Florida’s Diesel Emissions Mitigation Program

Division of Air Resource Management
March 2018
Division of Air Resource Management Staff:

Preston McLane, Deputy Director
Hastings Read, Program Administrator
John Paul Fraites, Program Consultant

Agenda

1. Introduction and Meeting Overview ................................................................. 10 Minutes
2. Presentation: Planning for Florida’s Diesel Emissions Mitigation Program ........ 45 Minutes
3. Questions & Answers ...................................................................................... 20 Minutes
4. Closing of Formal Presentation ....................................................................... 5 Minutes
5. Open Session for Meeting with Division Staff ................................................ 40 Minutes
In October 2016, Volkswagen (VW) settled with the U.S. government resolving claims that it violated the Clean Air Act by selling vehicles equipped with “defeat devices” that directed nitrogen oxides (NOx) controls to function during emissions testing, but not during normal vehicle operations.
The Volkswagen Settlement consists of three major components:

- **Buyback** or **emissions modification** on at least 85 percent of the subject vehicles.
- **ZEV Investment** – $2 billion to promote the use of zero emission vehicles and infrastructure.
- **Mitigation Trust Fund** – $2.925 billion to fully remediate the excess NOx emissions from the subject vehicles.

The remainder of this presentation focuses exclusively on the **Mitigation Trust Fund** and states’ roles in using the available funds.
Mitigation Trust Fund

• On March 15, 2017, Wilmington Trust was selected as the independent trustee to administer the Mitigation Trust Fund.

• On October 2, 2017, the Final Trust Agreement was filed with the court, and established the Mitigation Trust Fund, which has a combined $2.9 billion for beneficiaries to mitigate excess NOx emissions from subject vehicles.

• 50 states, the District of Columbia, and Puerto Rico were authorized to become beneficiaries under the Environmental Mitigation Trust for State Beneficiaries.
On November 28, 2017, Florida submitted to the Trustee a Certification to become a **State Beneficiary** under the Mitigation Trust Fund.

On January 30, 2018, the Trustee designated Florida as a State Beneficiary.

Florida is now eligible to receive approximately $166 million in diesel emission reduction project funding over a period of up to 10 years.

Florida is required to submit to the Trustee a **State Beneficiary Mitigation Plan** at least 30 days prior to submitting any project-specific funding request.
Florida must submit to the Trustee and make publicly available a **State Beneficiary Mitigation Plan** before receiving any trust funds.

This plan must:

- Explain the state’s overall goal for use of the trust funds;
- List the categories of projects that the state expects to implement;
- Explain how the plan considers benefits to air quality in communities with a disproportionate air pollution burden; and
- Estimate the overall NOx reductions that will be achieved through the diesel emission reduction projects.
Considerations in Mitigation Planning

The Department has identified seven potential considerations* that could be part of the State Beneficiary Mitigation Plan:

- Focusing on projects in communities that bear a disproportionate share of the air pollution burden;
- Identifying projects with greater emission reductions per dollar invested;
- Incentivizing business investment in cleaner technologies;
- Focusing on modernizing transportation hubs (seaports, airports, railyards);
- Replacing the highest emitting diesel units regardless of their location;
- Funding projects in areas with higher diesel engine emissions; and/or
- Replacing diesel units with alternative fuel (i.e. natural gas) and/or electric vehicles and equipment.

* The Plan could, of course, emphasize several of these considerations, but there would be trade-offs.
NOx Emissions Distributions

Percentage Distribution by Sector for All NOx Emissions in Florida (2014)

- Non-Diesel Mobile Sources: 9%
- Diesel-Powered Mobile Sources: 7%
- Electric Generating Units: 13%
- Industrial Facilities: 38%
- Miscellaneous Sources: 33%

Percentage Distribution for Diesel-Powered Mobile Source NOx Emissions in Florida (2014)

- On-Road Heavy Duty: 52%
- Non-Road Equipment: 33%
- Commercial Marine Vessels: 8%
- On-Road Light Duty: 4%
- Locomotives: 3%
Eligible Mitigation Actions

1. Repower or replace **Class 8 local freight trucks and port drayage trucks** with new diesel, alternative fuel or electric engines;

2. Repower or replace **Class 4-8 school buses, shuttle buses or transit buses** with new diesel, alternative fuel or electric engines;

3. Repower or replace **Class 4-7 local freight trucks** with new diesel, alternative fuel or electric engines;

4. Repower or replace **pre-Tier 4 diesel switcher locomotives** with new diesel, alternative fuel or electric engines;

5. Repower or upgrade **diesel-powered ferries and tugs** with new diesel or alternative fuel engines;

6. Provide **electric shorepower equipment** for oceangoing vessels;

7. Repower or replace **diesel-powered airport ground support equipment** with electric engines;

8. Repower or replace **large forklifts and port cargo handling equipment** with electric engines;

9. Build new light-duty **zero emission vehicle supply equipment** (electric charging or hydrogen dispensing stations); and

10. Use trust funds to provide matching funds for state allocation of funding under the **Diesel Emission Reduction Act (DERA)**.

