

Commonwealth of Pennsylvania



Beneficiary Mitigation Plan

*In re: Volkswagen “Clean Diesel” Marketing, Sales Practices, and
Products Liability Litigation, No. 3:15-md-02672-CRB (N.D. Cal.)
(MDL 2672)*

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Beneficiary Mitigation Plan – Pennsylvania

I. Settlement Summary and Background

A. Settlement Summary

This Beneficiary Mitigation Plan for the Commonwealth of Pennsylvania (Commonwealth or Pennsylvania) summarizes how Pennsylvania plans to use the funds allocated to it under the Environmental Mitigation Trust Agreement for State Beneficiaries (State Trust Agreement), in the case, *In Re: Volkswagen “Clean Diesel” Marketing, Sales Practices, and Products Liability Litigation*. This multidistrict litigation is in the United States (U.S.) District Court for the Northern District of California, No. 3:15-md-02672-CRB (N.D. Cal.), MDL No. 2672.

The State Trust Agreement became effective when the U. S. Department of Justice filed it with the court on October 2, 2017. The State Trust Agreement, along with an Environmental Mitigation Trust Agreement for Indian Tribe Beneficiaries (Indian Tribe Trust Agreement), establish \$2.925 billion in environmental mitigation trust funds (State and Indian Tribe Mitigation Trusts), to be divided primarily among the participating States and Indian Tribes. The State and Indian Tribe Trust Agreements are designed to fulfill the environmental mitigation obligations of Volkswagen and the other defendants (VW or defendants) set forth in two Partial Consent Decrees previously approved by the court in the case. The defendants will fund the State and Indian Tribe Mitigation Trusts. Pennsylvania is currently allocated \$118.5 million of the State Mitigation Trust to fund eligible projects that reduce oxides of nitrogen (NO_x), including the costs of Eligible Mitigation Action Administrative Expenditures relating to those projects for the Commonwealth or the applicants. (Appendix D-1B State Trust Agreement.) Links to the State Trust Agreement, Partial Consent Decrees and other helpful documents are available on the Pennsylvania Department of Environmental Protection’s (DEP or Department) Driving Pennsylvania Forward website here: www.dep.pa.gov/drivePAforward.

Under the State Trust Agreement, the Commonwealth timely filed the required Certification for Beneficiary Status with the court on November 16, 2017, and submitted it to the court-approved Trustee of the State Mitigation Trust, Wilmington Trust, N.A online on November 17, 2017, and by certified mail on November 20, 2017. Pennsylvania was approved as a ‘Beneficiary’ of the State Mitigation Trust by the Trustee on January 29, 2018. The Certification for Beneficiary Status identifies the Department as the Commonwealth’s ‘Lead Agency’ as defined in paragraph 4.2 of the State Trust Agreement.

B. Case Background

In January 2016, the U.S. sued VW, alleging that VW installed defeat devices in certain model year 2009-2016 vehicles, and that the defeat devices activated during emissions testing to make the vehicle emission systems appear compliant, when in fact the vehicles emitted 9 to 40 times the allowable amount of NO_x, a harmful air pollutant, during on-road operation. California also sued.

On October 25, 2016, and May 17, 2017, respectively, the Court approved two Partial Consent Decrees¹ among the U.S., California and the defendants, to settle violations of the federal Clean Air Act and the California Health and Safety Code for the approximately 580,000 2.0-liter and 3.0-liter VW vehicles in the U.S. that were equipped with defeat devices. The Partial Consent Decrees required, among other things, that VW fund environmental mitigation trusts to be used by States and Indian Tribes to reduce NO_x emissions. This requirement is now embodied in the October 2, 2017, State Trust Agreement and Indian Tribe Trust Agreement.

Consistent with the terms of the State Trust Agreement, this Beneficiary Mitigation Plan provides the public with insight into Pennsylvania's overall structure for focused use of the mitigation funds, as well as information about the specific types of projects that are eligible for funding under the State Trust Agreement.

As specified in paragraph 4.1 of the State Trust Agreement, the Beneficiary Mitigation Plan will not be binding on Pennsylvania when it is final, nor will the Beneficiary Mitigation Plan create any rights in any person(s) or entity(ies) to claim an entitlement or vested right of any kind. This Beneficiary Mitigation Plan provides the level of detail reasonably ascertainable at the time of submission to the Trustee of the State Mitigation Trust. Pennsylvania may adjust its goals and specific spending plans by updating the Beneficiary Mitigation Plan under the terms of the State Trust Agreement. The process for updating the Beneficiary Mitigation Plan is further described below.

The State Trust Agreement is designed to be straightforward and uncomplicated to implement. Ten specific 'Eligible Mitigation Actions,' as well as the 'Eligible Mitigation Action Administrative Expenditures' for which the State Mitigation Trust may be used, are set forth clearly in Appendix D-2 of the State Trust Agreement. A state is not required to use the funding available to it under the State Trust Agreement for all 10 categories of eligible projects. Pennsylvania, however, has chosen to consider funding all Eligible Mitigation Actions as set forth in the State Trust Agreement. This Beneficiary Mitigation Plan describes how Pennsylvania plans to allocate the funding. Pennsylvania is responsible for verifying the eligibility of projects prior to submitting a funding request to the Trustee.

II. Air Quality in Pennsylvania

To better understand the impact of the excess emissions from the VW vehicles in Pennsylvania, it is important to understand current air quality in Pennsylvania. Reducing emissions from diesel engines is one of the most significant air quality challenges facing the Commonwealth. According to the U.S. Environmental Protection Agency's (EPA) 2014 National Emission Inventory, emissions from highway and non-road diesel-powered mobile sources (including marine, rail, and aviation) accounted for approximately 145,395 tons per year (tpy) of NO_x in Pennsylvania in 2014.² New standards for diesel vehicles and equipment promulgated by the

¹ These are referred to in this Beneficiary Mitigation Plan as the First Partial Consent Decree and the Second Partial Consent Decree, respectively.

² To access EPA's 2014 National Emission Inventory data, see: <https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data>.

EPA, applicable to model year 2007 and newer vehicles and engines,³ will ensure that newer medium-duty and heavy-duty diesel engines will be less polluting. Many older diesel engines, however, can operate for 25 to 30 years before replacement is required. Thus, it may be many years before existing equipment is replaced with newer, cleaner equipment due to typical fleet turnover. It is likely that a large population of older diesel engines unaffected by the new federal standards will continue to operate in the Commonwealth well into the future. Strategies and programs currently exist to reduce emissions from these older engines. Replacing, retrofitting, or repowering older diesel vehicles and engines are cost-effective strategies to reduce emissions of NO_x and volatile organic compounds (VOC), which are precursor pollutants for the formation of fine particulate matter (PM_{2.5}) and ground-level ozone, by as much as 90 percent or more. Dollars available under the State Trust Agreement will enable the Commonwealth to help fund more of these types of projects than currently funded through Pennsylvania's existing programs.

