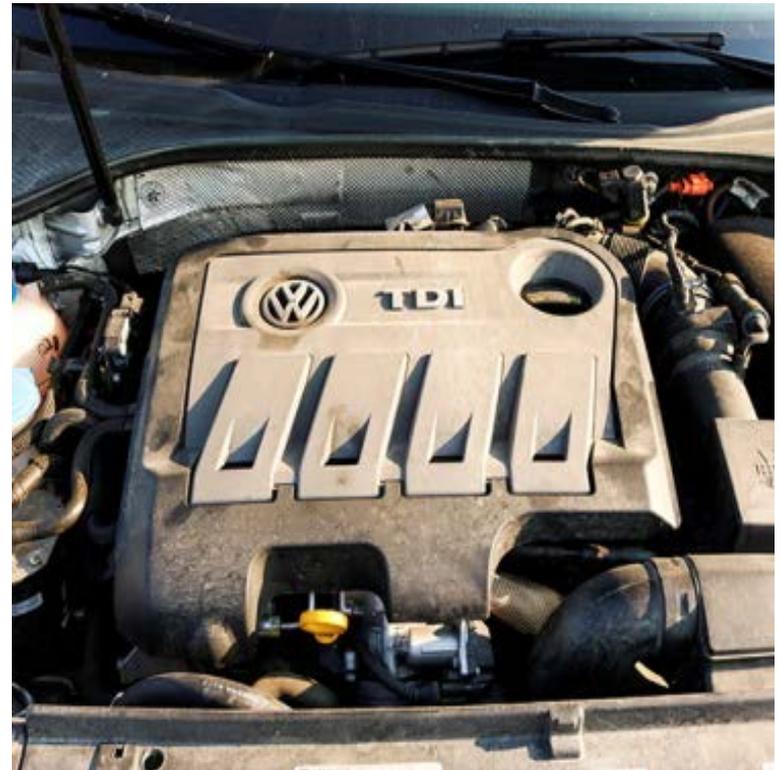


Volkswagen Trust

Be Part of the Solution

Missouri's Volkswagen Trust Program

Nongovernment Trucks,
Locomotive and Marine,
Airport and Cargo
Equipment,
and DERA Option



Presentation Overview

- Background
- Review FY 2019
- Plans for FY 2020
- Workshop Goals
 - What information is needed?
 - How are projects ranked?
 - How to make a high-ranked project
- Hands-on Workshop

Background

In 2015, VW admitted using software that caused diesel vehicles to perform differently during emissions tests so they would pass.

- During normal operation, these vehicles emitted nitrogen oxides (NO_x) at levels higher than EPA standards

Volkswagen to pay \$2.9 billion to an environmental mitigation trust fund

- Missouri's Share: \$41 million to counteract excess NO_x emissions

Beneficiary Mitigation Plan Overall Goals

- Reduce NO_x emissions from mobile sources
- Additional goals:
 - Replace aging school bus fleets
 - Reduce diesel fuel consumption
 - Upgrade government and private fleets
 - Target areas that currently or historically have not met air quality goals
 - Target areas with affected Volkswagen vehicles
 - Promote electric vehicles

Fiscal Year 2019 Funding Awarded

- School Buses (~\$4.7 million)
- VW DERA Option (~\$276,000)
- Federal DERA funds (~\$414,000)
- Government Trucks (~\$1.6 million)
- Transit and Shuttle Buses (~\$500,000)
- Department of Corrections (~\$1 million)
- FY19 Appropriations Authority \$7.25 million
- Over 150 tons of NO_x emissions reduction across these categories

FY2020 Appropriations

- Current Budget includes:
 - \$13.5 million for distribution under Missouri's Beneficiary Mitigation Plan
 - \$1 million for replacement of Department of Corrections' fleet
- Funding amounts for each award category will be based on applications received and amounts allocated in MO's BMP

