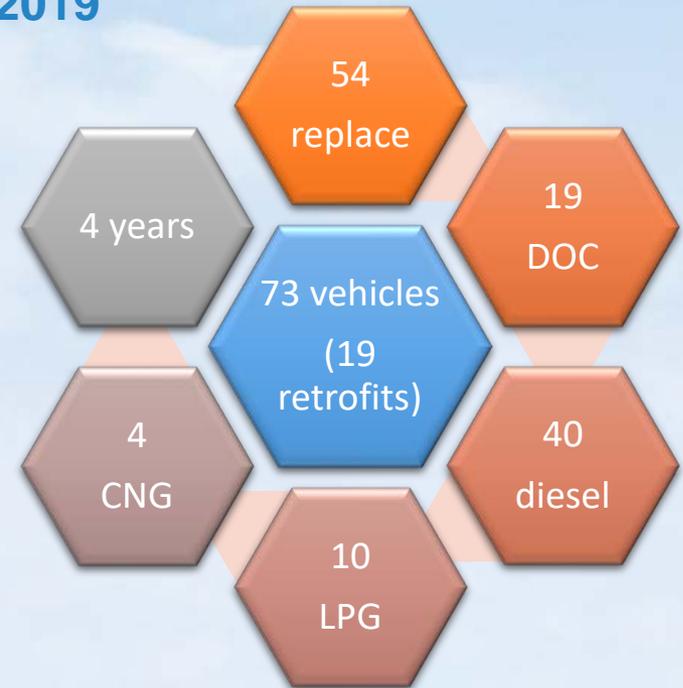
54 Vehicle replacements

19 DOC upgrades

40 NEW Diesel vehicles

10 NEW LPG (school buses)

4 NEW CNG (low NOx refuse haulers – 2019 engine model 0.02g/bhp-hr NOx)



# Benefits to Grantees

1. Ability to have part of your vehicle/fleet replaced with federal aid
2. Many newer fuel types and associated vehicles are now available, including electric, renewable natural gas, and even hydrogen
3. New vehicles may provide a savings in total cost of ownership due to reduced maintenance and lower fuel costs
4. Play a part in the improvement of air quality in Maricopa County, reduce environmental impacts and the negative health effects of diesel exhaust..... primarily NOx

# 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

## \*Vehicle Replacement & 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

\*Verify using web links in Program Guide

# Eligible Engines

**Table 2: Medium and Heavy-Duty Trucks, Transit Buses, and School Buses Funding Restrictions**

Current Engine Model Year (EMY)	DOC +/- CCV	DPF	SCR	Verified Idle Reduction, Tires, or Aerodynamics	Vehicle or Engine Replacement: EMY 2016+ (2013+ for Drayage)	Vehicle or Engine Replacement: EMY 2016+ Zero Emission or Low-NO <sub>x</sub>	Clean Alternative Fuel Conversion
older - 1995	No	No	No	No	No	No	No
1996 - 2006	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2007 - 2009	No	No	Yes	Yes*	Yes	Yes	Yes
2010 - newer	No	No	No	Yes*	No	Yes	Yes

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

Use the above funding table on page 23 of the program guide to verify:

1. Engine Model Year (EMY)
2. Type of upgrade (from the grey boxes above)

# 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%

# Additional Things to Consider

- The DERA program aims to remove 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 is no longer a component of this grant.

# 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. Replacement vehicles must drive the same route as the vehicle it replaces.
- Highway: The replacement vehicle must not be in a larger weight class than the existing vehicle (Class 5,6,7, or 8). Can possibly move to higher class, but will need prior EPA approval.
- An Intergovernmental Agreement (IGA) or Memorandum of Understanding (MOU) will need to be signed between Maricopa County and the subawardee organization.
- A technical data worksheet is required for all proposed and completed work
- Quarterly and final grant reporting is required.

# Additional Things to Consider

Review program information guide, pay special attention to pages:

- B. Eligible Diesel Vehicles, Engines and Equipment - page 6
- C. Eligible Diesel Emissions Reduction Solutions - pages 7-15
- 7. Vehicle and Equipment Replacement (links) pages 13-14
- 2. Outputs - page 17
- 3. Outcomes – pages 17-18
- A. Federal Matching Funds - page 19
- F. Mandated Measures – pages 19-20
- G. Fleet Expansion - page 20
- Scrappage & photo documentation requirements, Item 4. pages 20-21

# Additional Things to Consider

- Subgrantees must complete the EPA **certificate of engine/chassis destruction form** and compile scrappage evidence for each retired project vehicle in preparation for final report submission. Evidence of appropriate disposal includes legible **digital photos of: 1) side profile of vehicle; 2) VIN label; 3) engine label with serial number; 4) chassis label with serial number; 5) chassis rail cut in half; 6) engine block prior to hole; and 7) engine block after hole.**
- \*Due to the number of issues meeting photo documentation requirements, photos 1 - 4 are now required as part of the application process. If you have questions about obtaining the correct photos, or possibly submitting a manufactures cut sheet instead of a photo, you must have written prior approval from Maricopa County Air Quality Department before the application due date.

# Additional Things to Consider

- K. Highway Model Year - page 22
- Table 2: Medium and Heavy-Duty Trucks, Transit Buses, and School Buses Funding Restrictions - page 23
- X. Mandatory Cost Share Requirements – pages 26-27 Table 6
- E. Procurements - page 29
- I. Quarterly Reports - page 29

# When to Apply

Application cycle will open very early Spring 2020 (March 1)

Application will be open for 4 weeks

**Applications due:** by 5:00pm MST March 31<sup>st</sup>, 2020

County Application Review April 1 – 14, 2020

Application due to EPA Region 9 April 15, 2020

Application due to grants.gov May 14, 2020

**Applicants notified if they are pre-selected end of May 2020**

States notified of award from EPA October 2020

Subawarding process (grants start) November/December 2020

Grant Work Plan deadline (grants end) September 2021

Grant Cycle - October 1, 2020 thru September 30, 2021



# Where to Apply

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

Scroll to the bottom of the web page to find program documents

**DUE by 5:00pm MST March 31<sup>st</sup>, 2020:**

1. FY20 DERA Application
2. Technical Data Worksheet

Additional Resources:

EPA DERA State Clean Diesel Grant Program Guide

FY20 DERA Informational Power Point Presentation



# THANK YOU

## for questions, please contact

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