



Department of
**Environment &
Conservation**

Volkswagen Settlement: Tennessee's Approach to Implementing the Environmental Mitigation Trust

**Tennessee Department of Environment and Conservation
Office of Energy Programs**



Environmental Mitigation Trust

- **TN's initial allocation based on the 2.0 and 3.0 liter partial settlements is \$45,759,914.**
- TDEC has been identified by Tennessee Governor Bill Haslam as the Lead Agency for purposes of administering Tennessee's trust allocation.
- On **October 2, 2017**, the final, executed Trust Agreements under the partial settlements with the U.S. federal government for 2.0 and 3.0 liter vehicles were filed with the Court, establishing the Trust Effective Date (TED) for the Environmental Mitigation Trust.

Environmental Mitigation Trust

**Trust Effective
Date (TED):
October 2, 2017**

**Beneficiary
Certification Forms
required to be filed
within 60 days of TED --
TN filed on November
15-16, 2017**

**Trustee approved
Beneficiary status
of all Governmental
Entities on January
29, 2018**

**Beneficiary
Mitigation Plan
submitted (no
later than 30
days prior to
submitting the
first funding
request)**

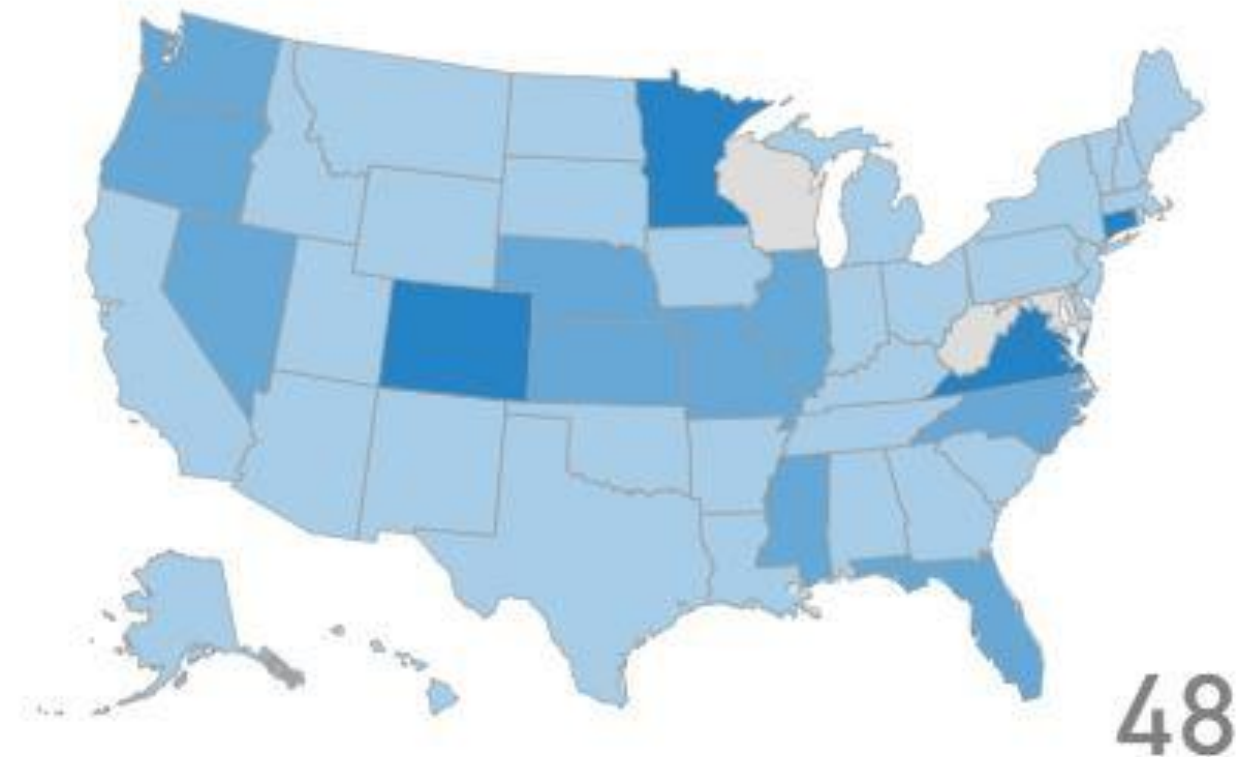
Beneficiary Mitigation Plan

The Plan must summarize how the Beneficiary (TN) plans to use its mitigation funds, addressing:

- TN's overall goal for the use of the funds;
- The categories of Eligible Mitigation Actions TN anticipates that it will use and the expected percentages of funds to be used for each type of action;
- How TN will consider the beneficial impact of Eligible Mitigation Actions on air quality in areas that bear a disproportionate share of the air pollution burden within its jurisdiction;
- The expected ranges of emissions benefits TN estimates would be realized by implementation of the Eligible Mitigation Actions identified in the Plan;
- The process by which TN shall seek and consider public input on its Beneficiary Mitigation Plan.

