

Volkswagen Settlement Alabama Beneficiary Mitigation Plan

Public Information and Listening Session



ADECA

Alabama Department of Economic and Community Affairs

E n e r g y D i v i s i o n

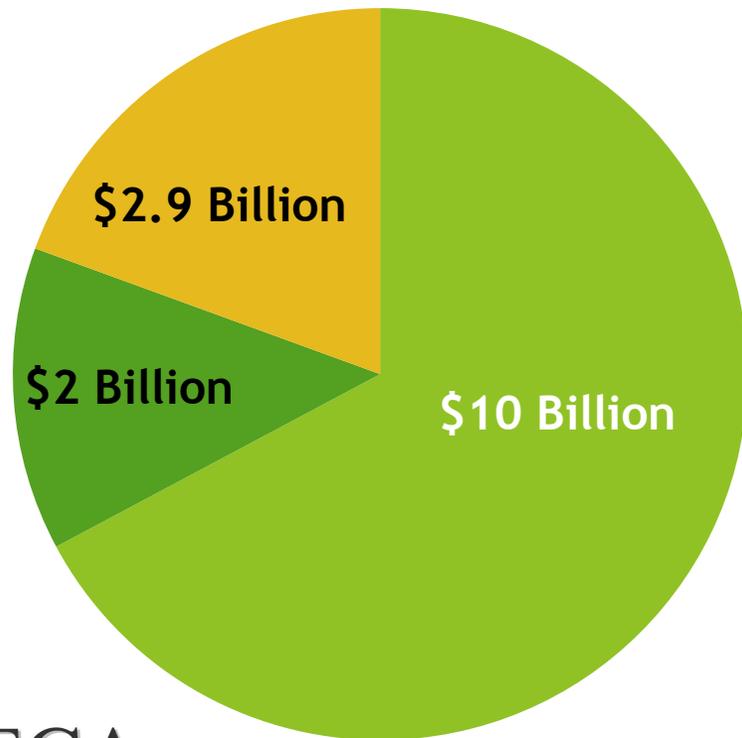
Background

- ▶ The German automaker, Volkswagen AG, admitted fault and settled a civil complaint which alleged that VW violated the Clean Air Act by installing software in approximately 590,000 model year 2009-2016 vehicles with 2.0 and 3.0 liter diesel engines with deliberate intent to disable emission controls under normal use and turn on emission controls only when the vehicles were undergoing emission testing.
- ▶ These “defeat devices” allowed the vehicles to easily pass emissions testing yet emit highly unacceptable levels of NOx during normal operation.
- ▶ In October 2016 and May 2017, the U.S. District Court, Northern District of California approved two partial settlements related to the affected 2.0 and 3.0 liter vehicles, totaling \$14.9 billion.
- ▶ In April 2017, a third partial settlement, addressing civil penalties and injunctive relief was approved by the Court. VW paid a \$1.45 billion civil penalty to the U.S. Treasury under this third partial settlement.

First and Second Partial Settlement Overview

- ▶ The \$14.9 billion VW agreed to pay under the first and second partial settlements will be used to buyback and/or modify vehicles, and to support national and state-level projects to reduce NOx emissions.

Settlement Breakdown



- Vehicle Buyback and Modification (consumers)
- Zero Emission Vehicle Investment (national and CA)
- Environmental Mitigation Trust (states)

