

RESPONSIVENESS SUMMARY

for public comments received on

Vermont's Beneficiary Mitigation Plan for the VW Environmental Mitigation Trust

May 29, 2018

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INTRODUCTION

On November 29, 2017, the Vermont Agency of Natural Resources (ANR) released a Draft Beneficiary Mitigation Plan for administration of Vermont's \$18.7 million allocation of the Volkswagen (VW) Environmental Mitigation Trust (EMT). The VW EMT was created on October 2, 2017 following the finalization of an agreement between VW and the U.S. Environmental Protection Agency (EPA) regarding VW's installation and subsequent cover-up of nitrogen oxide (NOx) emission defeat devices in over a half-million diesel passenger vehicles in the United States. Vermont, as well as the remaining 49 states and the U.S. territories, is a beneficiary of the VW EMT.

On November 1, 2017 Governor Phil Scott submitted a request to the Trustee administering the VW EMT for Vermont to be certified as a beneficiary of the Trust. In the certification documents the Governor named the Agency of Natural Resources as the lead-agency beneficiary for Vermont.

Within ANR, the Air Quality and Climate Division has been providing support to the Vermont Attorney General regarding VW violations and directly advising the EPA on how the provisions of the (then proposed) VW EMT would impact Vermont. Because of this preliminary work, the Trust has been finalized in such a way that allows Vermont to take better advantage of the funding available to beneficiaries to help mitigate the excess NOx emissions caused by affected VW diesel vehicles.

The mission of the Air Quality and Climate Division is to achieve levels of air quality that will protect human health, prevent injury to plant and animal life, foster the comfort and convenience of the people, promote economic and social development in the state, and facilitate the enjoyment of the natural attractions of Vermont.

In keeping with this mission and in compliance with the requirements of the VW EMT Agreement, ANR drafted and released the Draft Beneficiary Mitigation Plan (hereinafter called "BMP"). The public comment period on the BMP was held from November 29, 2017 – January 13, 2018. A public meeting was held on December 13, 2017, where 16 verbal public comments were received.

ANR received 699 separate written comments, including responses to an online form. 594 of the written comments received were uniform comment letters from members of local and regional advocacy groups. ANR also provided an online public comment form with 23 questions that received 63 separate comments. The purpose of the comment form was to solicit ideas and suggestions for specific questions that were posed in the BMP, or proposed project priorities on which ANR was seeking additional feedback.

While public outreach on the Draft BMP is required, the VW EMT Agreement is silent on how beneficiaries should carry out the public comment process and respond to comments. Although this is not a rulemaking, ANR has deferred to the normal public notice and comment procedures ANR follows for rulemaking. This responsiveness summary provides the written and verbal comments received and responses to major comments similar to what EPA provides when adopting a final rule.

SUMMARY OF WRITTEN AND VERBAL COMMENTS AND RESPONSES

The intent of the VW EMT is to fully mitigate the total excess NOx emissions from the subject diesel vehicles manufactured by VW and operated in Vermont. Recognizing the competing interests for the best use of the VW EMT funds, the BMP strives to balance cost effective reduction of NOx emissions and adoption of all-electric or other NOx mitigating alternatively fueled vehicles/equipment. Cost effective NOx emissions reduction supports the purpose of the VW EMT and Vermont's air quality program, while supporting the market development of all-electric or NOx mitigating alternatively fueled vehicles and equipment supports Vermont's Comprehensive Energy Plan, the Zero Emissions Vehicle (ZEV) Memorandum of Understanding and Multi-State ZEV Action Plan. The responses provided below reflect ANR's effort to strike this balance.

Written and verbal comments received are categorized below into 15 bins that represent the subject area of the comment received. Given that ANR received several identical or similar comments or ideas in a particular category, comments have been summarized and paraphrased in the categories below. All written comments that were received by ANR can be made available upon request.

CATEGORY 1: ELECTRIC GRID CONSIDERATIONS/ COORDINATION WITH UTILITIES

1. **Paraphrased Comment:** *One commenter suggested that ANR and applicants engage utilities in a process for statewide strategy and information sharing between utilities and applicants, focusing on EVSE locations that are beneficial for consumers and cost effective.*

Response: The BMP gives priority to proposed projects that demonstrate coordination with the local utilities. Specific details of the electric bus pilot programs and the electric vehicle supply equipment (EVSE) grant program have yet to be determined. Coordination with utilities will be addressed as details of these programs are further developed.

2. **Paraphrased Comments:** *Multiple commenters suggested that coordination with utilities will minimize strain on the electrical system and electrical vehicle integration into the grid (benefits to off peak resources).*

Response: The BMP gives priority to proposed projects with an EVSE component that demonstrate coordination with the local utilities and charging of these electric vehicle/equipment replacements or repowers is managed to promote affordability of the electric system by ensuring projects are not adding to peak demand. Specific details of the electric bus pilot programs and the EVSE grant program have yet to be determined. Coordination with utilities will be addressed as details of these programs are further developed.

CATEGORY 2: EVSE AND PRIORITIZATION OF EVSE FUNDING

1. **Paraphrased Comments:** *Multiple commenters supported using the maximum funding available on EVSE (15%) to build a more robust EVSE infrastructure around the state, to help drive EV market transformation, for emissions reductions and health benefits, and to increase the visibility of EVs in the state.*

Response: The Agency agrees with this comment.

2. **Paraphrased Comments:** *Multiple commenters supported installation of EVSE in strategically sited, highly visible, and high-volume locations (e.g. hospitals, airports, beaches, resorts, town center, parks, court houses, workplace charging, multi-unit-dwellings, and highway corridors and exits).*

Response: The Agency agrees that EVSE installations need to be sited in high priority and high-volume locations such as workplaces, multi-family housing, state designated centers, highway corridors, and major destinations.

3. **Paraphrased Comment:** *One commenter requested the removal of hydrogen as a funding option.*

Response: Vermont is planning to launch an EVSE Grant Program in Summer 2018 and the initial round of applications being accepted will be limited to EVSE for battery electric and plug-in hybrid vehicles. Over the 10-year life of the trust, program priorities will be periodically re-evaluated to determine if future funds should be expended on infrastructure to support hydrogen fuel cell vehicles.

4. **Paraphrased Comment:** *One commenter voiced concerns with the price associated with charging at new charging stations.*

Response: The Agency is aware of this issue and hopes to resolve any future problems in the guidance provided by the Vermont EVSE Grant Program anticipated to be launched in Summer 2018.

5. **Paraphrased Comment:** *One commenter suggested the use of a program methodology for review of EVSE projects, rather than a one-off method, for ease of scaling and potential cost share.*

Response: The Interagency EVSE Working Group is developing a program for funding of EVSE that provides a set of minimum qualifying criteria, as well as project evaluation parameters that will be utilized to award grants.