III. Elements of Pennsylvania's Beneficiary Mitigation Plan⁴

Paragraph 4.1 of the State Trust Agreement specifies several elements that a Beneficiary Mitigation Plan must address:

- A. The Beneficiary's overall goal for the use of the funds;
- B. The categories of Eligible Mitigation Actions the Beneficiary anticipates will be appropriate to achieve the stated goals and the preliminary assessment of the percentages of funds anticipated to be used for each type of Eligible Mitigation Action;
- C. 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; and
- D. A general description of the expected ranges of emission benefits the Beneficiary estimates would be realized by implementation of the Eligible Mitigation Actions identified in the Beneficiary Mitigation Plan.

Additionally, the State Trust Agreement requires the Beneficiary Mitigation Plan to explain the process by which the Beneficiary will seek and consider public input on its Beneficiary Mitigation Plan. Information about public input is described separately in Section IV of this document.

The first four required items of the Beneficiary Mitigation Plan, listed above as items A-D, are discussed here:

³ For a list of EPA regulations for on-road heavy duty vehicles, see: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-smog-soot-and-other-air-pollution-commercial#regulations>.

⁴ This section addresses the first four required elements of the Beneficiary Mitigation Plan, as listed in paragraph 4.1 of the State Trust Agreement. The fifth required element, relating to public input on the Beneficiary Mitigation Plan, is addressed in Section IV of this document.

A. The Beneficiary's Overall Goal for the Use of the Funds

Pennsylvania intends to apply to the Trustee to use funds from Pennsylvania's allotted share to fund projects throughout the Commonwealth that will reduce or eliminate emissions of NO_x, focusing on the most cost-effective projects that will maximize emission reductions. The following list indicates Pennsylvania's overall goals and is not meant to be exclusive.

Pennsylvania may consider other qualifications and factors when determining whether projects are eligible for funding and whether to submit a funding request to the Trustee for those projects. The order in which Pennsylvania's overall goals are listed below does not indicate the weight that will be given to each of the goals in the review and scoring of project applications. Scoring criteria for specific projects, including values and weighting, will be detailed in guidance documents that DEP will develop for any funding programs revised or created to distribute Pennsylvania's State Mitigation Trust allocation. Applications will be reviewed based on this scoring criteria.

Consideration will be given to distributing project funding statewide, as appropriate, primarily based on the cost-effectiveness and the quantity of NO_x emission reductions. Pennsylvania anticipates the following:

1. Focus on funding projects that repower, retrofit, or replace large diesel engines, such as locomotives or marine diesel engines.
2. Focus on funding projects that repower, retrofit, or replace large numbers of older diesel vehicles and engines.
3. Focus on vehicles, engines, and equipment operating or located in or near areas that bear a disproportionate share of the air pollution burden (priority areas), such as:
 - Distribution centers;
 - Multimodal centers;
 - Ports;
 - Rail yards;
 - Rail and bus terminals;
 - Bus yards or depots;
 - Airports;
 - Brownfields; and
 - Environmental justice areas.
4. Focus on projects located in areas that are in nonattainment of National Ambient Air Quality Standards (NAAQS) for ozone, particulate matter (PM), or nitrogen dioxide (NO₂). Nonattainment is defined differently for each NAAQS and is based on the results of ambient air monitoring.⁵ A list of EPA-designated NAAQS nonattainment areas in Pennsylvania is available on the following website: <https://www.epa.gov/green-book>.

⁵ For an explanation of "nonattainment" for each NAAQS, see 40 C.F.R. Part 50.

Pennsylvania also maintains an ‘Attainment Status’ website here:
<http://www.dep.pa.gov/Business/Air/BAQ/Regulations/Pages/Attainment-Status.aspx>.

5. Focus on projects located in areas with high-population density and high-traffic density. In Pennsylvania, areas of high-population density (such as Philadelphia and Pittsburgh) and high-traffic density (such as the I-95 corridor, the I-81 corridor, and major ports) are often the areas with the poorest air quality. Projects in these areas will result in much-needed health benefits for residents of these areas, who are often disproportionately members of vulnerable populations such as the elderly and the economically disadvantaged.
 6. Focus on projects that advance Pennsylvania’s energy, environmental, or economic development goals including, but not limited to, reducing other significant pollutants, promoting or supporting infrastructure development relating to the projects, or transforming or advancing the market for technologies eligible for State Mitigation Trust funding.
- B. The Categories of Eligible Mitigation Actions the Beneficiary Anticipates will be Appropriate to Achieve the Stated Goals and the Preliminary Assessment of the Percentages of Funds Anticipated to be Used for Each Type of Eligible Mitigation Action.⁶
1. Pennsylvania will consider submitting projects to the Trustee for funding from all the categories of Eligible Mitigation Actions identified in Appendix D-2 of the State Trust Agreement, including project types authorized under the Diesel Emission Reduction Act (DERA). Pennsylvania intends to prioritize projects to submit to the Trustee for funding that are the most cost-effective and that yield the largest amount of NO_x emission reductions.
 2. For the development of this Beneficiary Mitigation Plan, Pennsylvania has separated the Eligible Mitigation Actions⁷ into four groups by project type, namely:
 - a. On-road fleet projects;
 - b. Non-road/off-road fleet projects;
 - c. DERA-eligible fleet projects; and
 - d. Light-duty zero emission vehicle supply equipment.
 3. For this Beneficiary Mitigation Plan, the Department considers a fleet to be either a single eligible vehicle, engine, or piece of equipment or combination of vehicles, engines, or pieces of equipment which are eligible as part of an Eligible Mitigation Action. The definition of a fleet may be further refined by this Commonwealth as existing funding

⁶ Over the term of the Beneficiary Mitigation Plan, these allocations may shift depending on demand and eligible project needs in Pennsylvania, as well as other economic and policy factors.

⁷ The Commonwealth has placed all 10 Eligible Mitigation Actions within the four groups in Section III.B.5.a-d.

programs are revised or new funding programs are developed.⁸ Pennsylvania may use up to 15 percent of the total State Mitigation Trust allocation for administrative costs, as authorized in Appendix D-2 of the State Trust Agreement.⁹

4. For some Eligible Mitigation Actions, it is not currently clear whether the fleets eligible for projects under the Eligible Mitigation Actions exist in Pennsylvania (government-owned freight switchers, for example) and, if they do, whether there is interest from any public or private entity in participating in any of the Eligible Mitigation Actions relating to that type of fleet. The Department expects to identify the types of fleets eligible for funding that exist in Pennsylvania and the level of public and private interest that exists in applying for funding and completing mitigation projects with those fleets. This will be a continuous process for Pennsylvania, essentially evaluating necessity, demand, and need.
5. Section III.B.5.a-d details how the Department plans to group the categories of Eligible Mitigation Actions, and the projects listed under each Eligible Mitigation Action, for the purposes of this Beneficiary Mitigation Plan. The project groups are listed differently in this Section when compared to the listing of Eligible Mitigation Actions in Appendix D-2 of the State Trust Agreement. The project groups, however, include all the eligible project types under each Eligible Mitigation Action category listed in the group. See Attachment A to this Beneficiary Mitigation Plan for full descriptions of the Eligible Mitigation Actions categories and associated definitions. The State Trust Agreement establishes a maximum funding level for each project type but does not establish minimum funding levels. In addition to the project groups, administrative expenditures are discussed in Section III.B.5.e.

a. On-Road Fleet Projects:

This group includes projects listed under the following Eligible Mitigation Action categories:

- Class 8 Local Freight Trucks and Port Drayage Trucks;
- Class 4-8 School Buses, Shuttle Buses, or Transit Buses; and
- Class 4-7 Local Freight Trucks.