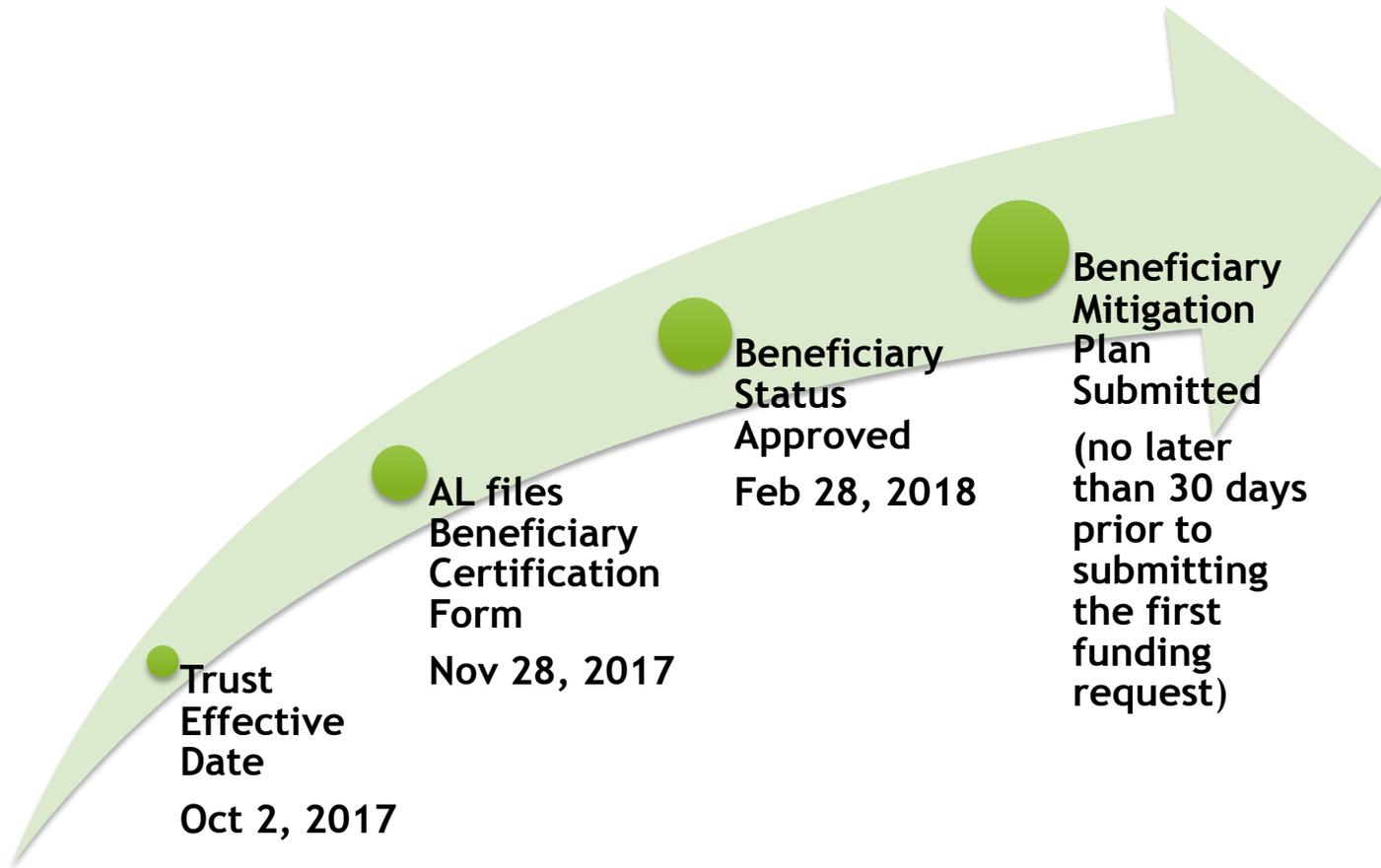
Environmental Mitigation Trust

- ▶ \$2.7 billion (2.0 liter settlement) and an additional \$225M (3.0 liter settlement) is being placed in an independently administered Environmental Mitigation Trust to be allocated to beneficiaries (states, tribes, and certain territories) based on the number of impacted VW vehicles in their jurisdictions.
- ▶ The Trust will support projects that reduce NOx emissions where the VW vehicles were, are, or will be operated.
- ▶ Alabama's Allocation: \$25,480,968
- ▶ ADECA has been designated by Governor Ivey to be the "Lead Agency" in Alabama to administer the state's Trust allocation.