6. **Paraphrased Comment:** *One commenter suggested future-proofing EVSE installations and creating a networked system to help manage grid load and data collection.*

Response: Vermont is planning to launch an EVSE Grant Program in Summer 2018, which considers future-proofing EVSE installations as well as networked EVSE.

7. **Paraphrased Comment:** *One commenter asked that the funding percentage difference for EVSE on government versus non-government properties be removed to enable a greater focus on priority locations.*

Response: All applications seeking funding for EVSE will be evaluated to determine if the proposed EVSE siting falls within a priority location (workplaces, multi-family housing, state designated centers, highway corridors, and major destinations). With regard to altering the funding percentages, cost share amounts are dictated by the Mitigation Trust Agreement and the “up to” cost share amounts shown as funding percentages for government and non-government entities cannot be made less stringent by the beneficiary (Vermont); however, the funding percentages could be made more stringent. The Interagency EVSE Working Group plans to address prioritization of government applicants that agree to provide a cost match in the project evaluation parameters for the EVSE grant program to be launched in the Summer of 2018.

8. **Paraphrased Comment:** *One commenter suggested prioritizing clean vehicles rather than fueling infrastructure.*

Response: The only fueling infrastructure eligible for funding under the VW EMT is electric vehicle supply equipment (EVSE) and deployment of adequate EVSE is necessary to encourage electric vehicle adoption. While alternative fossil fuel and new diesel vehicles, all of which have lower NOx emissions when compared to the older diesel eligible for replacement, are allowable replacement or repower projects, the associated fueling infrastructure (natural gas, propane, diesel, etc.) is not. As indicated in the BMP, the maximum funding allowed (15%) is being allocated for light-duty EVSE. The remaining funding is allocated toward eligible vehicle replacements and repowers. Therefore, the BMP allocates the majority of funding to lower NOx emitting vehicles.

9. **Paraphrased Comment:** *One commenter suggested strategically siting infrastructure (with cross functional capacity for heavy-duty technologies) and increasing the EVSE network to make it easier for drivers to go electric.*

Response: As described in the BMP, an interagency working group is currently establishing an EVSE grant program to be administered by the Department of Housing & Community Development (DHCD). The maximum allowable 15% of the trust funds will be spent on the installation of EVSE with the goal to increase the robustness and availability of the charging network in the state and to promote the electrification of the light-duty fleet. Criteria and priorities for EVSE projects and siting are being established and will be available prior to the program launch which is anticipated to begin in July 2018.

10. **Paraphrased Comment:** *One commenter suggested that new EVSE installations be powered by renewable energy.*

Response: ANR generally supports the idea of powering new EVSE installations with renewable energy, however, this may prove to be cost prohibitive in many situations. It should also be noted that energy that is considered renewable does not necessarily equate to electricity that is generated with low air pollutant emissions. The EVSE workgroup may consider the renewable nature of the electricity supplying the charging station, however projects will not be limited to EVSE exclusively charged by renewable energy. The state's Renewable Energy Standard (RES) sets minimum percentages of renewable energy to be included in utility power portfolios, which increase over time, that will gradually increase the renewable attributes of the electricity used for charging at new EVSE installations funded by the VW mitigation funds.

CATEGORY 3: ELECTRIC SCHOOL AND TRANSIT BUSES

1. **Paraphrased Comment:** *Multiple commenters supported the use of 85% of the funds for electrification of the transportation sector, with an emphasis on electric school and transit buses.*

Response: ANR believes that the electrification of mass transit vehicles is an important piece in the emissions reduction strategy for the state, however, the currently high upfront cost of these vehicles makes them difficult to justify on the basis of cost effective pollution reduction. Electric

school buses are also relatively new to the market, especially in the Northeast region, so ANR will be implementing several pilot projects for both electric transit and electric school buses, as described in the BMP, to generate real world in-use data and to evaluate the viability of the technologies in our cold, rural, and mountainous state. Approximately \$4 million is also being reserved for additional electric bus replacements depending upon the success of the pilot projects. This slight delay in timeline will hopefully have the dual benefit of testing the vehicles in Vermont conditions, as well as taking advantage of the expected price reductions in electric bus technologies over the next several years. Electric buses are a major focus for use of the VW EMT funds and they will be balanced and complemented with the other goals and priorities listed in the BMP.

2. **Paraphrased Comment:** *Multiple commenters supported funding electric school buses because of the health benefits to children.*

Response: ANR agrees that the health of children is important when determining the best possible uses for the VW EMT funds. It is true that electric buses would result in tailpipe emission reductions close to 100%, although they would require a fuel powered heater with a tailpipe in Vermont, but their high upfront cost is problematic in terms of the cost effectiveness of pollutant reduction. Replacing eligible diesel vehicles with diesel and alternative fuel vehicles certified to current emissions standards produces NOx and PM2.5 reductions of approximately 90% when averaged over the eligible vehicle model years (1992 – 2009). Since the cost of new electric buses is significantly higher (in the case of school buses three to four times higher), significantly fewer total buses can be replaced with electric models. This means that total emissions reductions, and the number of children realizing health benefits, would be far lower if all the funds were spent only on replacement with electric models. Despite the currently high up-front cost of electric buses ANR realizes that it is important to determine the feasibility and effectiveness of electric buses in Vermont and to begin the transition of the electric bus market. As stated in the BMP, ANR will implement several pilot projects for both electric school and transit buses with a reserve for approximately \$4 million for future electric bus projects depending upon the success of the pilot projects. Funding for these electric bus projects will be balanced with and complemented by eligible projects that have a greater focus on the BMP goal of cost effective NOx reductions, as well as additional priorities outlined in the BMP.

3. **Paraphrased Comment:** *Multiple commenters support the purchase of electric school buses for air quality and emissions benefits.*

Response: ANR agrees that electric school buses would help to reduce emissions of air pollutants from the transportation sector and will implement several electric school and transit bus pilot projects to demonstrate the viability of the technology in Vermont, as stated in the BMP. Significant funding will be reserved for additional electric school and transit bus projects depending on the success of the pilot projects. Due to the currently high upfront cost of electric school buses and the high percentage reductions of pollutants from the replacement of an eligible diesel vehicle with a new diesel or alternative fossil fuel vehicle, electric school buses are not currently a cost-effective way to reduce air pollution in the state. Therefore, ANR plans to balance electric bus projects with replacements with new combustion technologies in the freight truck sector, as those types of electric technologies are not yet readily available on the market.