VW-Related Activity by Other States

- As of 1/29/18, all states and relevant territories have been deemed Beneficiaries
- 48 states have requested some kind of public comment
- 29 draft Beneficiary Mitigation Plans and/or proposals have been released for public review by the states of: Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Idaho, Illinois, Indiana, Iowa, Maine, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Vermont, Virginia, and Washington
- 2 states have released RFPs (Virginia and Colorado), both for Light Duty ZEV Supply Equipment



States that have requested some kind of public comment as of 5/9/2018, courtesy of Atlas Policy's EV Hub

Timeline for BMP Development & Related Program Design

Q4 2017:

Hosted Public Information Sessions; solicited comments / feedback / input to inform *draft* BMP.

Q1 2018:

Close of comment period to inform *draft* BMP; deadline to respond to RFI; reviewed & considered comments and responses.

Q2 2018:

Complete *draft* BMP; submit draft BMP to Governor's Office; finalize *proposed* BMP & release for public comment; program design.

Late Q2-EarlyQ3 2018:

Close of public comment period; review & consider comments; finalize BMP, submit to Trustee, release to public; continue with program design.

Q3 2018:

Release first solicitation for projects - likely limited to 1 of the categories in the final BMP.

VW Public Info Sessions

To date, TDEC's Office of Energy Programs (OEP) has held five VW Diesel Settlement public information sessions in Nashville, Knoxville, Memphis, Chattanooga, and online via webinar. These meetings served to provide an overview of the VW Diesel Settlement, the Environmental Mitigation Trust, TDEC's process for developing a proposed Beneficiary Mitigation Plan for Tennessee, and the types of eligible mitigation actions that can be funded by Tennessee's Environmental Mitigation Trust allocation.

- **Nashville:** October 31, 10:30 am-12 pm Central
- **Knoxville:** November 7, 10:30 am-12 pm Eastern
- **Memphis:** November 17, 1:30 pm- 3 pm Central
- **Chattanooga:** December 15, 10:30 am-12 pm Eastern
- **Webinar:** December 19, 2 pm-3:30 pm Central. Please note that the webinar was recorded and a link to the recording will be posted on our Volkswagen Diesel Settlement Resources page.

Stakeholder Engagement in TN: Environmental Mitigation Trust

- A multi-disciplinary internal Advisory Council has been established, with members from Air Pollution Control, Office of Energy Programs, Office of Policy & Sustainable Practices, and Office of General Counsel.
- TDEC created [a webpage](#) that provides an overview of the Settlement, links to related resources, and a number of FAQs.
- TDEC sought public input from stakeholders to shape TN's Beneficiary Mitigation Plan. All public comments were to be submitted via a Public Comment Form on TDEC's website or directly through email or phone by **11:59 pm CST on January 15** to be considered for the Beneficiary Mitigation Plan.
- On December 12, TDEC released an RFI to seek cost information on Eligible Mitigation Actions, in order to inform TN's Beneficiary Mitigation Plan. Responses were due to TDEC by **January 23 at 11:59 PM CST**.

Section 4.2.8 : Notice of Availability of Mitigation Action Funds

- Section 4.2.8 of the Trust Agreement states that not later than 30 Days after being deemed a Beneficiary, each Beneficiary must provide a copy of the Trust Agreement to the U.S. Department of the Interior, the U.S. Department of Agriculture, and any other Federal agency that has custody, control or management of land within or contiguous to the territorial boundaries of the Beneficiary and has by then notified the Beneficiary of its interest hereunder, explaining that the Beneficiary may request Eligible Mitigation Action funds for use on lands within that Federal agency's custody, control or management (including, but not limited to, Clean Air Act Class I and Class II areas), and setting forth the procedures by which the Beneficiary will review, consider, and make a written determination upon each such request.
- Appendix D-2 to the Trust Agreement defines "Government" as a "State or local government agency."
- The term "Federal Agency" is defined in Section 1.11 of the Trust Agreement as "any agency of the United States government."