Spending Trust Allocations

- ▶ Beneficiaries have up to 10 years to spend 80% of their allocation, and up to 15 years to spend 100% of their allocation.
- ▶ If at least 80% of the state's allocation is expended within the ten years, we may be eligible to receive a supplemental weighted share of the remaining balance in any unused funds. States eligible to receive such supplemental funding will be granted 5 years of additional time to select and implement appropriate Eligible Mitigation Actions.
- ▶ Up to 1/3 of the state's allocation may be requested during the first year and up to 2/3 of the allocation during the first two years.
- ▶ The state must develop and submit a “**Beneficiary Mitigation Plan**”.
 - ▶ A high-level summary of how the state intends to spend the Trust fund
 - ▶ Must be submitted at least 30 days before the first funding request
- ▶ States may adjust their goals and spending plans at their discretion but must provide the Trustee with updates to their Beneficiary Mitigation Plan.

Environmental Mitigation Trust Timeline



Beneficiary Mitigation Plan

The Plan is intended to provide the public with insight into the state's vision for use of the mitigation funds and will address the following:

- ▶ Overall Goal for use of the Funds
- ▶ Categories of Eligible Mitigation Actions (including % of funds allocated)
- ▶ Potential Beneficial Impact on Air Quality in areas that bear a disproportionate share of air pollution burden
- ▶ Expected Ranges of Emission Benefits
- ▶ Process by which the state shall seek and consider public input on its Beneficiary Mitigation Plan

Eligible Mitigation Actions

- ▶ Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks)
- ▶ Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)
- ▶ Freight Switchers
- ▶ Ferries/Tugs
- ▶ Ocean Going Vessels (OGV) Shorepower
- ▶ Class 4-7 Local Freight Trucks (Medium Trucks)
- ▶ Airport Ground Support Equipment
- ▶ Forklifts and Port Cargo Handling Equipment
- ▶ Light Duty Zero Emission Vehicle Supply Equipment
- ▶ Diesel Emission Reduction Act (DERA) Option

Eligible Large Trucks

- ▶ Eligible Class 8 Local Freight Trucks and Port Drayage Trucks include engine model years between 1992 and 2009 and have a gross vehicle weight (GVWR) of 33,001 pounds or more.
- ▶ Eligible Large Trucks must be scrapped.
- ▶ Eligible Large Trucks may be repowered with any new diesel or alternate fueled engine or all-electric engine, or may be replaced with any new diesel, alternate fueled or all-electric vehicle with an engine model year in which the Eligible Large Trucks Mitigation Action occurs or one engine model year prior.



Eligible Large Trucks - % of Project that can be funded through the Trust

	Non-Government owned Class 8 Freight Trucks	Non-Government owned Drayage Trucks	Government owned Class 8 Large Trucks
Repower with a new diesel or alt fuel engine (includes installation cost)	Up to 40%	Up to 40%	Up to 100%
New diesel or alt fuel vehicle	Up to 25%	Up to 50%	Up to 100%
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 75%	Up to 100%
New all-electric vehicle (including installation and charging infrastructure)	Up to 75%	Up to 75%	Up to 100%

Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)

- ▶ Eligible class 4-8 school buses, shuttle buses or transit buses must have a 2009 engine model year or older and a GVWR greater than 14,001 pounds.
- ▶ Eligible Buses must be scrapped.
- ▶ Eligible Buses may be repowered with any new diesel or alternate fueled engine or all-electric engine, or may be replaced with any new diesel, alternate fueled or all-electric vehicle with an engine model year in which the Eligible Large Trucks Mitigation Action occurs or one engine model year prior.



Eligible Buses - % of Project that can be funded through the Trust

	Non-Government owned Busses	Government owned Busses
Repower with a new diesel or alt fuel engine (includes installation cost)	Up to 40%	Up to 100%
New diesel or alt fuel vehicle	Up to 25%	Up to 100%
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 100%
New all-electric vehicle (including installation and charging infrastructure)	Up to 75%	Up to 100%

Freight Switchers

- ▶ Eligible Freight Switchers include pre-Tier 4 switcher locomotives that operate 1000 or more hours per year.
- ▶ Eligible Freight Switchers must be scrapped.
- ▶ Eligible Freight Switchers may be repowered with any new diesel or alternate fueled or all-electric engine(s) (including generator sets), or may be replaced with any new diesel or alternate fueled or all-electric (including generator sets) Freight Switcher, that is certified to meet the applicable EPA emissions standards as published in the CFR for the engine model year in which the Eligible Mitigation Action occurs.