Pennsylvania expects to request between 35 and 40 percent of the State Mitigation Trust funding allocated to Pennsylvania for projects involving on-road fleets in Pennsylvania. The on-road projects include replacements or repowers with new diesel, alternative fuel or electric vehicles and engines (including infrastructure relating to the electric vehicles and engines). The State Trust Agreement establishes the maximum funding levels for these types of projects at between 25-100 percent for eligible project costs. A new funding program will be developed to evaluate these projects for submission to the Trustee.

⁸ See Section III.B.5.a-d of this Beneficiary Mitigation Plan for the Eligible Mitigation Actions that would be included under each grouping.

⁹ See Section III.B.5.e of this Beneficiary Mitigation Plan.

Some on-road projects eligible under this category may also be eligible for funding under the DERA program, at the lower funding levels established by the DERA program. *See* Section III.B.5.c for additional information on DERA-eligible projects.

b. Non-Road/Off-Road Fleet Projects:

This group includes projects listed under the following Eligible Mitigation Action categories:

- Freight Switchers;
- Ferries/Tugs;
- Ocean Going Vessels (OGV) Shorepower;
- Airport Ground Support Equipment; and
- Forklifts and Port Cargo Handling Equipment.

Pennsylvania expects to request between 35 and 40 percent of the State Mitigation Trust funding allocated to Pennsylvania for projects involving non-road or off-road fleets in Pennsylvania. Per vehicle, non-road and off-road repower or replacement projects, specifically those involving rail and marine applications, are significantly more expensive than projects involving on-road fleets. Additionally, non-road or off-road projects tend to result in the most cost-effective and largest emission reductions.¹⁰

The non-road or off-road projects include replacements or repowers with new diesel, alternative fuel or electric vehicles and engines (including infrastructure relating to the electric vehicles and engines). Some Eligible Mitigation Actions in this group, such as Airport Ground Support Equipment projects, are limited to only electric repowers or replacements. The State Trust Agreement establishes the maximum funding levels for these types of projects at between 25-100 percent for eligible project costs. A new funding program will be developed to evaluate these projects for submission to the Trustee.

Some non-road or off-road projects eligible under this category may also be eligible for funding under the DERA program at the lower funding levels established by the DERA program. *See* Section III.B.5.c for additional information on DERA-eligible projects.

c. DERA-eligible Fleet Projects:

This group includes projects listed under several different Eligible Mitigation Action categories that are eligible for funding under EPA's DERA programs. The Department has an existing state DERA program – the Pennsylvania State Clean Diesel Grant Program – which has reimbursed grantees for eligible project costs since 2008.¹¹

¹⁰ See Section III.D. of this Beneficiary Mitigation Plan for an analysis of potential emission benefits.

¹¹ Projects from multiple sectors have been funded through the Pennsylvania State Clean Diesel Grant Program. These have included retrofitting school buses, replacing long-haul tractor trailers with alternative fuel vehicles,

Pennsylvania expects to request up to 10 percent of the State Mitigation Trust funding allocated to Pennsylvania for DERA-eligible fleet projects. Funds from the State Mitigation Trust will be used as Pennsylvania's 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),¹² during the application process to request DERA funding from EPA. Projects eligible under this group include all project types currently allowed under the DERA programs, such as various types of retrofits, repowers, replacements and conversions. DERA-eligible projects are subject to the funding limits established by EPA for the DERA programs. The maximum funding levels for these types of projects range between 25-100 percent for eligible project costs.

There may be some overlap in eligibility for funding under the four project groups, with different applicant funding match requirements depending on the funding programs. Some projects included in the On-Road and Non-Road/Off-Road groupings are also eligible for funding through the Pennsylvania State Clean Diesel Grant Program, albeit at lower funding levels than those established by the State Trust Agreement. One example of this is a project to replace an existing diesel bus with an electric bus. Under the terms of the State Trust Agreement, this type of replacement project is eligible for funding ranging from a maximum of 75 percent for eligible project costs for privately-owned buses, or 100 percent for eligible project costs if the bus is government-owned. Under the Pennsylvania State Clean Diesel Grant Program (DERA), this bus replacement project would be eligible for maximum funding of 25 percent for eligible project costs; the applicant would be responsible for at least 75 percent of project costs.

In the DERA-eligible fleet group, both the Eligible Mitigation Actions already included under DERA programs, as well as all other projects allowed under DERA programs, are eligible for funding under the Pennsylvania State Clean Diesel Grant Program.

d. Light-Duty Zero Emission Vehicle Supply Equipment:

This group includes the projects listed in paragraph 9 of Appendix D-2 of the State Trust Agreement. These projects relate to light-duty zero emission vehicle (ZEV) supply equipment, including public and private electric vehicle charging equipment and hydrogen fuel cell refueling equipment. The State Trust Agreement identifies six specific 'stand-alone' recharging/refueling setups that are eligible for funding. The State Trust Agreement establishes the maximum funding levels for these types of projects at between 25-100 percent for eligible project costs. The light-duty ZEV supply equipment projects are not linked to the electric vehicle/equipment replacement or repower projects listed in paragraphs 1-8 of Appendix D-2. The ZEV supply equipment projects are also restricted to light-duty vehicle

replacing diesel transit buses with hybrid buses, replacing diesel airport ground support equipment with electric equipment, electrifying truck parking spaces, and many other projects.

¹² See State Trust Agreement, Appendix D-2, paragraph 10.

recharging/refueling locations, and do not include recharging/refueling locations exclusively for medium- or heavy-duty vehicles or equipment. Advances in technology may result in a single type of recharging or refueling equipment being used for all classes of vehicles and equipment in the future. Pennsylvania expects to request up to 15 percent of the State Mitigation Trust funding allocated to Pennsylvania for light-duty ZEV supply equipment projects.

