

Putting Ohio's Plan in Motion: \$75 million to reduce NOx emissions



Today's Presentation

- Update on Ohio's planning process
- First look at grant application process



In 2016, the United States and California sued Volkswagen and associated companies, alleging that VW installed **defeat devices** on certain vehicles (model years 2009-2016).

The devices activated during emissions testing to make vehicles appear compliant with the law, when in fact, during on-road operation, the vehicles emitted **nine to 40 times the allowable amount of nitrogen oxides (NOx)**, a harmful air pollutant.

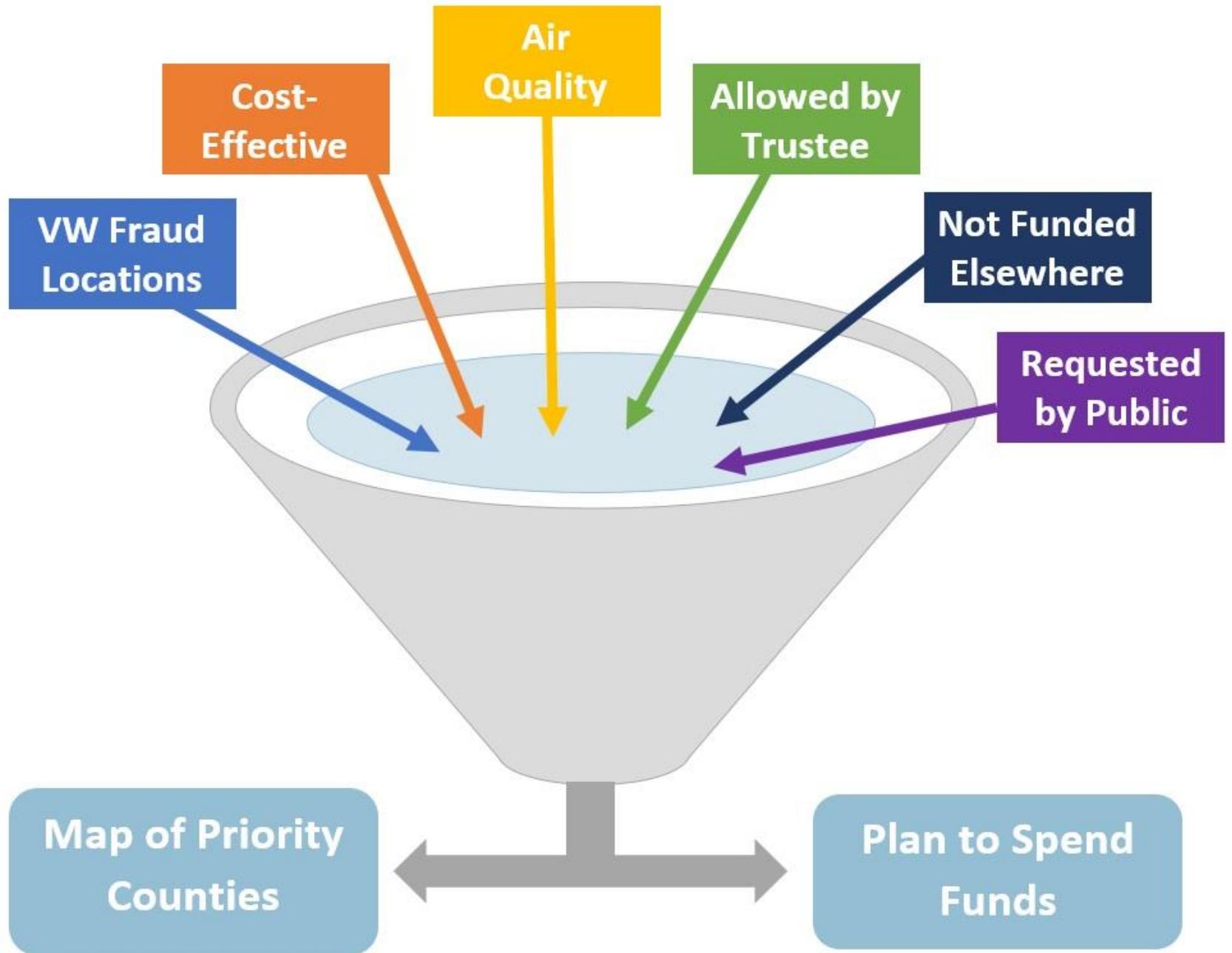


\$14 Billion VW Settlement

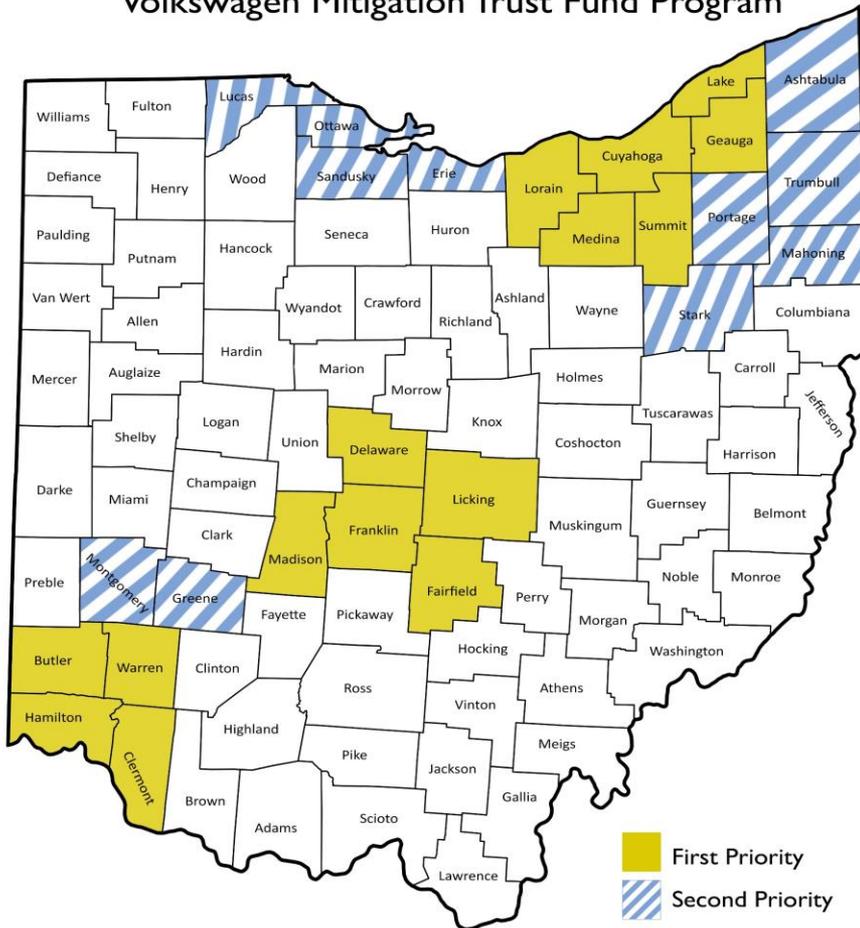
- Overseen by federal court and court-appointed Trustee
- \$10 billion compensation to VW diesel vehicle owners (buyback, repair)
- \$2 billion to promote Zero Emission Vehicles, www.electrifyamerica.com
- **\$2.7 billion** to remediate environmental effects of excess NOx emissions across all 50 states, D.C., Puerto Rico and Tribes

State Responsibilities

- Ohio will receive **\$75 million** over 15 years, based on more than 16,000 VW and Audi diesel vehicles registered here with the defeat devices.
- Trust agreement requires each state to develop a plan to allocate the funds among **ten allowable uses**, for approval by the Trustee.
- Funds must be used to “**impact air quality** in areas that bear a **disproportionate share of the air pollution burden.**”