Freight Switchers - % of Project that can be funded through the Trust

	Non-Government owned Freight Switchers	Government owned Freight Switchers
Repower with a new diesel or alt fuel engine or generator sets (includes installation cost)	Up to 40%	Up to 100%
New diesel or alt fuel freight switcher	Up to 25%	Up to 100%
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 100%
New all-electric vehicle (including installation and charging infrastructure)	Up to 75%	Up to 100%

Ferries/Tugs

- ▶ Eligible Ferries and/or Tugs include unregulated, Tier 1, or Tier 2 marine engines.
- ▶ Eligible Ferry and/or Tug engines that are replaced must be scrapped.
- ▶ Eligible Ferries and/or Tugs may be repowered with any new Tier 3 or Tier 4 diesel or alternate fueled engines, or with all-electric engines, or may be upgraded with an EPA Certified Remanufacture System or EPA Verified Engine Upgrade.

	Non-Government owned Ferries/Tugs	Government owned Ferries/Tugs
Repower with a new diesel or alt fuel engine or generator sets (includes installation cost)	Up to 40%	Up to 100%
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 100%



Ocean Going Vessels (OGV) Shorepower

- ▶ Eligible Marine Shorepower includes systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth. Components of such systems eligible for reimbursement are limited to cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution. Marine shore power systems must comply with international shore power design standards (ISO/IEC/IEEE 80005-1-2012 High Voltage Shore Connection Systems or the IEC/PAS 80005-3:2014 Low Voltage Shore Connection Systems) and should be supplied with power sourced from the local utility grid.

	Non-Government owned Marine Shorepower	Government owned Marine Shorepower
Shore-side system connected with local utility grid	Up to 100%	Up to 100%



Class 4-7 Local Freight Trucks (Medium Trucks)

- ▶ Eligible Class 4-7 Local Freight Trucks include engine model years between 1992 and 2009 and have a gross vehicle weight (GVWR) of 14,001-33,000 pounds.
- ▶ Eligible Medium Trucks must be scrapped.
- ▶ Eligible Medium Trucks may be repowered with any new diesel or alternate fueled engine or all-electric engine, or may be replaced with any new diesel, alternate fueled or all-electric vehicle with an engine model year in which the Eligible Medium Trucks Mitigation Action occurs or one engine model year prior.



Medium Trucks - % of Project that can be funded through the Trust

	Non-Government owned Medium Trucks	Government owned Medium Trucks
Repower with a new diesel or alt fuel engine (includes installation cost)	Up to 40%	Up to 100%
New diesel or alt fuel vehicle	Up to 25%	Up to 100%
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 100%
New all-electric vehicle (including installation and charging infrastructure)	Up to 75%	Up to 100%

Airport Ground Support Equipment

- ▶ Eligible Airport Ground Support Equipment includes:
 - ▶ Tier 0, Tier 1, or Tier 2 diesel powered airport ground support equipment; and
 - ▶ Uncertified, or certified to 3 g/bhp-hr or higher emissions, spark ignition engine powered airport ground support equipment
- ▶ Eligible Airport Ground Support Equipment must be scrapped.
- ▶ Eligible Airport Ground Support Equipment may be repowered with an all-electric engine, or may be replaced with the same Airport Ground Support Equipment in an all-electric form.