Pennsylvania encourages applicants interested in this sector also to seek funding through VW's National ZEV Investment Commitment,¹³ which is administered by VW's subsidiary Electrify America, LLC.¹⁴ Pennsylvania may favor projects that have a transformative impact on the ZEV market or ZEV charging infrastructure market in Pennsylvania. Interested persons with questions about the National ZEV Investment Commitment may contact DEP's Office of Pollution Prevention and Energy Assistance with inquiries. See DEP's Driving Pennsylvania Forward website, www.dep.pa.gov/drivePAforward.

e. Administrative Costs:

Pennsylvania will apply for up to 15 percent of its allocation from the State Mitigation Trust funds for actual administrative expenditures associated with implementing Eligible Mitigation Actions. Eligible Mitigation Action Administrative Expenditures are specified on page 11 of Appendix D-2 of the State Trust Agreement. Pennsylvania's administrative costs will be calculated as a portion of the project costs for each project approved for funding by the Trustee and will be apportioned out of, not in addition to, the funding percentages allocated to the groups in Section III.B.5.a-d. In summary, administrative expenditures may include the following: employee (but not consultant) salaries and wages; fringe benefits, including health insurance, Federal Insurance Contributions Act tax, retirement, life insurance, and payroll taxes; supply costs; contractual costs; construction costs; and other eligible costs, including insurance, professional services, occupancy and equipment leases, printing and publication, training, indirect costs, and accounting. The full listing is found in Appendix D-2 of the State Trust Agreement. The 15 percent cap includes the aggregated amount of eligible administrative expenditures incurred by Pennsylvania and any third-party contractor(s). Contractors, and third-party contractors, are not defined in the State Trust Agreement. Pennsylvania plans to define those terms in the guidance documents for the funding programs.

f. Scrappage Requirements:

Many of the Eligible Mitigation Actions require the old vehicle or old equipment being replaced or repowered to be scrapped. The term 'scrapped' is defined in Appendix D-2 of the State Trust Agreement to mean to render inoperable and available for recycle, and, at a minimum, to specifically cut a 3-inch hole in the engine block for all engines. If any eligible vehicle will be replaced as part of an eligible project, 'scrapped' also includes under the definition the disabling of the

¹³ See Appendix C of the First Partial Consent Decree.

¹⁴ The website for Electrify America, LLC, is www.electrifyamerica.com.

chassis by cutting the vehicle's frame rails completely in half. The Department intends to include detailed scrappage requirements in the guidance documents it develops for funding programs, as well as in any funding agreement with funding recipients.

6. Specialty Programs: While the Department intends to work primarily from the four-group framework described above, the Department may, over the term of the State Trust Agreement, initiate stand-alone funding programs for specific technologies, project types, or applicants. Possible examples of this type of program are a program providing funding only for school buses, funding only for government entities, or funding only for electric transit buses.

C. 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 their Jurisdiction.

1. The Department has identified several types of areas that tend to bear a disproportionate share of the air pollution burden, referred to in this Beneficiary Mitigation Plan as 'priority areas.' Priority areas include areas designated nonattainment for a NAAQS, environmental justice areas, brownfields, and high-pollution areas.
 - a. NAAQS Nonattainment – Several areas throughout the Commonwealth are not attaining the federal NAAQS for ozone and PM_{2.5}. While all areas of the state are currently in attainment of the NO₂ NAAQS,¹⁵ NO_x is a precursor pollutant for both ozone and PM_{2.5}, for which there are several nonattainment areas. A list of EPA-designated NAAQS nonattainment areas in Pennsylvania is available on the following website: <https://www.epa.gov/green-book>. Pennsylvania also maintains an 'Attainment Status' website here: <http://www.dep.pa.gov/Business/Air/BAQ/Regulations/Pages/Attainment-Status.aspx>.
 - b. Brownfields and Environmental Justice Areas – The Department also considers brownfields and environmental justice areas to be areas that tend to bear a disproportionate share of the air pollution burden.
 - 1) 'Brownfields' are defined by EPA as a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Residents in and around brownfields may be exposed to a disproportionate share of the air pollution.
 - 2) The Department defines an 'environmental justice area' as any census tract where 20 percent or more individuals live in poverty, and/or 30 percent or more of the

¹⁵ As of December 2016. See, EPA's "Nonattainment Areas for Criteria Pollutants (Green Book)," available at <https://www.epa.gov/green-book>. The EPA Green Book provides detailed information about NAAQS designations, classifications, and nonattainment status. Information is current as of the date indicated on EPA's "Green Book" webpage. EPA provides the information in reports and maps and as data downloads.

population is minority.¹⁶ Environmental justice areas are priority areas because these areas usually include communities and/or populations that are more adversely, disproportionately and/or historically impacted by environmental issues and problems than other communities because of geography, poverty, income levels and similar types of factors. The Department's Environmental Justice website can be found here:

<http://www.dep.pa.gov/PublicParticipation/OfficeofEnvironmentalJustice/Pages/default.aspx>. This website provides both a link to a statewide map of Environmental Justice areas, as well as a tool to map individual Environmental Justice areas.

- c. High-Pollution Areas – High-pollution areas may include, but are not limited to: ports, rail yards, terminals, distribution centers, multi-modal centers, airports, high-traffic and/or high-population density areas, and bus yards or depots and the areas surrounding these locations. Pennsylvania plans to define this type of area in the guidance documents for the funding programs.
2. Pennsylvania plans to focus its mitigation project solicitation efforts on the types of priority areas discussed above. The Department has several ways to prioritize projects in priority areas.
 - a. Under competitive grants,¹⁷ extra points can be awarded during scoring for projects located in or near a priority area. The Pennsylvania State Clean Diesel Grant Program under DERA currently awards points in this manner. Any new competitive grant program would include a similar scoring methodology.
 - b. In most cases, non-competitive funding programs do not include a scoring process. As a result, the Department must take a different approach for prioritizing projects in priority areas when no scoring is involved in the application process. For rebate programs, sole-source grant awards, and other non-competitive funding methods, the Department can limit eligibility to projects located in or operating in these priority areas.
- D. A General Description of the Expected Ranges of Emission Benefits the Beneficiary Estimates would be Realized by the Implementation of the Eligible Mitigation Actions Identified in the Beneficiary Mitigation Plan.

To develop an estimate of the expected ranges of emission benefits resulting from implementation of the actions identified in this Beneficiary Mitigation Plan, the Department used a representative sample of project types for which the Department expects applications for funding under each group described above in Section III.B.5.a-d of this Beneficiary

¹⁶ Pennsylvania Environmental Justice Areas:
<http://www.dep.pa.gov/PublicParticipation/OfficeofEnvironmentalJustice/Pages/PA-Environmental-Justice-Areas.aspx>.

¹⁷ See Section V.A. of this Beneficiary Mitigation Plan for a discussion of the funding mechanisms available to the Department.

Mitigation Plan. Actual emission reductions achieved will depend on the types of projects applicants submit for funding, how many applicants apply for funding, and which projects the Department selects to submit with a request for funding to the Trustee.

For this analysis, the Department made the following assumptions about the amount of funding allocated to each of the groups identified in Section III.B.5.a-d, above, from the total State Mitigation Trust funds allocated to Pennsylvania: 38.75 percent for on-road fleet projects, 38.75 percent for non-road/off-road fleet projects, 7.5 percent for DERA-eligible fleet projects, and 15 percent for light-duty zero emission vehicle supply equipment projects. The analysis may be revised in a future year of the term of the State Trust Agreement to reflect changes to the funding percent allocations to the groups as needs and market demands change.