Possible Ohio Priority Counties for Volkswagen Mitigation Trust Fund Program



Draft Beneficiary Mitigation Plan



In re: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products Liability Litigation, MDL No. 2672 CRB (JSC)

Office of Environmental Education
December 7, 2017

Cost Effectiveness in \$/Ton OF NOX Emission Reductions

More

Less

Locomotives

Airport/Port
GSE

Class 4-8
Trucks

Transit
Buses

Tugboats
and Ferries

Shorepower

School
Buses

Most Requested Uses of VW Funds in Early Public Comment Round:
(1) School Buses; (2) Transit Buses; (3) Electric Vehicle Charging

\$15 Million for School Buses

Replace diesel buses with new clean diesel, CNG or propane.
\$3 million for small demonstration project for electric buses.



\$15 Million for Transit Buses

Replace diesel buses with new clean diesel, CNG or propane.
Per-vehicle limit on hydrogen fuel cells or electric.



\$12 Million for Local Freight Trucks (Increased from Draft Plan)



Replace diesel trucks with new clean diesel, CNG, propane.
Per-vehicle limit on hydrogen fuel cells or all-electric.
Increase in proposed allocation compared to draft plan.

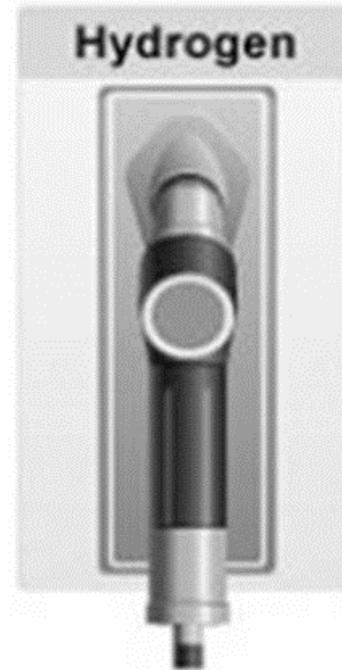
\$2 Million for Ferries and Tugboats



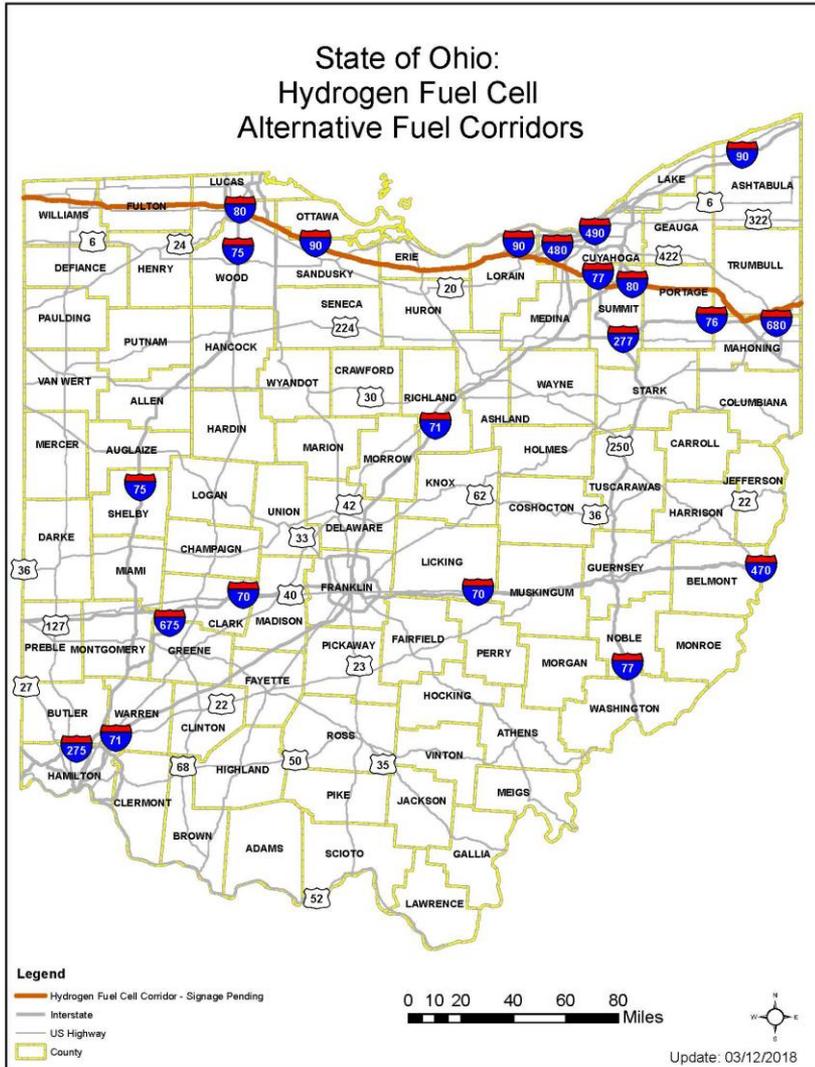
\$5 Million for Switcher Locomotives



\$11 Million for Zero Emission Vehicle (ZEV) Infrastructure



Hydrogen Fuel Cell Corridors



\$10 Million for Ground Support and Cargo Handling Equipment in Ports and Airports

Replace diesel with electric



Reimbursement Rates

Government-Owned Fleets

- Maximum 75% of the cost of replacement vehicles and engine repowers (all fuel types)
- To be competitive, grant applicants should consider offering >25% local match
- Ohio and other states may set a maximum amount that will be awarded for any vehicle of the same type

Repowers of Non-Government-Owned Fleets

- Up to 40% of Repower with new diesel, CNG, Propane, Diesel-Electric Hybrid engine
- Up to 75% of Repower with all-electric engine

Replacements of Non-Government-Owned Fleets

- Up to 25% of Replacement with new diesel, CNG, Propane, Diesel-Electric Hybrid
- *Exception: Up to 50% for drayage trucks working ports, airports, intermodal rail yards*
- Up to 75% of Replacement with all-electric