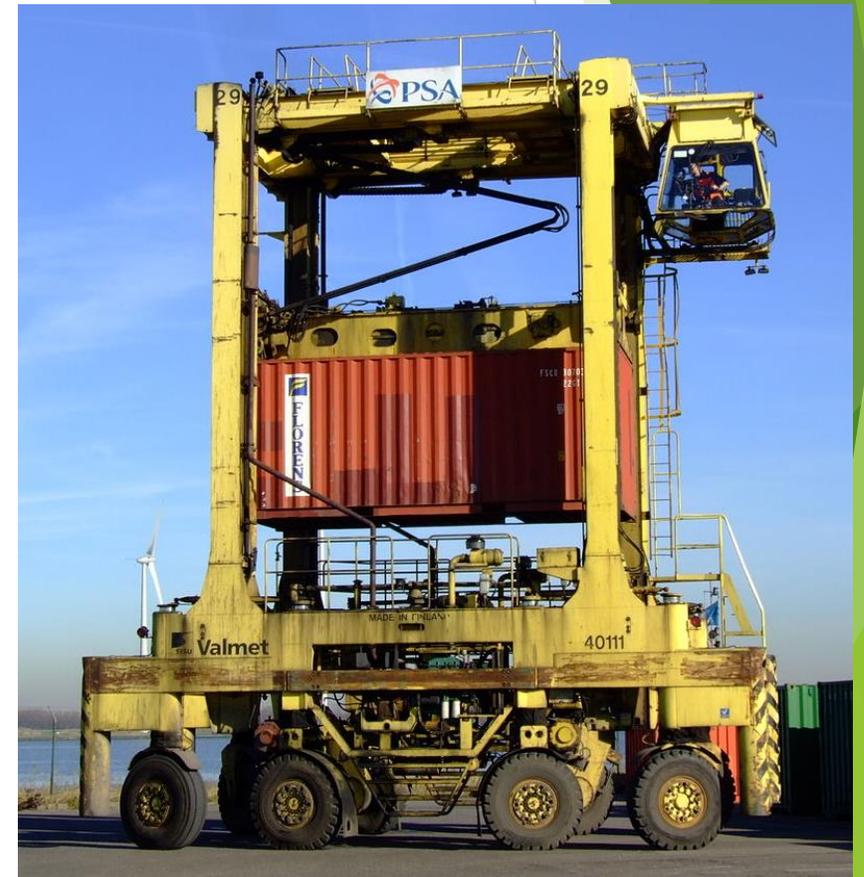
Airport Ground Support Equipment - % of Project that can be funded through the Trust

	Non-Government owned Airport Ground Support Equipment	Government owned Airport Ground Support Equipment
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 100%
New all-electric equipment (including installation and charging infrastructure)	Up to 75%	Up to 100%



Forklifts and Port Cargo Handling Equipment

- ▶ Eligible Forklifts include forklifts with greater than 8000 pounds lift capacity.
- ▶ Eligible Forklifts and Port Cargo Handling Equipment must be scrapped.
- ▶ Eligible Forklifts and Port Cargo Handling Equipment may be repowered with an all-electric engine, or may be replaced with the same equipment in an all-electric form.



Forklifts and Port Cargo Handling Equipment - % of Project that can be funded through the Trust

	Non-Government owned Forklifts and Port Cargo Handling Equipment	Government owned Forklifts and Port Cargo Handling Equipment
Repower with new all-electric engine (including installation and charging infrastructure)	Up to 75%	Up to 100%
New all-electric equipment (including installation and charging infrastructure)	Up to 75%	Up to 100%



Light Duty Zero Emission Vehicle Supply Equipment

- ▶ Light duty electric vehicle supply equipment includes Level 1, Level 2 or fast charging equipment (or analogous successor technologies) that is located in a public place, workplace, or multi-unit dwelling and is not consumer light duty electric vehicle supply equipment (i.e., not located at a private residential dwelling that is not a multi-unit dwelling).
- ▶ Light duty hydrogen fuel cell vehicle supply equipment includes hydrogen dispensing equipment capable of dispensing hydrogen at a pressure of 70 megapascals (MPa) (or analogous successor technologies) that is located in a public place.
- ▶ Limited to 15% allocation of Trust Funds

Light Duty Zero Emission Vehicle Supply Equipment - % of Project that can be funded through the Trust

	Available to the public at a Government Owned Property	Available to the public at a Non-Government Owned Property	Available at a workplace, but not to the general public	Available at a multi-unit dwelling, but not to the general public
Purchase, install and maintain eligible light duty electric vehicle supply equipment	Up to 100%	Up to 80%	Up to 60%	Up to 60%

	Equipment capable of dispensing at least 250 kg/day and available to the public	Equipment capable of dispensing at least 100 kg/day and available to the public
Purchase, install and maintain eligible light duty hydrogen fuel cell vehicle supply equipment	Up to 33%	Up to 25%

Diesel Emission Reduction Act (DERA) Option

- ▶ Trust Funds may be used for non-federal voluntary match, pursuant to Title VII, Subtitle G, Section 793 of the DERA Program in the Energy Policy Act of 2005 (codified at 42 U.S.C. § 16133), thereby allowing Beneficiaries to use such Trust Funds for actions not specifically enumerated in this Appendix D-2, but otherwise eligible under DERA pursuant to all DERA guidance documents available through the EPA.
- ▶ Trust Funds shall not be used to meet the non-federal mandatory cost share requirements, as defined in applicable DERA program guidance, of any DERA grant.