1. On-Road Fleet Projects – The Department analyzed a sample of eligible projects that included replacing Class 5 trucks, Class 8 trucks, and Class 8 drayage trucks with diesel replacements, as well as replacing school buses and transit buses with diesel, propane, compressed natural gas and electric versions. The estimated total lifetime emission reductions from this group are approximately 610 tons of NO_x.
2. Non-Road Fleet Projects – The Department analyzed a sample of eligible projects that included repowering tugboats, freight switchers, airport ground support equipment (GSE), and forklifts, as well as electric recharging stations for GSE and forklifts. The estimated total lifetime emission reductions from this group are approximately 26,600 tons of NO_x.
3. DERA-eligible Fleet Projects – The Department analyzed a sample of eligible projects that included replacements of school buses, short-haul trucks, transit buses, and construction equipment with diesel replacements. The estimated total lifetime emission reductions from this group are approximately 530 tons of NO_x.
4. Light-duty Zero Emission Vehicle Supply Equipment – The Department used data showing the cost per ton of NO_x reduced by a light-duty ZEV electric charging station and estimates of costs for various station types to determine potential total lifetime emission reductions from use of this equipment, which are approximately 12 tons of NO_x.
5. In total, the Department estimates that applying the entire amount of funding allocated to Pennsylvania under the State Trust Agreement (\$118.5 million) to fund the Eligible Mitigation Actions under this Beneficiary Mitigation Plan using the percent allocations noted above in Section III.D. would result in total lifetime emission reductions of approximately 27,700 tons of NO_x. As stated above, actual emission reductions are dependent on the types of projects applicants submit for funding, how many applicants apply for funding, and which projects the Department selects to submit with a request for funding to the Trustee.

IV. Public Input Element of Pennsylvania’s Beneficiary Mitigation Plan

In addition to the elements described in Section III of this Beneficiary Mitigation Plan, paragraph 4.1 of the State Trust Agreement also requires that the Beneficiary Mitigation Plan explain the process by which the Beneficiary shall seek and consider public input on its Beneficiary Mitigation Plan.

This section describes the public input process the Department implemented to inform the development of this Beneficiary Mitigation Plan, as well as the public input process to be employed when revising this Beneficiary Mitigation Plan. In order to provide transparency and accountability, the Department will post information on its Driving Pennsylvania Forward website, www.dep.pa.gov/drivePAforward, which is further described in this section.

- A. Public Input – The Department sought public input on the Beneficiary Mitigation Plan through the following public participation process. Pennsylvania anticipates that it will follow a similar process for future major revisions to the Beneficiary Mitigation Plan.
 - 1. Draft Beneficiary Mitigation Plan – Notice of the opportunity for public comment on the draft Beneficiary Mitigation Plan was published in the *Pennsylvania Bulletin* on May 20, 2017 (47 Pa.B. 2946). The Department also shared the information in the *Pennsylvania Bulletin* notice through various public and industry outreach methods. The draft Beneficiary Mitigation Plan was available for public review on the Department’s Driving Pennsylvania Forward website, www.dep.pa.gov/drivePAforward.
 - 2. Public Informational Meetings and Comments – The *Pennsylvania Bulletin* notice included information about submitting comments during a 45-day public comment period and participating in public informational meetings held across the Commonwealth. A webinar was also held to provide information on the draft Beneficiary Mitigation Plan.
 - 3. Final Beneficiary Mitigation Plan – The final Beneficiary Mitigation Plan has been submitted to the Trustee of the State Mitigation Trust. The Department considered all comments received, reviewed any new or revised requirements in the State Trust Agreement, made relevant revisions, and posted the final Beneficiary Mitigation Plan on the Department’s Driving Pennsylvania Forward website, www.dep.pa.gov/drivePAforward, described below. The final Beneficiary Mitigation Plan is also available by calling the Department at (717) 787-9495.
- B. Periodic Evaluation – The Department will periodically evaluate implementation of the Beneficiary Mitigation Plan and implementation of the Eligible Mitigation Actions after the initial round of funding to determine whether any revisions to the Beneficiary Mitigation Plan and funding levels are appropriate or necessary. If future revisions to the Beneficiary Mitigation Plan are necessary, the Department intends to seek public input on major revisions to the Beneficiary Mitigation Plan generally consistent with the process outlined above, including publishing a notice of the opportunity for public comment and providing, at minimum, a 30-day public comment period regarding the proposed revisions.

C. DEP's Driving Pennsylvania Forward Website – The Department has created a public website as a clearinghouse for information relating to the VW lawsuit, State Trust Agreement, Pennsylvania's plans, and implementation information, which can be accessed at: www.dep.pa.gov/drivePAforward. Information relating to both the State Mitigation Trust and VW's ZEV Investment Plan will be posted here. The Department intends to post the following:

1. General information on the State Trust Agreement, including a link to the Partial Consent Decrees and State Trust Agreement documents;
2. Pennsylvania's Beneficiary Mitigation Plan, including information about the public participation process for the Beneficiary Mitigation Plan. A draft Beneficiary Mitigation Plan will be posted at the beginning of a public comment period for any major future revision to the Beneficiary Mitigation Plan;
3. Information about new and existing funding programs the Department uses to distribute funding from the State Mitigation Trust;
4. All public records supporting funding requests the Department submits to the Trustee, and all public records supporting all expenditures of the State Mitigation Trust, subject to confidentiality laws and until the Termination Dates of the Partial Consent Decrees and the State Trust Agreement;
5. Department contact information; and
6. Information about VW's National ZEV Investment Plan:
 - a. The Department does not submit requests for project funding under the National ZEV Investment Plan; it can only make suggestions for projects.
 - b. VW will select the final projects in coordination with EPA.
 - c. The Department may provide links to the project submission portal established by VW and EPA, and may provide technical assistance or support for proposal development.

V. Project Planning

This section identifies the mechanisms available to the Department to fund projects and the potential local, state, and regional partners that can work with the Department on educational outreach and project development. All programs the Department develops under this Beneficiary Mitigation Plan will be designed to:

- Be consistent with all requirements of the State Trust Agreement;
- Require appropriate documentation to ensure accountability; and

- Comply with the Commonwealth's laws, regulations, and policies.

A. Funding Mechanisms

The Commonwealth will employ funding mechanisms and programs to determine which projects it submits to the Trustee with a request for funding. The Department will be responsible for certifying the eligibility of projects and selecting projects to be submitted to the Trustee with funding requests.

1. The Department may use a variety of funding mechanisms to evaluate funding requests for the Eligible Mitigation Actions, including:
 - a. Competitive grant awards – Funds awarded based on scoring of specific criteria;
 - b. Sole-source grant awards – Funds awarded based on restrictions of location, product, service, or time;
 - c. Rebate programs – Funds awarded based on proof of purchase of a specific product or service;
 - d. Pilot projects – Funds awarded in a variety of formats, subject to Pennsylvania's Air Pollution Control Act; and
 - e. Memoranda of Understanding or Letters of Understanding (MOU/LOU) – Funds awarded as an agreement between the Department and other state agencies or local governments.
2. The Department will determine the most appropriate funding mechanism and programs to evaluate proposals for Eligible Mitigation Actions and will modify existing programs or develop new programs to evaluate eligible projects for funding from the State Mitigation Trust. The Department will incorporate any eligibility requirements contained in the State Trust Agreement into existing programs and into new programs as they are developed.