Variables Considered by TDEC VW TAC

- The current emissions inventory for Tennessee, as detailed by the Environmental Protection Agency's (EPA's) National Emissions Inventory (NEI) ;
- Expected ranges of emissions benefits from potential projects under all EMA categories except for Ocean Going Vessel Shorepower (determined to not be viable in Tennessee), calculated using the EPA's Diesel Emissions Quantifier (DEQ) ;
- Vehicle, vessel, and equipment inventories in Tennessee, sourced from the Tennessee Department of Transportation's vehicle inventory data (compiled by the University of Tennessee, Knoxville for NEI reporting), as well as from inventory data provided by stakeholders;
- Cost to Repower or replace eligible engines, vehicles, vessels, or equipment, sourced from responses to TDEC's RFI on cost information;
- Cost effectiveness of EMAs in terms of dollar spent per ton of NOx reduced;
- Potential impact to vulnerable populations or populations affected by a disproportionate share of the air pollution burden;

(Variables continued on next slide)

Variables Considered by TDEC VW TAC

- Lessons learned from emissions reduction and sustainable transportation programs;
- Economic development potential;
- Public input;
- Market demand for particular EMA categories, fuel types, and technologies, as expressed by potential applicants through public input (i.e., public interest in or support for);
- Viability of specific technologies, based on cost or commercial availability;
- Availability of other funding sources (e.g., Federal Highway Administration's Congestion Mitigation Air Quality Improvement Program – administered by TDOT, TVA's Electric Forklift Program, Federal Aviation Administration's Voluntary Airport Low Emissions Program);
- Opportunities to strengthen emergency preparedness through diversity of fuel and project types;
- Ability to maximize the State's allocation through required cost share; and
- Ancillary benefits (e.g., quietness of engines, health benefits to children's lungs from a school bus project).

Expected Ranges of Emissions Benefits

The Beneficiary Mitigation Plan (BMP) must include, *"a general description of the expected ranges of emissions benefits the Beneficiary estimates would be realized by implementation of the Eligible Mitigation Actions identified."*

Such emissions benefits could be measured or referenced in a variety of ways:

Emissions reductions in tons/year: Measuring emissions reductions in tons/year could allow for more of an apples to apples comparison across multiple project types. Within its draft BMP, the State of Colorado considers expected ranges of emissions benefits in tons/year.

Emissions reductions as a total lifetime reduction per project (this requires additional assumptions about the useful life of the vehicle or engine being replaced/repowered): Programs may also choose to evaluate emissions reductions as a total lifetime reduction per project, as this would incorporate additional assumptions and nuance related to the useful life of the vehicle or engine being replaced/repowered. Both the states of Pennsylvania and Washington have taken this approach in their draft BMPs:

Emissions reductions as a percent change: The State of Virginia references emissions reductions as a percent change; they do this by noting EPA exhaust emission standards for NOx and the differential that is expected when replacing one engine standard with another.

Expected Ranges of Emissions Benefits

Expected ranges of emissions benefits were calculated by Division of Air Pollution Control staff using EPA's Diesel Emissions Quantifier (DEQ), which provides a standard platform for computing the expected range in emissions reductions across a variety of on-road and non-road vehicles and engines.

Expected ranges of emissions benefits were captured in tons/year, in order to allow for a side by side comparison of project types by annual emission reduction benefit.

The State expects to also consider and evaluate lifetime emissions benefits (total emissions reductions to be achieved when taking into consideration the remaining useful life of the vehicle to be repowered or replaced) once additional and specific project details are known (e.g., actual model years and engine types proposed to be repowered or replaced); this is expected to occur during the project solicitation and review phases.

Evaluating Beneficial Impacts of Mitigation Actions

The VW Trust Agreement states, as part of what is required to be considered in the Beneficiary Mitigation Plan:

- *(iii) 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;*

Evaluating beneficial impacts of selected Eligible Mitigation Actions in areas that bear a disproportionate share of air pollution burden is dependent upon how TDEC defines “*areas that bear a disproportionate share of air pollution burden.*”

Defining Areas of Burden

TDEC could define areas of disproportionate burden in a number of ways, or include all definitions:

- **High Emission Areas** – areas with higher than average concentrations of NOx based on National Emissions Inventory (NEI) data.
- **High Pollution Areas** – areas located near ports, rail yards, terminals, distribution centers, truck stops, construction sites, bus yards or depots, and other major sources of pollution; and/or areas with higher than Tennessee average criteria pollutant levels.
- **Areas or Communities**
 - With **higher than state average minority or low-income** populations;
 - With **higher than state average populations of elderly or young**; or
 - A combination of all these considerations.