Definitions

▶ “Repower”

- ▶ To replace an existing engine with a newer, cleaner engine or power source that is certified by EPA to meet a more stringent set of engine emission standards.

▶ “Scrapped”

- ▶ To render inoperable and available for recycle, and to cut a 3-inch hole in the engine block for all engines. If a vehicle is to be replaced, “scrapped” shall also include the disabling of the chassis by cutting the vehicle’s frame rails completely in half.

▶ “Government”

- ▶ State or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority, owning fleets purchased with government funds), and a tribal government or native village.

▶ “Local”

- ▶ ?

What the Environmental Mitigation Trust CANNOT Fund

- ▶ Research and development
- ▶ Refueling infrastructure for diesel, natural gas or propane-powered vehicles
 - ▶ The only allowable infrastructure costs are the cost of infrastructure associated with eligible All-Electric engines, vehicles, or equipment and the cost of acquisition, installation, operation and maintenance of new Light Duty ZEV Supply Equipment (Level 1, Level 2, and fast charging EV infrastructure, and hydrogen dispensing equipment).
- ▶ The repower or replacement of light-duty, passenger vehicles
 - ▶ The Environmental Mitigation Trust is focused on the repower or replacement of medium and heavy-duty vehicles, vessels, and equipment only.
- ▶ Anything that does not fit in one of the listed “eligible mitigation action” categories

Evaluating Beneficial Impacts of Mitigation Actions

The VW Trust Agreement requires that the Beneficiary Mitigation Plan include a *“description of how the Beneficiary will consider the potential beneficial impact of the selected Eligible Mitigation Actions on air quality in areas that bear a disproportionate share of the air pollution burden within its jurisdiction.”*

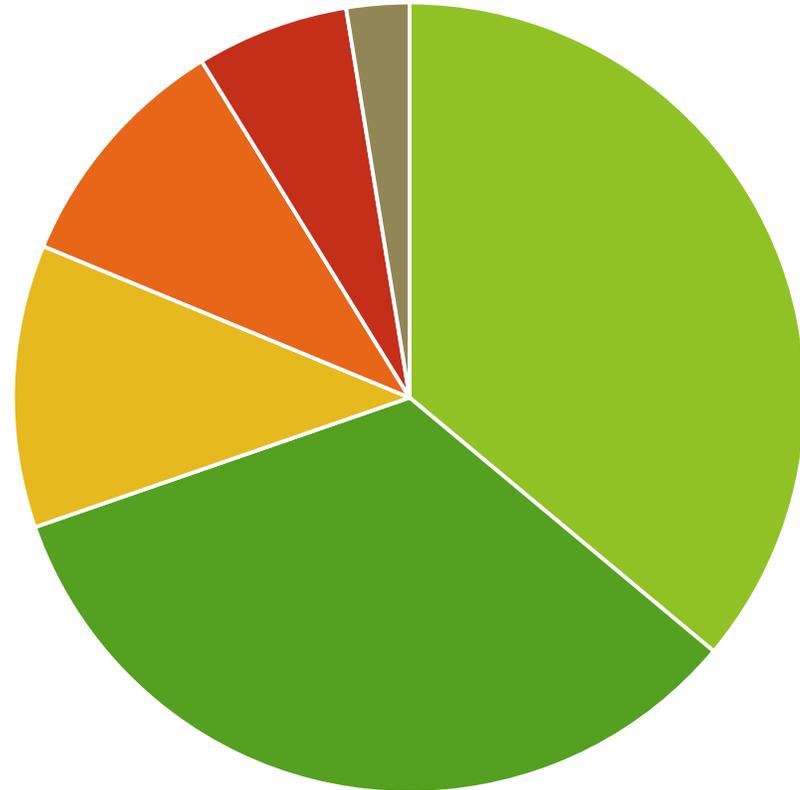
- ▶ Possible considerations:
 - ▶ EPA designated non-attainment or maintenance areas for air quality
 - ▶ Populations most vulnerable to negative impacts from emissions
 - ▶ Areas near busy highways, rail yards, or ports
 - ▶ Other suggestions?