B. Program Partners

In addition to the general public, the Department has identified several organizations as potential program partners within the Commonwealth, regionally, and nationally. The Department intends program partners to be entities that will work with the Department on activities that include but are not limited to: identifying potential projects; conducting outreach for awareness of the funding programs; organizing educational events; assisting with project review, especially on determining local impacts of projects; performing some administrative tasks; and performing other types of activities. Consideration as a program partner is not an official designation and will not convey any rights or special consideration for funding, if the entity chooses to apply for funding. In addition, the Department encourages partnerships in project development among potential program partners, other organizations, private businesses, and individual citizens (Project Partnerships).

Organizations other than those listed here may also be considered as partners.

1. Commonwealth Partners – The Department may partner with organizations within the Commonwealth to identify and complete projects. Below are examples of the types of organizations within the Commonwealth that may have experience in participating in grant or other funding programs, are linked to government agencies, and/or have knowledge of local fleets and interest in Eligible Mitigation Actions within their jurisdictions.
 - a. Other state agencies;
 - b. Approved air pollution control agencies;
 - c. Municipal governments and authorities;
 - d. Government coalitions;
 - e. Metropolitan and rural planning organizations;
 - f. Environmental advocacy groups; and
 - g. Clean transportation advocacy groups.
2. Regional and National Partners – The Department may partner with regional and national organizations located outside of the Commonwealth. Below are examples of organizations that may be useful to identify and complete projects involving vehicles or equipment involved in interstate transport or multi-state transportation corridors, such as rail projects, port projects, airport projects, and light-duty ZEV supply equipment development.
 - a. The Mid-Atlantic Regional Air Management Association (MARAMA);
 - b. The Mid-Atlantic Diesel Collaborative;
 - c. The National Association of Clean Air Agencies (NACAA);
 - d. The National Association of State Energy Officials (NASEO); or
 - e. Other states.
3. Business and Industry Partners – In addition to public and non-profit organizations, the Department may also partner with private businesses or industry groups that have an interest in or information about the Eligible Mitigation Actions.

VI. Conclusion

This Beneficiary Mitigation Plan has been developed in accordance with the terms of the State Trust Agreement. This Beneficiary Mitigation Plan:

- Summarizes Pennsylvania's goals for the use of the funds from the State Mitigation Trust;
- Identifies the categories of Eligible Mitigation Actions under which Pennsylvania will evaluate projects for submission of a funding request to the Trustee. The Beneficiary Mitigation Plan identifies the percent of funding Pennsylvania expects to allocate for its groupings of Eligible Mitigation Actions, presented as a range of percentages;
- Describes how the Department considered the potential beneficial impact of the selected Eligible Mitigation Actions on air quality in priority areas;
- Describes ranges of anticipated emission benefits from implementation of the Beneficiary Mitigation Plan; and
- Outlines the public input process for the Beneficiary Mitigation Plan and future revisions.

This Beneficiary Mitigation Plan is not a solicitation for projects. As such, this Beneficiary Mitigation Plan does not include details on the application or project selection process. Such information will become available on the Department's Driving Pennsylvania Forward website after this Beneficiary Mitigation Plan is submitted to the Trustee. Nothing in this Beneficiary Mitigation Plan guarantees approval of any request for funding of an Eligible Mitigation Action.

As part of periodic evaluations, the Department may revise this Beneficiary Mitigation Plan as necessary to reflect major changes in market demand, the Commonwealth's priorities or available funds in future years.

**Attachment A: Eligible Mitigation Actions, Eligible
Administrative Expenditures, and Definitions**

The following are lists of the Eligible Mitigation Actions, Eligible Mitigation Action Administrative Expenditures, and relevant definitions identified in Appendix D-2 of the State Trust Agreement.

I. Eligible Mitigation Actions and Mitigation Action Expenditures

A. Class 8 Local Freight Trucks and Port Drayage Trucks (Eligible Large Trucks).

1. Eligible Large Trucks include 1992-2009 engine model year Class 8 Local Freight or Drayage. For Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed Eligible Mitigation Action, Eligible Large Trucks shall also include 2010-2012 engine model year Class 8 Local Freight or Drayage.
2. Eligible Large Trucks must be Scrapped.
3. 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 or Alternate Fueled or All-Electric vehicle, with the engine model year in which the Eligible Large Trucks Mitigation Action occurs or one engine model year prior.
4. For Non-Government Owned Eligible Class 8 Local Freight Trucks, Beneficiaries may only draw funds from the Trust in the amount of:
 - a. Up to 40% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.
 - b. Up to 25% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.
 - c. Up to 75% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
 - d. Up to 75% of the cost of a new All-Electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.
5. For Non-Government Owned Eligible Drayage Trucks, Beneficiaries may only draw funds from the Trust in the amount of:
 - a. Up to 40% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.
 - b. Up to 50% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.
 - c. Up to 75% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
 - d. Up to 75% of the cost of a new all-electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.
6. For Government Owned Eligible Class 8 Large Trucks, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.
 - b. Up to 100% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.

- c. Up to 100% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
- d. Up to 100% of the cost of a new All-Electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.

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

1. Eligible Buses include 2009 engine model year or older class 4-8 school buses, shuttle buses, or transit buses.
2. For Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year buses at the time of the proposed Eligible Mitigation Action, Eligible Buses shall also include 2010- 2012 engine model year class 4-8 school buses, shuttle buses, or transit buses.
3. Eligible Buses must be Scrapped.
4. Eligible Buses may be Repowered with any new diesel or Alternate Fueled or All-Electric engine, or may be replaced with any new diesel or Alternate Fueled or All-Electric vehicle, with the engine model year in which the Eligible Bus Mitigation Action occurs or one engine model year prior.
5. For Non-Government Owned Buses, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 40% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.
 - b. Up to 25% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.
 - c. Up to 75% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
 - d. Up to 75% of the cost of a new All-Electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.
6. For Government Owned Eligible Buses, and Privately Owned School Buses Under Contract with a Public School District, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.
 - b. Up to 100% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.
 - c. Up to 100% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
 - d. Up to 100% of the cost of a new All-Electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.

C. Freight Switchers.

1. Eligible Freight Switchers include pre-Tier 4 switcher locomotives that operate 1000 or more hours per year.
2. Eligible Freight Switchers must be Scrapped.

3. 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 (or other more stringent equivalent State standard) as published in the CFR for the engine model year in which the Eligible Freight Switcher Mitigation Action occurs.
4. For Non-Government Owned Freight Switchers, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 40% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine(s) or Generator Sets, including the costs of installation of such engine(s).
 - b. Up to 25% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) Freight Switcher.
 - c. Up to 75% of the cost of a Repower with a new All-Electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new All-Electric engine(s).
 - d. Up to 75% of the cost of a new All-Electric Freight Switcher, including charging infrastructure associated with the new All-Electric Freight Switcher.
5. For Government Owned Eligible Freight Switchers, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine(s) or Generator Sets, including the costs of installation of such engine(s).
 - b. Up to 100% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) Freight Switcher.
 - c. Up to 100% of the cost of a Repower with a new All-Electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new All-Electric engine(s).
 - d. Up to 100% of the cost of a new All-Electric Freight Switcher, including charging infrastructure associated with the new All-Electric Freight Switcher.