4. **Paraphrased Comment:** *Multiple commenters support electric school bus purchases to help drive a market transition, and to catalyze additional projects, especially for school districts where it would not happen naturally.*

Response: ANR agrees that encouraging the market transition to electric school buses will be beneficial for air quality and the health of children in Vermont. Unfortunately, it is not clear that the amount of funding available in the VW settlement would be enough to catalyze this transition. Even if all the funds available (excluding the 15% for EVSE and administrative reserve) were to be spent on electric school buses at current prices, only around 40 buses would be able to be replaced out of a total of roughly 1,800 in the state. Although this is a starting point, it will take significant future investments to truly drive this market transition. As stated in the BMP, ANR will be implementing several electric school and transit bus pilot projects, with approximately \$4 million of supplemental funding reserved for additional projects if the pilot projects prove effective. This investment will help to catalyze this market transition and will be balanced and complemented with projects with a greater focus on cost-benefit NOx reductions, as outlined in the BMP.

5. **Paraphrased Comment:** *Multiple commenters support the purchase of electric school buses to illustrate a visible commitment, to help educate and inspire children, and to introduce children to new electric vehicle technologies.*

Response: ANR agrees that putting electric school buses on the road is a good way to illustrate a visible commitment to air quality and greenhouse gas issues, as well as to educate and inspire children. To this end, several electric school and transit bus pilot projects will be implemented, to determine the viability and effectiveness of the vehicles in Vermont, with a reserve of approximately \$4 million for electric bus projects if the technologies prove to be effective in the state. These buses will demonstrate the electric bus technologies for school children and the general public and provide a visible example of the potential for future investments in the transportation industry.

6. **Paraphrased Comment:** *Two commenters suggested the purchase of electric school buses to help municipalities gain experience with the benefits and limitations of the new technologies.*

Response: As discussed in the BMP, ANR will implement several electric school and transit bus pilot projects which will help municipalities to gain experience with electric bus technologies. These pilot projects will also serve the purpose of demonstrating the viability of the technologies in Vermont and be an important source of information for future electric bus projects. Having information from these pilot projects will provide important lessons learned, information on benefits and issues, and will hopefully stretch the implementation timeline so that electric bus technologies are more cost competitive with their fossil fuel counterparts.

7. **Paraphrased Comment:** *One commenter requested the use of funding for electric school bus purchases to move toward meeting state renewable energy goals.*

Response: ANR is implementing several electric school and transit bus projects in FY2019 to determine the viability of the technologies in Vermont. Assuming those projects are successful,

approximately \$4 million of additional funding are being reserved for future electric bus projects. These electric bus pilot projects will help the state move toward meeting the renewable energy goals within the transportation sector as outlined in the 2016 Comprehensive Energy Plan.

8. **Paraphrased Comment:** *Two commenters suggested the funds be used for electric school buses for benefits to the electric grid.*

Response: As stated in the BMP, several electric school and transit bus pilot projects are planned for FY 2019 with approximately \$4 million set in reserve for additional projects if the technology proves to be effective in Vermont. These electrification projects have the potential, with coordination with applicable utilities, to produce benefits for the electric grid. The main benefit is the potential for demand side management, which would allow utilities to control the bus charging schedule (or incentivize certain charging times) to manage load and costs. Most of this benefit would occur when electric vehicles are charged during off-peak electricity usage hours, such as overnight, or potentially during the afternoon prior to the evening peak when there is an excess of renewable energy on the grid. ANR agrees that electric buses could be particularly beneficial to the grid in grid-constrained areas where they would provide additional battery storage. Although off-peak charging could provide some benefits to utilities and the electric grid the more beneficial vehicle-to-grid technology, where utilities can draw electricity back from the bus battery when demand is high, is still relatively new and comparatively expensive.

9. **Paraphrased Comment:** *One commenter suggested that focusing the available funds only on electric school buses would be inequitable and would limit the amount of buses that could be replaced or retrofitted, therefore limiting the air quality benefits and immediate health benefits to children that could be otherwise achieved through the more cost-effective purchase of newer diesel technology.*

Response: ANR agrees that exclusively funding higher priced electric school buses with the VW EMT funds would reduce the number of older diesel buses that could be replaced, and therefore limit the overall air quality and health benefits achieved by use of the funds. The BMP document attempts to balance the priority of air quality improvements through cost-effective NOx reductions with the need to determine the viability of electric vehicle technologies in multiple sectors and to advance the electric vehicle market in the state. Providing this balance will lead to significant NOx reductions and health benefits, as well as multiple co-benefits, including greenhouse gas emissions reductions.

10. **Paraphrased Comment:** *Multiple commenters requested the funds not be used to promote “clean diesel” technologies.*

Response: Although ANR understands the concerns associated with using the VW mitigation funds to purchase new diesel vehicles, in terms of cost-effective pollutant reduction and overall health benefits they are currently an appropriate option. However, new diesel and alternative fossil fuel replacements are not the main focus of the BMP document for the allocation of the VW EMT funds. No funding is currently being allocated to diesel bus replacements, however new diesel and alternative fossil fuel freight trucks will be maintained as an option because of the more cost-effective pollution reduction and relatively undeveloped market for electric vehicles in this category.

Electric and traditional projects will be balanced to maximize the benefits achieved by the VW EMT funds.

11. **Paraphrased Comment:** *Multiple commenters requested the funding of electric school buses to help mitigate carbon emissions and climate change.*

Response: As described in the BMP, ANR will implement a pilot project for electric school and transit buses in fiscal year 2019 to determine the viability of electric transit vehicles in Vermont. Approximately \$4 million will also be set in reserve to be spent on additional electric bus replacements if those projects are successful. Reductions in greenhouse gases are an important co-benefit listed in the BMP funding priorities for VW funds and will be taken into consideration in the project selection process, however NOx remains a priority for the VW funds. While limited CO₂ reductions will be realized by the fuel efficiency upgrades from an old diesel vehicle to a new diesel vehicle, reductions in greenhouse gases will be mostly due to transportation electrification.

12. **Paraphrased Comment:** *Multiple commenters supported the funding of electric school buses because of the tax benefits to Vermonters, driven by the reduced fuel and maintenance costs of buses.*

Response: ANR acknowledges the tax benefits to Vermonters that would result from the reduced fuel and maintenance costs of electric school buses. As noted in the BMP, ANR is implementing several electric school and transit bus pilot projects with approximately \$4 million in reserve for use on additional electric bus projects, depending upon the outcome of the pilots. It should be noted that the number of school buses that will likely be replaced in any particular town or district, due to the high price of electric school buses, limited funding, and the desire for equitable distribution of the funds, would likely not produce enough fuel and maintenance cost reductions to result in a significant lowering of the tax burden for a town. Two of the main objectives in the BMP are to demonstrate the feasibility of electric technologies in Vermont, and to reduce NOx emissions in the most cost-effective way possible. To this end, electric vehicle technology projects will be balanced and complemented with combustion technologies in the freight truck category, which provide more cost-effective pollution reduction.