What is NOx?

- ▶ NOx (Nitrogen Oxides) - harmful compounds released by combustion processes, including diesel engines
- ▶ Reacts with Carbon Monoxide (CO) and Volatile Organic Compounds (VOCs) in sunlight to form tropospheric or ground-level ozone, the major component of smog, which is a significant air pollution problem in the U.S.
- ▶ NOx and particulate matter from diesel emissions and other sources is linked to serious health effects including asthma, respiratory system irritation, allergen sensitivity, respiratory infections, and premature death.
- ▶ Peer-reviewed research estimates that over the sales period for the affected 2.0 liter VW vehicles, 59 deaths will be caused in the U.S. by the excess emissions from the vehicles.
- ▶ NOx poses other significant environmental risks contributing to acid precipitation that can damage forests, crops, and waterways.
- ▶ Reducing the use of petroleum-based fuels in transportation is an important mechanism to reduce NOx emissions.

NOx in Alabama

Mobile Source Tons of NOx



- On-road Light Duty Vehicles
- On-road Heavy Duty Vehicles
- Non-road Equipment
- Locomotives
- Commercial Marine Vehicles
- Aircraft

Emission Calculation Tools

- ▶ Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool
 - ▶ Estimates petroleum use, greenhouse gas emissions, air pollutant emissions, and cost of ownership of light-duty and heavy-duty vehicles using simple spreadsheet inputs.
- ▶ Diesel Emissions Quantifier
 - ▶ Evaluates clean diesel projects and upgrade options for medium-heavy and heavy-heavy duty diesel engines. Provides an interactive, web-based tool for users with little or no modeling experience.
- ▶ Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET)
 - ▶ A full life-cycle model to evaluate various vehicle and fuel combinations on a full fuel-cycle/vehicle-cycle basis.
- ▶ MOtor Vehicle Emission Simulator (MOVES)
 - ▶ Estimates emissions for mobile sources at the national, county and project level
- ▶ Shore Power Technology Assessment and Emissions Calculator
 - ▶ Estimates environmental benefits of shore power by vessel type in an area where shore power is being considered.

Plan Considerations

- ▶ Primary Goal: Reduce NOx Emissions
- ▶ Benefits to Vulnerable Populations
- ▶ Benefits to Areas Bearing a Disproportionate Share of Air Pollution
- ▶ Economic Development Potential
- ▶ Fuel Security and Energy Assurance
- ▶ Getting the most “Bang” for the “Buck”
- ▶ Cost to Repower vs. Cost to Replace
- ▶ Life Cycle Costs
- ▶ Cost of Scrappage
- ▶ Availability of Fueling Infrastructure and Fuel Price Volatility
- ▶ Opportunities to Leverage Other Funding

Our Process



Type of Input Needed

- ▶ Where will investments will be most impactful?
- ▶ What types of projects will be most impactful?
- ▶ Which mitigation actions will result in the biggest return on investment?
- ▶ How to best improve air quality for vulnerable populations in the state
- ▶ How potential mitigation actions can enhance economic development in the state
- ▶ How should “local” be defined?
- ▶ Lessons learned and best practices from relevant projects in the past
- ▶ Opportunities to leverage settlement funds with other fund sources

What do you think?

PROPOSALS FOR SPECIFIC PROJECTS WILL BE REQUESTED AT A LATER DATE

Your Portal for Information and Input

- ▶ Website: www.adeca.alabama.gov/vwsettlement
- ▶ Email: vwsettlement@adeca.alabama.gov

Your thoughts and perspective are important to us!

For Information on Other Portions of the Volkswagen Settlement

- ▶ Vehicle Buyback and Modification:
www.vwcourtsettlement.com/en/
- ▶ ZERO Emission Vehicle Investment:
www.electrifyamerica.com

Questions





THANK
YOU