**NOTE:** Replaced engines or vehicles must be scrapped.
The Trust Agreement requires that states describe how they will consider potential benefits to air quality in areas that bear a disproportionate share of the air pollution burden.

- There are numerous approaches to identifying such areas, including the U.S. EPA's "EJ SCREEN," Florida's air quality monitoring network data, and U.S. Census data.
Population data could be used to identify projects that would benefit more densely populated areas.
Emissions inventories could be used to identify areas that have disproportional levels of NOx emissions.
Design values for ground-level ozone (i.e. smog) could be used to identify areas that have higher concentrations of ground-level ozone.
Emissions Benefits

• The Settlement requires that each State Beneficiary Mitigation Plan provide a description of the **expected range of emissions benefits** (i.e. total estimated tons of NOx reductions) to be achieved under the plan.

• This will vary depending on the considerations that guide the project selection process.

FOR CONTEXT:
• Approximately 33,160 of the 580,000 affected VW vehicles were in Florida.
• The Department estimates that these vehicles emitted approximately 500 tons of excess NOx per year.
Emissions Benefits

Example Eligible Mitigation Actions
Replacing old on-road diesel vehicles with new diesel vehicles

- Emissions estimated using EPA’s Diesel Emissions Quantifier (DEQ) tool.
- New alternate fuel vehicle emissions closely approximate new diesel fuel vehicle emissions. Replacing with electric would result in lower emissions.

<table>
<thead>
<tr>
<th>DEQ Inputs</th>
<th>NO$_x$ Emissions (lbs/yr)</th>
<th>PM Emissions (lbs/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type</td>
<td>Eligible Unit</td>
</tr>
<tr>
<td>Model year 1999</td>
<td>Class 8 Truck</td>
<td>686</td>
</tr>
<tr>
<td>Annual mileage:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model year 1999</td>
<td>School Bus</td>
<td>266</td>
</tr>
<tr>
<td>Annual mileage:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model year 1999</td>
<td>City Bus</td>
<td>1,764</td>
</tr>
<tr>
<td>Annual mileage:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Emissions Benefits

Example Eligible Mitigation Actions
Replacing old non-road diesel units with new diesel units

- Emissions estimated using EPA’s Diesel Emissions Quantifier (DEQ) tool.
- New alternate fuel vehicle emissions closely approximate new diesel fuel vehicle emissions. Replacing with electric would result in lower emissions.

<table>
<thead>
<tr>
<th>DEQ Inputs</th>
<th>NO(_x) Emissions (lbs/yr)</th>
<th>PM Emissions (lbs/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switcher Locomotive</strong></td>
<td>Eligible Unit: 9,518</td>
<td>New Unit: 542</td>
</tr>
<tr>
<td><strong>Tug Boat</strong></td>
<td>Eligible Unit: 28,702</td>
<td>New Unit: 796</td>
</tr>
<tr>
<td><strong>Airport Equipment</strong></td>
<td>Eligible Unit: 1,956</td>
<td>New Unit: 64</td>
</tr>
</tbody>
</table>

DEQ Inputs:
- 1,000 HP Tier 0 engine
  - Annual hours of operation: 3,000
- Two 1,000 HP uncontrolled engines
  - Annual hours of operation: 1,000
- 175 HP uncontrolled engine
  - Annual hours of operation: 1,000
Next Steps

• The **Diesel Emissions Mitigation Program Public Survey** will be available online through May 11, 2018.

• The Department will use responses obtained through this survey in developing Florida’s State Beneficiary Mitigation Plan.

• Individuals interested in submitting **general comments** on Florida’s approach to the developing the State Beneficiary Mitigation Plan may also **email** those comments to: **VWMitigation@FloridaDEP.gov**

• At this time, **the Department is not soliciting funding requests** or proposals for any specific diesel emissions mitigation project.
Important Links

Volkswagen Settlement Webpage

Diesel Emissions Mitigation Program Public Survey

Volkswagen Settlement Email Subscription Sign-Up: https://floridadep.gov/subscribe

Contact Information

Division of Air Resource Management:
John Paul Fraites, (850) 717-9021

Diesel Emissions Mitigation Program Email: VWMitigation@FloridaDEP.gov
Florida’s Diesel Emissions Mitigation Program

Questions?