- Ohio may set maximum per vehicle type

Project Scope Description Should Include

- Method by which old engines will be **decommissioned**
- Method to ensure vehicles will **operate at least 85% of the time** in Ohio's first and second priority counties
- Method to ensure vehicles will be maintained for a minimum of **five years**
- **Access to fueling** station for CNG, Propane, Diesel-Electric Hybrid, All-Electric

Financial Requirements for Non-Government Fleets

- Demonstrate ability to cover upfront **costs of entire project** while awaiting reimbursement
 - Documentation of acceptable credit rating, or

Credit Agency	Rating
Standard & Poor's	AAA, AA, A or BBB
Dun & Bradstreet Viability	1, 2, 3, 4, or 5
Moody's	Aaa, Aa, A, or Baa
Fitch	AAA, AA, A, or BBB

- Letter from a financial institution documenting
 - Time deposits (e.g. certificates of deposit), or
 - Line of credit, or
 - Loan (Reimbursements will be paid at rate the loan is paid down)

Online Grant Application (Fleet Projects)

- Review Application Guidelines that will be posted on Mitigation Trust Fund website
- Set Up Account in Ohio EPA's Customer Support Center
- Gather engine information on existing fleet
- Gather quotes for new vehicles, engine repowers, salvage value
- Begin entering information



Diesel Mitigation Trust Fund Grant Application



Vehicle Types

Screen 2 of 3

Instructions In the table below, select a vehicle type that you are requesting grant funds for and fill in the remaining information for that row. Click the "Add" button if you want to:

1. Add vehicles for a different vehicle type to the grant application
2. Add the same vehicle type but want funding for a different activity or different fuel type

Definitions

Drayage Truck	"Port Drayage Truck" is a subset of Heavy Heavy Local Freight Truck, and are trucks hauling cargo to and from ports and intermodal rail yards, including trucks working transload facilities. They can be servicing a ship port, airport or intermodal rail yard or transload rail yard.
Heavy Heavy Duty Local Freight Truck	"Heavy Heavy Local Freight Truck" is a truck with a gross vehicle weight rating over 33,000 lbs. that is operating as "Freight cargo delivery" anywhere in the priority counties, and include waste haulers, dump trucks and concrete mixers.