13. **Paraphrased Comment:** *One commenter requested the use of funds for electric school bus pilot programs, to be prioritized for districts that manage their own fleet and are in areas with an electricity portfolio consisting of at least 90% renewable energy.*

Response: As described in the BMP document, ANR will implement an electric school and transit bus pilot program with VW settlement funds in fiscal year 2019. The pilot project program specifics will be established by ANR in collaboration with the VW Interagency Workgroup (composed of members from several state entities, including: Agency of Natural Resources, Agency of Transportation, Department of Public Service, Department of Housing and Community Development, Department of Buildings and General Services, and the Department of Health). This group has been in contact with the Vermont Energy Investment Corporation (VEIC), which has experience implementing several electric school and transit bus pilot projects in the region. A Request for Information (RFI) is also

currently being developed to gather additional relevant information before a Request for Proposals (RFP) is generated, which will contain the specifics of the pilot program. Locations of bus deployments for the pilot program will depend on many factors, including interest and willingness of schools or districts, input from the third-party program administrator, other details listed in the program RFP, and additional priorities in the BMP document. ANR agrees that public tax benefits would potentially be greater for districts which manage their own bussing fleets, however, it is also possible that the same result could be achieved by the school or district renegotiating their contract when their bussing contractor receives a no or low-cost new bus due to interest from the district.

Although ANR agrees that the electricity portfolio of the districts charging these electric buses is important, just because energy is considered renewable does not mean that the method of generating that electricity emits less air pollution. There are also issues of equity to be considered, as limiting pilot projects to regions with electricity portfolios consisting of at least 90% renewable energy would severely restrict school districts and towns that would be eligible.

14. **Paraphrased Comment:** *One commenter suggested the use of funds to purchase electric school buses that could be used for transit buses during off hours.*

Response: An electric school bus pilot project is being implemented in FY 2019 to determine the feasibility of the technology in Vermont, as stated in the BMP. Additional funding will be held in reserve for electric school bus replacements if the technology proves to be effective in Vermont. The idea of using electric school buses as transit buses during “off-hours” is interesting, however does have some potential issues. One major issue is that of charging time. Depending upon the length of the school bus route, the available charging infrastructure, and the desired transit route there may not be enough electric range to use the school bus for multiple purposes (except potentially on the weekends). This option remains a possibility, however specific analyses would need to be conducted to determine the feasibility for particular routes.

15. **Paraphrased Comment:** *One commenter suggested a slower rate of purchase for electric buses, and to wait for the bus price to go down as the technology emerges and becomes more widely adopted.*

Response: ANR will implement an electric school and transit bus pilot project in FY 2019 to assess the feasibility of electric buses in Vermont, with approximately \$4 million in reserve depending upon the success of the pilot projects. These pilot projects have the dual benefit of determining the feasibility and reliability of the technology in Vermont, as well as delaying the purchase timeline slightly, which will take advantage of the expected price reductions for electric bus and battery technologies in the coming years. These pilot projects will also provide valuable information relating to the use, maintenance, and other technical issues of electric buses, and will help to streamline the process for additional electric bus deployments.

16. **Paraphrased Comment:** *Two commenters request the use of funds to purchase electric school and transit buses because they are more energy efficient than diesel buses.*

Response: As stated in the BMP, an electric school and transit bus pilot project is planned for FY 2019 with approximately \$4 million set in reserve for additional projects if the technology proves

effective in Vermont. Electric buses do provide improved energy efficiency compared to their diesel counterparts, however, they are also currently considerably more expensive. Significant funding will be allocated to the purchase of electric school and transit buses that improve the energy efficiency in the transportation sector, and these projects will be balanced and complemented by projects with combustion engines for freight trucks which provide more cost-effective pollutant reduction.

17. **Paraphrased Comment:** *One commenter suggested Vermont adopt an incentive program for EV buses, and a competitive funding program like the federal or California program.*

Response: Assuming that the commenter is suggesting creating such an incentive program with VW funds, an electric school and transit bus pilot project is planned for FY 2019 with approximately \$4 million set in reserve for additional projects if the technology proves effective in Vermont.

18. **Paraphrased Comment:** *One commenter suggested funding electric transit bus projects to assess the feasibility of electric buses in the public transportation fleet, with pilots in Montpelier, Burlington, Rutland, and several smaller municipalities.*

Response: As stated in the BMP, an electric school and transit bus pilot project is planned for FY 2019 with approximately \$4 million set in reserve for additional projects if the technology proves effective in Vermont. Locations of the pilot projects will be based on the interest of the entity or transit agency, input from the third-party vendor overseeing the pilot project, and additional goals and priorities listed in the BMP. It is likely that pilot projects will be distributed across both rural and more urban routes, however, this depends on the entity chosen and is likely more applicable for school buses than transit.

19. **Paraphrased Comment:** *One commenter supported the purchase of electric buses with funds to help lower vehicle miles traveled (VMT).*

Response: As stated in the BMP, an electric school and transit bus pilot project is planned for FY 2019 with approximately \$4 million set in reserve for additional projects if the technology proves effective in Vermont. Although these electrification projects will have many benefits, including reducing air pollutant and greenhouse gas emissions, and VMT traveled by fossil fueled vehicles, they will likely not reduce the overall annual vehicle miles travelled (VMT) in the state.

20. **Paraphrased Comment:** *Three commenters requested the funds be used for electric school and transit buses to increase access to public transportation, and to focus on environmental justice areas.*

Response: As stated in the BMP, ANR will implement several electric school and transit bus pilot projects in FY 2019 to assess the feasibility of electric buses in Vermont, with approximately \$4 million in reserve depending upon the success of the pilot projects. Environmental justice areas are incorporated into Section III of the BMP document which prioritizes air quality in areas that bear a disproportionate share of the air pollution burden in Vermont, as well as the general funding priorities. The electric bus pilot and potential post-pilot projects will help to increase public access to electric transportation options and to help catalyze the transition to electric buses in Vermont.

CATEGORY 4: FLEET ELECTRIFICATION IN GENERAL

1. **Paraphrased Comment:** *Multiple commenters suggested the use of funds for electrification to help increase the visibility of EVs and electric buses, and to help model change to drive future transformation.*

Response: ANR agrees that it is important to increase the visibility of EVs and electric buses to promote the adoption of electric technologies and to help drive the transformation of the transportation sector. As stated in the BMP, ANR will implement a pilot project for electric school and transit buses and will allocate approximately \$1 million to determine the feasibility of electric local freight trucks, with additional funds in reserve if the electric technologies prove effective in Vermont. The maximum 15% will also be allocated to the installation of EVSE to help increase the adoption of light-duty electric vehicles. These projects will help to put multiple electric demonstration projects on the road, to provide additional visibility for electric vehicles in the state, and hopefully motivate additional electric vehicle adoption across categories.