Category 4

Category 4: Nongovernment Trucks

- Three Funding Pools:
 - KC Area, St. Louis Area, Areas outside of KC and St. Louis
- Open to privately-owned Class 4 and larger Diesel Trucks
 - Engine model year must be 1992-2009
- Eligibility based on truck's area of operation
 - For KC Area Funding Pool, must spend at minimum 50% of operating time in the Platte, Clay, and Jackson counties
- \$3 million allocated to Nongovernment Trucks funding pools:
 - Around 20% set aside for Kansas city area projects (~\$600,000)
- Unspent funding will go to a statewide pool for future iterations
 - With additional \$3 million for the statewide pool

Category 4

Category 4: Nongovernment Trucks

- Three Funding Pools:
 - KC area, St. Louis Area, Areas outside of KC and St. Louis
- Open to privately-owned Class 4 and larger Diesel Trucks
 - Engine model year must be 1992-2009
- Eligibility based on truck's area of operation
 - For St. Louis Funding Pool, must spend at minimum 50% of operating time in the City of St. Louis, and/or the counties of St. Louis, St. Charles, Jefferson, or Franklin
- \$3 million allocated to Nongovernment Trucks funding pools:
 - Around 50% set aside for St. Louis area projects (~\$1,500,000)
- Unspent funding will go to a statewide pool for future iterations
 - With additional \$3 million for the statewide pool

Category 4

Category 4: Nongovernment Trucks

- Three Funding Pools:
 - KC Area, St. Louis Area, Areas outside of KC and St. Louis
- Open to privately-owned Class 4 and larger Diesel Trucks
 - Engine model year must be 1992-2009
- Eligibility based on truck's area of operation
 - For “Outside St. Louis and KC” funding pool, must spend 50% of time in MO, but not be eligible for the other two funding pools
- \$3 million allocated to Nongovernment Trucks funding pools:
 - Around 30% set aside for Outside funding pool (~\$900,000)
- Unspent funding will go to a statewide pool for future iterations
 - With additional \$3 million for the statewide pool

Category 5 and 6

Category 5: Locomotive and Marine and

Category 6: Airport and Cargo

- No funding pools, projects compete statewide
- Open to both Government and Privately-owned projects
 - See guidelines for details on other project eligibility
- Projects must operate at least 50% of the time in Missouri or along a river border of Missouri
 - Ferries and Tugboats whose home port is in Missouri must only operate 25% of the time in and along the Missouri border to be eligible
- Both categories have \$2 million allocated to fund projects

Category 7

Category 7: DERA Option

- No funding pools, projects compete statewide
- Open to both Government and Privately-owned projects
- Open to many project types not eligible under other VW Categories
 - Stationary pumps, agricultural equipment, engine retrofits, etc
 - These project types are in addition to repower and replacement projects eligible under other categories
 - See program requirements for details
- The air program will give preference to projects not covered by other VW Categories in determining awardees

Cost Share

- Entities may request up to a certain percentage of their project's cost on their project application
- Category 4: Nongovernment Trucks
 - Up to 40% of the cost of a repower with diesel or alternate fuel
 - Up to 25% of the cost of a replacement diesel or alternate fueled vehicle
 - Up to 50% of the cost of a repower or replacement electric engine or vehicle
- Categories 5, 6, and 7
 - Varies by project type and category, see guidelines for details

Application Schedule

- October 1st: Open applications for target area funding for Nongovernment Trucks, Locomotive and Marine, Airport and Cargo, and DERA Option categories
- October 30th: Application period ends
- November: Awardees notified

Workshop Goals:

- Help applicants understand the emissions impact of their projects
- Help applicants understand how projects are ranked
- Lead applicants through Diesel Emissions Quantifier

What information is needed?

- Engine model year (and Tier)
 - Different model years have different emissions profiles
 - Affects the lifetime remaining of the engine
- Vehicle/Equipment Class and Type
 - Class and type also affect emissions profile
 - Class is determined by the Gross Vehicle Weight Rating
- Engine Use
 - Directly tied to the amount of emissions
 - Must be based on the most recent year
 - Miles driven, fuel gallons used, hours spent idling
 - Operating time percentages in various counties

How are projects ranked?