Select Vehicle Type	What is the activity you want funding for?	What is the new fuel type for this line item?	No. of Vehicles	
Local Freight Truck	Repower	Compressed Natural Gas	1	
Drayage Truck	Replace	New Diesel	3	
Heavy Heavy Duty Local Freight Truck	Repower	Propane	5	

Screen Shot



Vehicle Types

Screen 2 of 14 ▼

Instructions In the table below, select a vehicle type that you are requesting grant funds for and fill in the remaining information for that row. Click the "Add" button if you want to:

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Definitions

Airport Ground Support Equipment	Also includes fork lifts at airports
Heavy Heavy Duty Local Freight Truck	"Heavy Heavy Local Freight Truck" is a truck with a gross vehicle weight rating over 33,000 lbs. that is operating as "Freight cargo delivery" anywhere in the priority counties, and include waste haulers, dump trucks and concrete mixers.

Select Vehicle Type	What is the activity you want funding for?	What is the new fuel type for this line item?	No. of Vehicles	Add
Airport Ground Support Equipment ▼	Replace ▼	All-electric (includes ▼)	3	✕
Heavy Heavy Duty Local Freight Truck ▼	Repower ▼	Propane ▼	5	✕

Please download the **Fleet Data Sheet** and fill in the information for each individual vehicle that is represented in the table above. You will be required to upload the completed Fleet Data Sheet later in this application process.

Has the fleet data sheet been downloaded? *

Note for Consultants

If you are preparing VW grant applications for more than one applicant, note that only one application can be in progress at a time associated with your user email address.

You must complete and submit one application before starting work on another, or use different user email addresses for each application.

Emissions Estimates

- Grant applicants are *not* required to generate emissions estimates for their projects.
- Ohio EPA will use the fleet data in the grant applications to develop an estimate of the cost-effectiveness of each project at reducing NOx emissions, using U.S. EPA's [Diesel Emissions Quantifier](#) tool.
- Applicants may run the DEQ for themselves to assess the competitiveness of their projects, but projects will be selected for award based on Ohio EPA's estimates.

School Bus Example

- 5 propane school buses @ \$90,000 = \$450,000
- Subtract \$500 per bus scrap value
- $\$447,500 \times 0.75\% = \$335,625$ grant share
- Total tons/yr NOx reductions: 1.75 (from DEQ)
- Cost Effectiveness \$191,785 per ton NOx reduced
- Compare to 50% request: $\$223,750$ grant share / 1.75 = \$127,857 cost effectiveness will score better compared to other projects
- Competing against other school buses *and* projects in other sectors

DEQ Estimates Vary

- The emission reduction estimates for a project will vary depending on factors such as the age of the vehicle, the miles travelled, amount of fuel used, and number of idling hours.
- One district's proposal for five propane school buses may be more cost effective than another school district's proposal for five propane school buses at the same price, based on these factors.

Pre-Reviews and Resubmittals

- The software will allow you to generate a pdf file of the application, that you can use to request pre-review by Ohio EPA. Do this before you hit “submit” which locks the application. You can generate a pdf of final version.
- If a project is not funded this year, you will have the ability to copy and paste from the pdf of this year’s application into a new application next year.

Grant Cycle Schedule

- Ohio EPA plans to hold one \$15 million grant cycle for fleet projects (on- and off-road vehicles) in 2018, 2019 and 2020.
- \$11 million for ZEV infrastructure will be awarded through a separate competitive procurement process beginning in 2019.
- In 2020, Ohio EPA will evaluate demand by sector and revise the state plan, if needed, to reallocate the remaining funds.