D. Ferries/Tugs.

1. Eligible Ferries and/or Tugs include unregulated, Tier 1, or Tier 2 marine engines.
2. Eligible Ferry and/or Tug engines that are replaced must be Scrapped.
3. 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 an EPA Verified Engine Upgrade.
4. For Non-Government Owned Eligible Ferries and/or Tugs, Beneficiaries may only draw funds from the Trust in the amount of:
 - a. Up to 40% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine(s), including the costs of installation of such engine(s).
 - b. Up to 75% of the cost of a Repower with a new All-Electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new All-Electric engine(s).

5. For Government Owned Eligible Ferries and/or Tugs, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine(s), including the costs of installation of such engine(s).
 - b. Up to 100% of the cost of a Repower with a new All-Electric engine(s), including the costs of installation of such engine(s), and charging infrastructure associated with the new All-Electric engine(s).

E. Ocean Going Vessels (OGV) Shorepower.

1. Eligible Marine Shorepower includes systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth.
2. Components of such systems eligible for reimbursement are limited to cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution.
3. 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.
4. Eligible Marine Shorepower includes equipment for vessels that operate within the Great Lakes.
5. For Non-Government Owned Marine Shorepower, Beneficiaries may only draw funds from the Trust in the amount of up to 25% for the costs associated with the shore-side system, including cables, cable management systems, shore power coupler systems, distribution control systems, installation, and power distribution components.
6. For Government Owned Marine Shorepower, Beneficiaries may draw funds from the Trust in the amount of up to 100% for the costs associated with the shore-side system, including cables, cable management systems, shore power coupler systems, distribution control systems, installation, and power distribution components.

F. Class 4-7 Local Freight Trucks (Medium Trucks).

1. Eligible Medium Trucks include 1992-2009 engine model year class 4-7 Local Freight trucks, and for Beneficiaries that have State regulations that already require upgrades to 1992-2009 engine model year trucks at the time of the proposed Eligible Mitigation Action, Eligible Trucks shall also include 2010- 2012 engine model year class 4-7 Local Freight trucks.
2. Eligible Medium Trucks must be Scrapped.
3. Eligible Medium Trucks may be Repowered with any new diesel or Alternate Fueled or All-Electric engine, or may be replaced with any new diesel or Alternate Fueled or All-Electric vehicle, with the engine model year in which the Eligible Medium Trucks Mitigation Action occurs or one engine model year prior.
4. For Non-Government Owned Eligible Medium Trucks, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 40% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.

- b. Up to 25% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.
 - c. Up to 75% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
 - d. Up to 75% of the cost of a new All-Electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.
5. For Government Owned Eligible Medium Trucks, Beneficiaries may draw funds from the Trust in the amount of:
- a. Up to 100% of the cost of a Repower with a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) engine, including the costs of installation of such engine.
 - b. Up to 100% of the cost of a new diesel or Alternate Fueled (e.g., CNG, propane, Hybrid) vehicle.
 - c. Up to 100% of the cost of a Repower with a new All-Electric engine, including the costs of installation of such engine, and charging infrastructure associated with the new All-Electric engine.
 - d. Up to 100% of the cost of a new All-Electric vehicle, including charging infrastructure associated with the new All-Electric vehicle.

G. Airport Ground Support Equipment.

- 1. Eligible Airport Ground Support Equipment includes:
 - a. Tier 0, Tier 1, or Tier 2 diesel powered airport ground support equipment; and
 - b. Uncertified, or certified to 3 g/bhp-hr or higher emissions, spark ignition engine powered airport ground support equipment.
- 2. Eligible Airport Ground Support Equipment must be Scrapped.
- 3. 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.
- 4. For Non-Government Owned Eligible Airport Ground Support Equipment, Beneficiaries may only draw funds from the Trust in the amount of:
 - a. Up to 75% of the cost of a Repower with a new All-Electric engine, including costs of installation of such engine, and charging infrastructure associated with such new All-Electric engine.
 - b. Up to 75% of the cost of a new All-Electric Airport Ground Support Equipment, including charging infrastructure associated with such new All-Electric Airport Ground Support Equipment.
- 5. For Government Owned Eligible Airport Ground Support Equipment, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost of a Repower with a new All-Electric engine, including costs of installation of such engine, and charging infrastructure associated with such new All-Electric engine.
 - b. Up to 100% of the cost of a new All-Electric Airport Ground Support Equipment, including charging infrastructure associated with such new All-Electric Airport Ground Support Equipment.

H. Forklifts and Port Cargo Handling Equipment.

1. Eligible Forklifts includes forklifts with greater than 8,000 pounds lift capacity.
2. Eligible Forklifts and Port Cargo Handling Equipment must be Scrapped.
3. 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.
4. For Non-Government Owned Eligible Forklifts and Port Cargo Handling Equipment, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 75% of the cost of a Repower with a new All-Electric engine, including costs of installation of such engine, and charging infrastructure associated with such new All-Electric engine.
 - b. Up to 75% of the cost of a new All-Electric Forklift or Port Cargo Handling Equipment, including charging infrastructure associated with such new All-Electric Forklift or Port Cargo Handling Equipment.
5. For Government Owned Eligible Forklifts and Port Cargo Handling Equipment, Beneficiaries may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost of a Repower with a new All-Electric engine, including costs of installation of such engine, and charging infrastructure associated with such new All-Electric engine.
 - b. Up to 100% of the cost of a new All-Electric Forklift or Port Cargo Handling Equipment, including charging infrastructure associated with such new All-Electric Forklift or Port Cargo Handling Equipment.

I. Light-Duty Zero Emission Vehicle Supply Equipment.

1. Each Beneficiary may use up to fifteen percent (15%) of its allocation of Trust Funds on the costs necessary for, and directly connected to, the acquisition, installation, operation and maintenance of new light-duty zero emission vehicle supply equipment for projects as specified below. Provided, however, that Trust Funds shall not be made available or used to purchase or rent real estate, other capital costs (e.g., construction of buildings, parking facilities, etc.) or general maintenance (i.e., maintenance other than of the Supply Equipment).
2. 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).
3. 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.
4. Subject to the 15% limitation above, each Beneficiary may draw funds from the Trust in the amount of:
 - a. Up to 100% of the cost to purchase, install and maintain eligible light-duty electric vehicle supply equipment that will be available to the public at a Government Owned Property.
 - b. Up to 80% of the cost to purchase, install and maintain eligible light-duty electric vehicle supply equipment that will be available to the public at a Non-Government Owned Property.