2. **Paraphrased Comment:** *Multiple commenters request that funds are used entirely for electrification of the transportation sector, including 15% for EVSE.*

Response: Determining the feasibility of the electrification of the transportation sector is one of the primary goals of the BMP document. As stated in the BMP an electric school and transit bus pilot project is being implemented in FY 2019, as well as proposed electric freight truck pilot projects in future years as technology is available, with significant additional funding in reserve if these technologies prove to be effective in Vermont. The full 15% allowable will also be allocated for the installation of EVSE, which will help to promote electrification of the light-duty fleet. Although a large percentage of the funds will be spent on electrification projects in the transportation sector, these projects will be complemented with projects that provide more cost-effective NOx reduction. These projects will be focused on freight trucks, since the electric technologies are less developed for those sectors.

3. **Paraphrased Comment:** *Multiple commenters support the use of funds for electrification of the transportation system because of the air quality emissions benefits, and associated greenhouse gas reductions.*

Response: Determining the feasibility of the electrification of the transportation sector is one of the primary goals of the BMP document. As stated in the BMP an electric school and transit bus pilot project is being implemented in FY 2019, as well as proposed electric freight truck pilot projects if technology is available, with significant additional funding in reserve if these technologies prove to be effective in Vermont. The full 15% allowable will also be allocated for the installation of EVSE, which will help to promote electrification of the light-duty fleet. There are significant air quality and emissions benefits from electrification, however, electrification projects generally provide less cost-effective pollution reduction due to the currently high upfront cost of electric vehicle technologies. Vehicle replacements with electric technologies which generate greater greenhouse gas reductions

may be complemented by replacements with new diesel or alternative fossil fuel technologies which produce more cost-effective reduction of NOx and other pollutants.

4. **Paraphrased Comment:** *Multiple commenters support the electrification of the transportation sector to help Vermont move toward our renewable energy, climate, and ZEV adoption goals.*

Response: One major focus and goal of the BMP document is assessing the feasibility of electric vehicle technologies in Vermont, and so ANR is implementing an electric school and transit bus pilot project, proposing electric freight truck pilot projects when technology is available, and allocating the maximum 15% of the funds to the installation of EVSE to help drive light-duty ZEV adoption. Additional projects will then be funded based on the success of these pilot projects and submitted applications. These vehicle electrification and EVSE projects will help to meet the state renewable energy goals for the transportation sector, as outlined in the 2016 Comprehensive Energy Plan, as well as the ZEV Action Plan and GHG goals. The electrification projects will be complemented by diesel and alternative fossil fuel projects in the freight truck category, which achieve more cost-effective NOx reductions, as outlined in the BMP.

5. **Paraphrased Comment:** *Multiple commenters were against any use of funds to purchase new diesel vehicles, or any vehicles powered by fossil fuel alternatives, because these diesel to new diesel replacements would be occurring anyway.*

Response: As discussed in the BMP, ANR has proposed to allocate the majority of the VW funds to electrification projects and the installation of EVSE. Traditional diesel or alternative fossil fuel replacement vehicles are not being entirely excluded from the freight truck category because of the more cost-effective NOx reductions for these replacements, due to the higher up-front purchase prices of the electric vehicles. There are also a limited number of available models of electric freight trucks and the electric truck technologies are fairly new, and in some cases untested, in Vermont. Although some of the replacements with new diesel or fossil fuel alternatives would have occurred without the VW funds, it is possible that these older diesel vehicles would remain on the road for many additional years without this funding to incentivize early vehicle replacements, especially in the case of freight trucks.

6. **Paraphrased Comment:** *Multiple commenters supported the electrification of the transportation sector to help jumpstart the market transition to electric vehicles in the state, especially through the funding of projects that would not be possible without supplemental funds.*

Response: ANR agrees that encouraging the electrification of the transportation sector will be beneficial for air quality and the health of people in Vermont. Unfortunately, it is not clear that the amount of funding available in the VW settlement would be enough to truly catalyze this transition. For example, at current prices if all the funds available (excluding the 15% for EVSE and administrative reserve) were to be spent on electric school buses, only around 40 buses would be able to be replaced out of a total of approximately 1,800 in the state. Transit buses are significantly more expensive than school buses, and so even fewer would be able to be replaced. Although this is a starting point, it will take significant future investments to truly drive this market transition. As stated in the BMP, ANR will be implementing several electric school and transit bus pilot projects,

as well as proposing electric freight truck pilot projects, and allocating the maximum 15% of funds to installation of EVSE to drive the light-duty fleet transition to electric. This investment will help to catalyze this market transition and will be balanced and complemented with projects with a greater focus on cost-effective NOx reductions, as outlined in the BMP.

7. **Paraphrased Comment:** *Multiple commenters support the use of funds to electrify the transportation sector to realize the associated public health benefits, and reductions in overall healthcare costs.*

Response: One major focus and goal of the BMP document is assessing the feasibility of electric vehicle technologies in Vermont, and so ANR is implementing an electric school and transit bus pilot project, proposing electric freight truck pilot projects when technology is available, and allocating the maximum 15% of the funds to the installation of EVSE to help drive light-duty ZEV adoption. Additional projects will then be funded depending on the success of these pilot projects and submitted applications. These electrification projects will provide public health benefits and reductions in overall healthcare costs, however electric vehicle replacement projects are less cost-effective than new diesel vehicle replacements, thereby resulting in less pollution reduction per dollar of EMT funds spent. For this reason, freight truck projects will still be eligible for both electric and diesel or alternative fossil fuel replacements.

8. **Paraphrased Comment:** *Multiple commenters support the use of funds specifically for the electrification of school and transit buses, as well as the installation of EVSE, to increase fuel efficiency in the transportation sector and to pass on fuel and maintenance savings to taxpayers.*

Response: Determining the feasibility of the electrification of the transportation sector is one of the primary goals of the BMP. As described in Section II of the BMP, an electric school and transit bus pilot project is being implemented in FY 2019, as well as proposed electric freight truck pilot projects, with nearly 5 million dollars of additional funding in reserve if these technologies prove to be effective in Vermont. The full 15% allowable will also be allocated for the installation of EVSE, which will help to promote electrification of the light-duty fleet. These electrification projects will have several benefits, including fewer tailpipe emissions, increasing the fuel efficiency in the transportation sector, and the fuel and maintenance savings realized over the life of the electric vehicle.

9. **Paraphrased Comment:** *Two commenters request the funds be used to promote transportation electrification to support the transition to clean energy, more renewable electric grid, and energy independence.*

Response: As illustrated in the BMP, electrification of the transportation sector is a major focus for the use of the VW EMT funds. ANR will implement a pilot project for electric school and transit buses and will allocate approximately \$1 million to determine the feasibility of electric local freight trucks, with additional funds in reserve if the electric technologies prove effective in Vermont. The maximum 15% will also be allocated to the installation of EVSE to help increase the adoption of light-duty electric vehicles. Implementation of these electric replacements will help to increase the

use of renewable energy within the transportation sector and will advance Vermont's energy independence by decreasing the state's reliance on imported fossil fuels.