Comparing Apples and Oranges

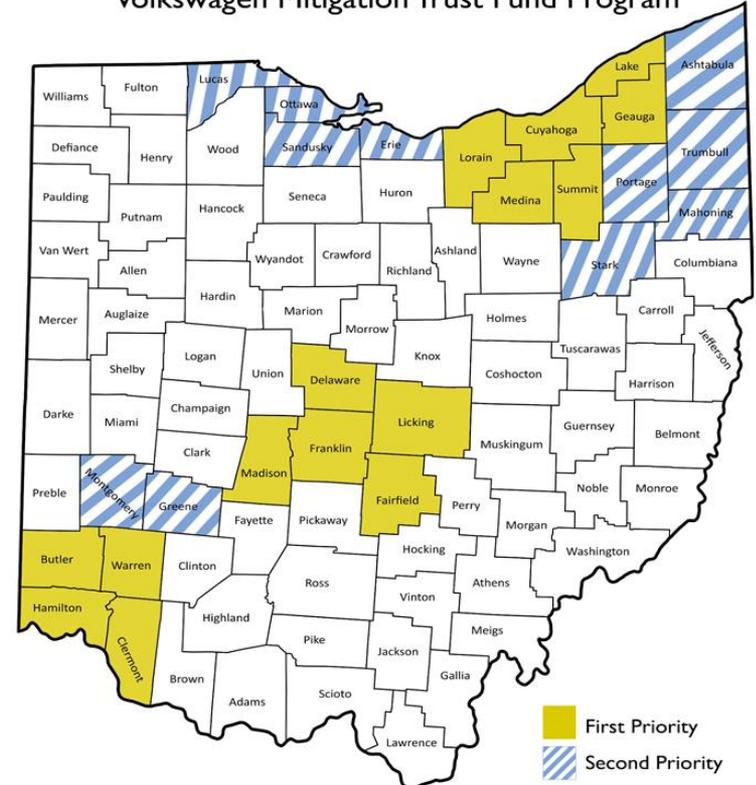


- In each grant cycle, Ohio EPA will rank applications by cost effectiveness, within each category and overall.
- For example, Ohio EPA might select the 8 highest ranking school bus projects out of 30 applications received, and the highest ranking 6 transit projects, 2 rail projects, 5 truck projects and 1 airport GSE/port cargo handling project.
- Ohio EPA will consider sector and geographic balance in making awards

Comparing Cost Effectiveness from First- and Second-Priority Counties

- Between sectors: a very cost effective switcher locomotive project from a secondary priority county would be selected before lower-ranking projects in other sectors.
- Within sectors: very high ranking projects from secondary counties may be selected.

Possible Ohio Priority Counties for Volkswagen Mitigation Trust Fund Program



Mitigation Trust Fund Timeline

- Ohio designated a Beneficiary 1/29/18
- Public comment period ended 2/7/18
- Draft Plan under revision based on comments
- Ohio files final Beneficiary Mitigation Plan with Trustee (spring 2018)
- Ohio EPA releases Request for Proposals for fleet project applications (late spring 2018)
- Applications due 60 days later (late summer 2018)
- First grant awards issued (fall 2018)
- Authorization to purchase after grant contracts are executed (late fall 2018)

ZEV Infrastructure Projects Timeline

- Prioritize Locations (2018)
 - Gather input from municipalities, regional planning organizations, utilities, other stakeholders
 - Consider other siting efforts underway, e.g. Electrify America, utilities
- Pre-Qualify vendors/installers through state-term contract (2019)
- Release RFPs by region (2019)



Contact Information

- For engine technology, vehicle quote and emissions estimate questions, (614) 644-4838 or Alan.Harness@epa.ohio.gov
- For other questions, (614) 644-3768 or Carolyn.Watkins@epa.ohio.gov