Example of Resources: Eligible Vehicle Inventory in TN

According to TDOT's vehicle inventory data, which is used for reporting to EPA for the National Emissions Inventory, in 2014, TN had ***approximately***:

Class 8 Local Freight Trucks and Port Drayage Trucks:

- 41,938 combination short-haul trucks (with majority of operation within 200 miles of home base) (~63% are MY 1992-2009)
- 2,714 refuse trucks (~67% are MY 1992-2009);

Class 4-8 School Buses, Shuttle Buses, or Transit Buses:

- 827 transit buses; (~75% are 2009 or older) and
- 8,864 school buses (~78% are 2009 or older)

Class 4-7 Local Freight Trucks:

- 111,493 single-unit short-haul trucks (with majority of operation within 200 miles of home base) (~64% are MY 1992-2009)

Example of Resources: Eligible Vessel & Equipment Inventory in TN

According to inventory data provided by stakeholders, TN has *approximately*:

Freight Switchers:

- ~199 Tier 0 or Tier 0+ freight switchers in TN

Ferries / Tugs:

- ~255 eligible tugs/towboats/pushboats owned by TN-based operators [245 pushboats and 10 tugboats] ; 2 ferries [both owned and operated by TDOT; TDOT confirmed that both have newer engines not in need of replacement]

Airport GSE:

- ~3,279 pieces of equipment (Tier 0 [126], Tier 1 [1,256], or Tier 2 [1,897] diesel powered equipment)

Forklifts:

- ~12,189 eligible forklifts in TN (those already incentivized by TVA's forklift program were removed from total forklift population to get this number)

Port Cargo Handling Equipment:

- ~100 yard trucks; 1 rubber tire load and empty container lift at the Memphis port



Tools to Inform Beneficiary Mitigation Plan

TDEC will also utilize a variety of tools to inform its beneficiary mitigation planning process. A few examples of some of the tools that will be useful include:

- **EJSCREEN** – Environmental justice screening and mapping tool that combines environmental and demographic indicators in maps and reports.
- **Alternative Fuel Life-Cycle Environment and Economic Transportation (AFLEET) Tool** – Can provide estimates of fuel use, GHG emissions, NOx reductions achieved by switching to alternative fuel or from replacing older diesel engine with a new diesel engine, and cost of ownership (for on-road vehicle categories only).
- **Diesel Emissions Quantifier (DEQ)** – An EPA tool that specializes in estimating emissions from medium- and heavy-duty diesel engines (both on-road and non-road applications). The tool is designed to estimate baseline emissions, emissions reductions, cost-effectiveness, and health benefits from the reduction of particulate matter and is frequently used to estimate diesel emissions reductions for DERA projects.
- **Atlas Policy EV Charging Financial Analysis Tool** – Originally developed for the Washington State Legislature's Joint Transportation Committee to identify business models for financially sustainable, private-sector funded charging networks. The tool is able to calculate emissions benefits based on station use and an emissions factor.

Additional Resources

- **NASEO & NACAA VW Settlement Clearinghouse and Working Group** – The National Association of State Energy Officials (NASEO) and the National Association of Clean Air Agencies (NACAA) have created a VW Settlement Working Group to enable state-to-state communication on the VW settlement's Environmental Mitigation Trust. The VW Working Group facilitates monthly calls with State Energy Offices, Air Agencies, and other state leads to address pressing questions related to the settlement, allow peer-to-peer networking and information sharing, and explore potential multi-state activities under the Environmental Mitigation Trust. OEP Assistant Commissioner serves as a State Advisor to this Working Group.
 - A corresponding “Clearinghouse” website provides foundational information on the settlement, as well as tools and resources that states may use to learn more about eligible projects and to develop investment strategies that support the alternative fuels market, reduce mobile source emissions, and further state economic development, environmental, and energy efficiency goals.
- **Atlas Policy EV Hub** – This is an online platform to equip stakeholders with actionable information on the EV market. It contains information on vehicle sales, infrastructure deployment, public policy, and media coverage. The site also aggregates this information in easy-to-use dashboards to compare actions and activity across states.

Contact Us!

Molly Cripps, Assistant Commissioner

Molly.cripps@tn.gov

Or

Alexa Voytek, Senior Program Manager

Alexa.voytek@tn.gov

Office of Energy Programs

312 Rosa L Parks Ave.

Nashville, TN

615-741-2994

<https://www.tn.gov/environment/VWSettlement>

The logo for the state of Tennessee, consisting of the letters "TN" in white, serif font, centered within a red square. A thin blue horizontal line is positioned below the square.

TN