10. **Paraphrased Comment:** *One commenter suggested using at least the 43% currently apportioned for on-road vehicles for electrification projects, and potentially expanding that, but also prioritizing electric options in the DERA, marine, and locomotive categories.*

Response: The apportionment of funding for the on-road vehicles category has been modified to 63%, which includes some potential funding for combustion driven freight trucks and has not been adjusted to account for the administrative reserve. Actual funding percentages will be extremely dependent on the number of applications received for each sector, as well as the success of the electric bus and freight truck pilot projects. Electrification projects in the DERA, marine, and locomotive categories will be considered and prioritized in accordance with the priorities and goals outlined in the BMP and will also be very dependent upon the type of applications received and technologies available in each category.

11. **Paraphrased Comment:** *Two commenters suggested the use of funds for electrification of municipal fleets, including DPW, police, fire department, and parks and recreation.*

Response: Municipal fleets will not receive additional prioritization in the BMP over other eligible projects, however, they do receive some advantage in the form of their eligibility for the 0% required government funding match. If these entities are able to provide some percentage of funding match, they will receive additional prioritization for providing a match above that which is required in Appendix D of the VW EMT document. Some of these projects may also meet the criteria for areas that receive a disproportionate share of air pollution burden, as listed in the BMP document. It is also likely that many municipal projects which would be eligible for VW funding would not have appropriate electric models and/or would not be practical for the needs of a municipality.

12. **Paraphrased Comment:** *One commenter suggested the use of funding for electrification of non-road equipment.*

Response: As discussed in Section II of the BMP document, nearly 3 million dollars will be allocated to non-road projects. Eligible projects can include, but will not be limited to, electrification projects (except for forklifts and airport ground equipment – which are restricted to electric replacements by the VW EMT document). The non-road sector contributes significantly to NOx emissions in Vermont, and also provides the opportunity for demonstration projects for alternative vehicle or engine technologies. Prioritization of electric projects within this category will depend upon the additional goals and priorities listed in the BMP and on the cost of the project.

13. **Paraphrased Comment:** *One commenter requested that the funds be used to prioritize vehicle electrification projects and so to help bolster the clean energy economy and provide new jobs in Vermont.*

Response: Electrification of the transportation sector is an important goal for the use of the VW EMT funds as illustrated in the BMP. ANR will implement a pilot project for electric school and transit buses and will allocate approximately \$1 million to determine the feasibility of electric local freight trucks, with additional funds in reserve if the electric technologies prove effective in Vermont. The maximum 15% will also be allocated to the installation of EVSE to help increase the adoption of light-duty electric vehicles. The addition of these electric vehicles to the fleet will help to promote the use of electricity as a transportation fuel, which produce less air pollutant emissions than combustion engines. This transition also has the potential to grow the “clean energy economy” and create new jobs in Vermont, however, the levels of funding available in Vermont’s allocation of the VW EMT will likely have a small impact and will need to be supplemented by significant additional investments.

14. **Paraphrased Comment:** *One commenter illustrated the definition of “Port” in the Consent Decree and suggested the potential inclusion/expansion of electric Terminal Trucks.*

Response: ANR does not see the need to further define ports in the BMP document. It is likely that vehicles operating at bulk terminals, container terminals, or intermodal container transfer facilities would qualify for funding in one of the freight truck categories or potentially through the DERA option and would be eligible for replacement or repower with either an electric or new combustion vehicle or engine. If necessary, this issue can be explored in a subsequent revision of the BMP.

CATEGORY 5: ALTERNATIVE FUEL REPLACEMENT PROJECT IDEAS

1. **Paraphrased Comment:** *One commenter recommended not limiting the eligible alternative fuels to a specific fuel (e.g. only allowing all-electric replacements) because different fuels serve different markets, and no single alternative fuel (including electricity) covers all applications.*

Response: ANR agrees with the commenter. However, the Vermont Legislature has included language in this year’s Appropriations Bill which limits the use of Vermont’s VW EMT funds to only all-electric replacements/repowers for FY 2019. Looking past FY 2019, the BMP reserves funding for projects fueled by any of the eligible fuels as written in the VW EMT, however these funds will be subject to the goals of the BMP and future action by the legislature.

2. **Comment:** *Given that the EMT was created because of NOx pollution associated with non-compliant diesel vehicles, we believe that the funding should be set aside for clean, alternative fuel vehicle projects that focus on maximizing NOx reduction for the funds spent.*

Response: Although the BMP does not exclude new diesel-powered replacements or repowers, the BMP does prioritize maximizing NOx emissions reduction for the funds spent as the commenter suggests. The BMP does not exclude new diesel-powered replacements or repowers, because in some instances these replacements or repowers can provide the most cost-effective NOx emissions reduction.

3. **Comment:** *I have heard that CNG (natural gas) vehicles are part of the plan, but I don't see that mentioned. Please advise as to your intention regarding CNG vehicles.*

Response: Under the VW EMT, Eligible Medium and Large Trucks, Buses, Freight Switchers, and Ferries may be replaced with any new alternative fueled (e.g., compressed natural gas, propane, hybrid) vehicle or repowered with any new alternative fueled engine. Accordingly, CNG replacement and repower projects are eligible for funding under Vermont's BMP.

4. **Paraphrased Comments:** *Multiple commenters strongly encouraged the prioritization of investments in natural gas near-zero emission vehicles since the technology is proven and widely available, these vehicles are now commercially available in all the desired vehicle categories stated in the Plan and can begin improving Vermont's air quality immediately at a much lower cost than other clean technologies.*

Response: The BMP includes a combination of funding priorities for projects that address the commenters' suggested prioritization of investments, including:

- a. Prioritizing projects that achieve the greatest NOx emission reduction per amount funded through the EMT (i.e., capital cost effectiveness in VW EMT fund dollars/pound of NOx reduced);
 - b. Prioritizing projects that can be implemented efficiently and within 18 months of approval; and,
 - c. Prioritizing projects that ensure feasibility of deployment and technology that can be supported in continued operation for the life of the equipment/vehicle.
5. **Paraphrased Comment:** *One commenter supported investment in natural gas vehicles because they emit less CO2 than diesel vehicles and they produce almost no nitrogen oxides. Today's natural gas vehicle (NGV) engines are 90% cleaner than the EPA's current exhaust standards, 90% below the cleanest diesel engine and 50% more cost effective at reducing NOx as compared to diesel or electric vehicles.*

Response: While it is true that some of today's compressed natural gas (CNG) vehicles have engines certified to meet the California Air Resources Board's (CARB's) Optional Low-NOx Emissions Standards of 0.1 gram per brake horsepower-hour (g/bhp-hr), 0.05 g/bhp-hr, or 0.02 g/bhp-hr NOx, not all of today's CNG vehicles are 90% cleaner. This will depend on which of the CARB Optional Low-NOx Emissions Standards an engine is certified to. Some CNG vehicles are only certified to meet current diesel emission standards and therefore are considered to have NOx emissions like today's diesel vehicle. The CNG vehicles that are certified to meet CARB's Optional Low-NOx Emissions Standards will likely be prioritized due to the BMP's prioritization of projects that achieve the greatest NOx emission reduction per amount funded through the EMT (i.e., capital cost effectiveness in VW EMT fund dollars/pound of NOx reduced).