- First, a project's emissions reduction is calculated using the Diesel Emissions Quantifier
- Then the project's price per pound is calculated:

$$\textit{Price per Pound} = \frac{\textit{Funding Requested}}{\textit{Lifetime lbs NO}_x\textit{ Emission Reduction}}$$

- Projects are ranked from low price to pound to high
- The project's area of operation modifies this price per pound to target certain areas of the state

Area of Operation Modification

- To be eligible for the St. Louis funding pool, a project must spend at least 50% of its operating time in the City of St. Louis and/or the counties of St. Louis, St. Charles, Jefferson, or Franklin
 - Every 10% operating time spent in the City of St. Louis or St. Louis County will reduce a project's price per pound by \$0.10
 - Every 10% operating time in St. Charles County will reduce a project's price per pound by \$0.08
 - Every 10% operating time in Jefferson County or Franklin County will reduce a project's price per pound by \$0.06
 - Every 10% operating time outside of the State of Missouri will increase a project's price per pound by \$0.10
 - Operation time in Jackson, Clay, Platte, Boone, and Green counties will also modify a project's price per pound

Area of Operation Modification

- To be eligible for the KC funding pool, a project must spend at least 50% of its operating time in the Jackson, Clay, and Platte Counties.
 - Every 10% operating time in Jackson County will reduce a project's price per pound by \$0.08
 - Every 10% operating time in Clay County or Platte County will reduce a project's price per pound by \$0.04
 - Every 10% operating time outside of the State of Missouri will increase a project's price per pound by \$0.10
 - Operation time in St. Louis City, St. Louis County, St. Charles County, Jefferson County, Franklin County, Boone County, or Greene County will also modify a project's price per pound

Area of Operation Modification

- To be eligible for the Outside Kansas City and St. Louis Funding Pool, a project must spend a minimum of 50% operation time in the state of Missouri, but outside of the counties listed for the other two funding pools.
 - St. Louis Funding Pool: City of St. Louis, St. Louis, St. Charles, Franklin, and Jefferson counties
 - KC Funding Pool: Jackson, Clay, and Platte counties
 - Operation time in these listed counties will lower a project's price per pound
 - Additionally, every 10% operation time in Boone or Greene counties will reduce a project's price per pound by \$0.02
 - Every 10% operation time outside of the State of Missouri will increase a project's price per pound by \$0.10

How to Make a High-Ranked Project

- Price per pound is based on two things:

$$\text{Price per Pound} = \frac{\text{Funding Requested}}{\text{Lifetime } NO_x \text{ emissions reduction}}$$

- The lower the price per pound, the higher a project is ranked

How to Maximize Your Project's Points

Lower the Funding Requested

$$\downarrow \text{Price per Pound} = \frac{\text{Funding Requested} \downarrow}{\text{Lifetime NO}_x \text{ emissions reduction}}$$

- Requesting less funding will lower price per pound
- May be necessary to ensure the project meets the price per pound threshold for its category

How to Maximize Your Project's Points

Choose Projects with More Emission Reductions

$$\downarrow \text{Price per Pound} = \frac{\text{Funding Requested}}{\text{Lifetime NO}_x \text{ emissions reduction}} \uparrow$$

- Choosing projects with higher emission reductions lowers price per pound
 - Pick vehicles with high annual mileage and use
 - Consider replacing with all-electric or cleaner alternative fuels
- Replacing vehicles with engine model years 2001-2006 achieve the best lifetime emission reductions
 - Older models have less lifetime remaining, (lowers emission reductions)
 - Newer models are cleaner, (less emissions to reduce)

Price per Pound Requirements

- Projects must be below a maximum price per pound to be considered for funding
- This maximum allowable price per pound is dependent upon the project's category:
 - Category 4: Nongovernment Trucks: \$20 per pound
 - Category 5: Locomotive and Marine: \$5 per pound
 - Category 6: Airport and Cargo: \$20 per pound
 - Category 7: DERA Option: No price per pound requirement

Questions?

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