- c. Up to 60% of the cost to purchase, install and maintain eligible light-duty electric vehicle supply equipment that is available at a workplace but not to the general public.
 - d. Up to 60% of the cost to purchase, install and maintain eligible light-duty electric vehicle supply equipment that is available at a multi-unit dwelling but not to the general public.
 - e. Up to 33% of the cost to purchase, install and maintain eligible light-duty hydrogen fuel cell vehicle supply equipment capable of dispensing at least 250 kg/day that will be available to the public.
 - f. Up to 25% of the cost to purchase, install and maintain eligible light-duty hydrogen fuel cell vehicle supply equipment capable of dispensing at least 100 kg/day that will be available to the public.
- J. Diesel Emission Reduction Act (DERA) Option.
- 1. Beneficiaries may use Trust Funds for their 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), or Section 792 (codified at 42 U.S.C. § 16132) in the case of Tribes, 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.

II. Eligible Mitigation Action Administrative Expenditures

- A. For any Eligible Mitigation Action, Beneficiaries may use Trust Funds for actual administrative expenditures (described below) associated with implementing such Eligible Mitigation Action, but not to exceed 15% of the total cost of such Eligible Mitigation Action. The 15% cap includes the aggregated amount of eligible administrative expenditures incurred by the Beneficiary and any third-party contractor(s).
- 1. Personnel including costs of employee salaries and wages, but not consultants.
 - 2. Fringe Benefits including costs of employee fringe benefits such as health insurance, FICA, retirement, life insurance, and payroll taxes.
 - 3. Travel including costs of Mitigation Action-related travel by program staff, but does not include consultant travel.
 - 4. Supplies including tangible property purchased in support of the Mitigation Action that will be expensed on the Statement of Activities, such as educational publications, office supplies, etc. Identify general categories of supplies and their Mitigation Action costs.
 - 5. Contractual including all contracted services and goods except for those charged under other categories such as supplies, construction, etc. Contracts for evaluation and consulting services and contracts with sub-recipient organizations are included.
 - 6. Construction including costs associated with ordinary or normal rearrangement and alteration of facilities.

7. Other costs including insurance, professional services, occupancy and equipment leases, printing and publication, training, indirect costs, and accounting.

III. Definitions/Glossary of Terms

‘Airport Ground Support Equipment’ shall mean vehicles and equipment used at an airport to service aircraft between flights.

‘All-Electric’ shall mean powered exclusively by electricity provided by a battery, fuel cell, or the grid.

‘Alternate Fueled’ shall mean an engine, or a vehicle or piece of equipment that is powered by an engine, which uses a fuel different from or in addition to gasoline fuel or diesel fuel (e.g., CNG, propane, diesel-electric Hybrid).

‘Certified Remanufacture System or Verified Engine Upgrade’ shall mean engine upgrades certified or verified by EPA or CARB to achieve a reduction in emissions.

‘Class 4-7 Local Freight Trucks (Medium Trucks)’ shall mean trucks, including commercial trucks, used to deliver cargo and freight (e.g., courier services, delivery trucks, box trucks moving freight, waste haulers, dump trucks, concrete mixers) with a Gross Vehicle Weight Rating (GVWR) between 14,001 and 33,000 lbs.

‘Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Buses)’ shall mean vehicles with a Gross Vehicle Weight Rating (GVWR) greater than 14,001 lbs. used for transporting people. See definition for School Bus below.

‘Class 8 Local Freight, and Port Drayage Trucks (Eligible Large Trucks)’ shall mean trucks with a Gross Vehicle Weight Rating (GVWR) greater than 33,000 lbs. used for port drayage and/or freight/cargo delivery (including waste haulers, dump trucks, concrete mixers).

‘CNG’ shall mean Compressed Natural Gas.

‘Drayage Trucks’ shall mean trucks hauling cargo to and from ports and intermodal rail yards.

‘Forklift’ shall mean nonroad equipment used to lift and move materials short distances; generally, includes tines to lift objects. Eligible types of forklifts include reach stackers, side loaders, and top loaders.

‘Freight Switcher’ shall mean a locomotive that moves rail cars around a rail yard as compared to a line-haul engine that moves freight long distances.

‘Generator Set’ shall mean a switcher locomotive equipped with multiple engines that can turn off one or more engines to reduce emissions and save fuel depending on the load it is moving.

‘Government’ shall mean a 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. The term ‘State’ means the several States, the District of Columbia, and the Commonwealth of Puerto Rico.

‘Gross Vehicle Weight Rating (GVWR)’ shall mean the maximum weight of the vehicle, as specified by the manufacturer. GVWR includes total vehicle weight plus fluids, passengers, and cargo.

Class 1: < 6000 lb.

Class 2: 6001-10,000 lb.

Class 3: 10,001-14,000 lb.

Class 4: 14,001-16,000 lb.

Class 5: 16,001-19,500 lb.

Class 6: 19,501-26,000 lb.

Class 7: 26,001-33,000 lb.

Class 8: > 33,001 lb.

‘Hybrid’ shall mean a vehicle that combines an internal combustion engine with a battery and electric motor.

‘Infrastructure’ shall mean the equipment used to enable the use of electric powered vehicles (e.g., electric vehicle charging station).

‘Intermodal Rail Yard’ shall mean a rail facility in which cargo is transferred from drayage truck to train or vice-versa.

‘Port Cargo Handling Equipment’ shall mean rubber-tired gantry cranes, straddle carriers, shuttle carriers, and terminal tractors, including yard hostlers and yard tractors that operate within ports.

‘Plug-in Hybrid Electric Vehicle (PHEV)’ shall mean a vehicle that is similar to a Hybrid but is equipped with a larger, more advanced battery that allows the vehicle to be plugged in and recharged in addition to refueling with gasoline. This larger battery allows the car to be driven on a combination of electric and gasoline fuels.

‘Repower’ shall mean to replace an existing engine with a newer, cleaner engine or power source that is certified by EPA and, if applicable, CARB, to meet a more stringent set of engine emission standards. Repower includes, but is not limited to, diesel engine replacement with an engine certified for use with diesel or a clean alternate fuel, diesel engine replacement with an electric power source (e.g., grid, battery), diesel engine replacement with a fuel cell, diesel engine replacement with an electric generator(s) (genset), diesel engine upgrades in Ferries/Tugs with an EPA Certified Remanufacture System, and/or diesel engine upgrades in Ferries/Tugs with an EPA Verified Engine Upgrade. All-Electric and fuel cell Repowers do not require EPA or CARB certification.

‘School Bus’ shall mean a Class 4-8 bus sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events. May be Type A-D.

‘Scrapped’ shall mean to render inoperable and available for recycle, and, at a minimum, to specifically cut a 3-inch hole in the engine block for all engines. If any Eligible Vehicle will be replaced as part of an Eligible project, scrapped shall also include the disabling of the chassis by cutting the vehicle’s frame rails completely in half.

‘Tier 0, 1, 2, 3, 4’ shall refer to corresponding EPA engine emission classifications for nonroad, locomotive, and marine engines.

‘Tugs’ shall mean dedicated vessels that push or pull other vessels in ports, harbors, and inland waterways (e.g., tugboats and towboats).

‘Zero Emission Vehicle (ZEV)’ shall mean a vehicle that produces no emissions from the onboard source of power (e.g., All-Electric or hydrogen fuel cell vehicles).