6. **Paraphrased Comments:** *Multiple comments were received supporting natural gas vehicles powered by Renewable Natural Gas (RNG) produced at farms and landfills. On farms, manure management is critical to reducing methane emissions and improve water quality. By "digesting" manure to create RNG, farms can produce renewable energy, reduce GHG emissions and advance efforts for cleaner water. Vehicles which use RNG create the double benefit of reducing transportation emissions through use of cleaner-running RNG, plus supporting a growing farm-sourced RNG supply which offers its own emissions reductions. This virtuous cycle of collaboration in transportation and agriculture promises to create and grow a robust market for RNG, a powerful strategy to advance Vermont's 90% renewable by 2050 energy goals.*

Response: ANR agrees that by "digesting" manure to create RNG, farms can produce renewable energy. When RNG is used as vehicle fuel, it may provide life cycle greenhouse gas (GHG) emissions benefits over conventional diesel fuel, depending on the vehicle type, drive cycle, engine calibration and what baseline is used for calculating the GHG emissions prior to adding a digester to the farm. If the actual manure management practice at the farm prior to adding a digester included allowing the manure to anaerobically decompose in a pit or lagoon without capturing the methane, then the digester GHG emission reductions would likely be significant^{1,2,3}. If the baseline manure management practices minimized anaerobic decomposition through more pasturing of the animals, or prompt spreading of collected manure, then the digester GHG reductions would be less significant because the baseline practice largely avoided anaerobic conditions which generate methane, and instead favored aerobic carbon dioxide generation (which is approximately 25 times less effective than methane as a GHG). Additionally, some of the carbon in the manure would be incorporated into the pasture soil.

ANR disagrees with the commenters' statement that digesting manure to produce RNG advances efforts for cleaner water. Only a small percentage of the manure is actually converted to biogas in modern anaerobic digesters. Dairy cow manure is about 85 percent water and 15 percent solids and only about a quarter of the solids end up being converted to biogas⁴. The residual solids left over after the digestion are lower in odor and may be dried and reused as cow bedding. The liquid effluent, which is also lower in odor, retains some of the nitrogen and phosphorus nutrients and is stored in tanks and/or lagoons before being reapplied to the land.

Anaerobic digestion by itself is not expected to result in reductions in phosphorus loading to soils, surface water, ponds or lakes. In order to obtain phosphorus reductions, diet manipulation or further processing of the manure to separate and concentrate the phosphorus is required. As of 2017 none of the 15 large manure digester projects in Vermont reduced their phosphorus loading due to the use of an anaerobic digester.

The use of RNG as a vehicle fuel may result in lower NOx emissions at the tailpipe when compared to conventional diesel; however, this depends largely on vehicle type, age, drive cycle, and the emissions standard the engine or vehicle is certified to. While it is true that some of today's natural gas vehicles (NGVs) have engines certified to meet the California Air Resources Board's (CARB's) Optional Low-NOx Emissions Standards of 0.1 gram per brake horsepower-hour (g/bhp-hr), 0.05 g/bhp-hr, or 0.02 g/bhp-hr NOx, some NGVs are only certified to meet current diesel emission standards and therefore are considered to have NOx emissions like today's diesel vehicle. The vehicles that are certified to meet CARB's Optional Low-NOx Emissions Standards will likely be

¹ [Estimating Greenhouse Gas Reductions For a Regional Digester Treating Dairy Manure](#). U.S. EPA. Accessed April 4, 2017.

² [Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory](#). USDA OCE. Accessed April 4, 2017.

³ Zaks, D. P., Winchester, N., Kucharik, C. J., Barford, C. C., Paltsev, S., & Reilly, J. M. [Contribution of Anaerobic Digesters to Emissions Mitigation and Electricity Generation Under U.S. Climate Policy](#). *Environmental Science & Technology*, 45(16), 6735-6742. doi:10.1021/es104227y. 2011.

⁴ Renewable and Alternative Energy. [Biogas from Manure](#). Penn State Extension Service.

prioritized due to the BMP's prioritization of projects that achieve the greatest NOx emission reduction per amount funded through the EMT (i.e., capital cost effectiveness in VW EMT fund dollars/pound of NOx reduced).

Replacement/repower projects utilizing RNG as a fuel are eligible for funding under the VW EMT.

The priorities within the BMP that may help to prioritize RNG fueled projects may include:

- Prioritizing projects that achieve the greatest NOx emission reduction per amount funded through the EMT (i.e., capital cost effectiveness in VW EMT fund dollars/pound of NOx reduced);
- Prioritizing projects that promote other statewide energy, environmental, health, and economic development goals; and
- Prioritizing projects that result in emissions and air quality co-benefits, such as a reduction in greenhouse gas, particulate matter, and other emissions.

7. **Comment:** *Since the Trust does not specify the fuel of the scrappage vehicle, allow older natural gas vehicles that meet the year criteria to be scrapped and replaced with new, cleaner NGVs.*

Response: The intent of the VW EMT is to fully mitigate the total excess NOx emissions from the subject diesel vehicles manufactured by VW and operated in Vermont. Given that the goal is to mitigate NOx emissions, Vermont has decided to only fund eligible projects that replace or repower existing diesel vehicles and equipment.

8. **Paraphrased Comment:** *One commenter encouraged the adoption and utilization of propane-powered Class 4-8 vehicles in Vermont's Volkswagen Environmental Mitigation Plan. Propane has a proven track record as a domestically produced transportation fuel in fleets across the country with benefits including lower total-cost-of-ownership, comparable performance to conventional fuels, onsite fueling, reduced maintenance, lower emissions, and decreased reliance on foreign-sourced fuel. Additionally, there are several companies that offer both OEM and aftermarket conversions for propane vehicles allowing for a variety so fleets can select the option that best fits their need. When factoring in all the benefits, there is no doubt that investing Volkswagen Settlement funds into propane powered school buses would be one of the most cost-effective ways of reducing the excess NOx caused by Volkswagen. Propane infrastructure is already in place to facilitate Vermont's Environmental Mitigation Plan, as there are already 13 public and private stations within the state.*

Response: Depending on vehicle type, age, and drive cycle, propane vehicles can produce lower NOx emissions when compared to vehicles fueled with diesel. As dictated in the terms of the Environmental Mitigation Agreement, replacement or repower (replacement of an existing engine with a newer, cleaner engine that is certified by EPA and, if applicable, CARB, to meet a more stringent set of engine emission standards) of Class 4-8 vehicles with propane vehicles or engines are eligible for funding; however, aftermarket clean alternative fuel conversions, in which conventional, original equipment manufacturer (OEM) highway diesel vehicles and engines are altered to operate on alternative fuels such as propane, are not eligible for funding. Priorities listed within the BMP that may encourage adoption of propane powered vehicles include:

- Prioritization of projects that achieve the greatest NOx emission reduction or offset per amount funded through the EMT (i.e., capital cost effectiveness in VW EMT fund dollars/pound of NOx reduced);
- Prioritization of projects that support the market development and demonstrate the feasibility of all-electric or NOx mitigating alternatively fueled vehicles and equipment;
- Prioritization of projects that can be implemented efficiently and within 18 months of approval;
- Prioritization of projects that ensure feasibility of deployment and technology that can be supported in continued operation for the life of the equipment/vehicle;
- Prioritization of projects that promote other statewide energy, environmental, health, and economic development goals; and
- Prioritization of projects that result in emissions and air quality co-benefits, such as a reduction in greenhouse gas, particulate matter, and other emissions.

9. **Paraphrased Comment:** *Another commenter supported propane powered buses and vehicles. Propane powered buses are a proven, popular alternative to electric school buses for the following reasons:*

- Propane school buses are roughly \$15,000 more than a diesel model and less than a third of the cost of an electric school bus. They are cheaper to operate and maintain, requiring less oil and fewer filters than conventional vehicles.*
- Due to its low carbon content, propane is fundamentally one of the cleanest burning fossil fuels. When used as a transportation fuel, it offers a 10% reduction in lifecycle emissions of greenhouse gases over petroleum-based fuels, depending on vehicle type and load conditions.*
- The propane fueling infrastructure is very similar to gasoline and diesel refueling equipment.*

Response: Please see the Response to the previous comment #8 in Category 6 above.

10. **Paraphrased Comment:** *One commenter discussed the importance of looking at what the marketplace already offers for NOx reduction. For instance, the Volkswagen funds are available for electric forklifts. They discourage ANR from focusing on these. The forklift market already has a NOx reducing option—propane. By supporting electric forklifts, it would take money away from applications that can better reduce harmful diesel emissions. Unfortunately, propane-powered forklifts are not eligible for these funds. This exclusion may be shortsighted, but you can avoid expounding this problem by continuing to focus Vermont’s mitigation plan on where the best “bang for the buck” exists.*

Response: Cost effective NOx emissions reduction is a priority of the BMP. However, in an effort to balance cost-effective reduction of NOx emissions and adoption of all-electric or other NOx mitigating alternatively fueled vehicles/equipment, the BMP does not further narrow the already narrow list of eligible mitigation actions provided under the EMT.

11. **Paraphrased Comment:** *One commenter supporting alternative fuel technologies urged that the use of these funds should maintain the focus of offsetting the excess Volkswagen NOx emissions.*

Response: The Agency agrees with this comment.

CATEGORY 6: NEW DIESEL REPLACEMENT PROJECTS

1. **Paraphrased Comment:** *One commenter supports reducing NOx emissions in the most cost-effective way possible. There have been many comments advocating all, or most, of the funds support a transition from diesel powered school buses to electric buses. There is an obvious and needed health benefit to students and Vermont's environment, but the VW fund is limited and must be invested fairly and thoughtfully. Using all the VW funds to purchase a few dozen electric school buses benefits their student riders while the rest of the student population is exposed to emissions that state-of-the-art control technologies can greatly reduce or eliminate. This matter of fair treatment for all students makes it imperative ANR consider using VW funds and DERA funds to bring all buses up to standards imposed on new buses. A cost-effective approach to meeting the BMP NOx reduction goal should focus on the entire Vermont school bus fleet and provide funding for all buses being retrofitted with state-of-the-art emission control technologies as a State-initiated program.*

Response: ANR appreciates the commenters support for the fair and cost-effective use of the limited VW EMT funds. The Agency acknowledges the comment and understands that due to the high cost of an electric school bus, if all the VW EMT funding were spent to replace diesel-powered school buses with all-electric school buses only a small number of school buses could be replaced, and this would benefit a small portion of the population of students that utilize school bus transportation, leaving the majority of school buses unchanged. Recognizing the competing interests for the best use of the VW EMT Fund, the BMP tries to balance cost effective reduction of NOx emissions and adoption of all-electric or other NOx mitigating alternatively fueled vehicles/equipment (if feasible). Specifically, the BMP does not further narrow the already narrow list of eligible mitigation actions provided under the EMT to allow for the opportunity to support both competing goals. Under the BMP, funds have been allocated to implement an electric school bus pilot program (which generally supports other state energy, environmental, health and economic development goals) while reserving funds for future use under the DERA Option (which allows for retrofitting diesel-powered school buses with advanced emission control technologies or replacement with new diesel-powered school buses with advanced emission control technologies) and other cost-effective, diesel emissions reducing projects. It is important to note that the Vermont Legislature included language in the FY19 Appropriations Bill that limits the use of Vermont's VW EMT funds to support only all-electric replacements/repowers for FY 2019.

There are several EPA and/or CARB verified emission controls available for school bus retrofits. The most common and successful retrofits for school buses are closed crankcase ventilation (CCV) and diesel oxidation catalyst (DOC) technologies. Another emission control retrofit technology that is available, is the diesel particulate filter (DPF). While these emission control retrofits importantly reduce air pollutants such as particulate matter, hydrocarbons, and carbon monoxide, they do not reduce NOx emissions. EPA and/or CARB verified selective catalytic reduction (SCR) retrofit technology for highway vehicles is designed to reduce NOx emissions by approximately 70%. However, SCR retrofits may not be available or appropriate for every school bus as their functionality depends greatly on the vehicle's duty cycle. Additionally, equipping a school bus with technology it was not originally designed for, especially SCR technology, can be very challenging and expensive.

Since the purpose of the VW EMT is to fund Eligible Mitigation Actions to achieve reductions of NOx emissions in the United States, allocating VW EMT funds to the DERA Option to fund a State-initiated program for NOx emissions reducing school bus retrofits may not be appropriate or successful due to the expensive challenges of SCR retrofit technology applications on school buses. The current State DERA grant program's purpose is to provide support for projects that protect human health and improve air quality by reducing harmful emissions from diesel engines and can fund up to 100% of the equipment and installation costs for school bus retrofits. It may be more fitting to fund a State-initiated program for school bus retrofits to reduce diesel emissions under the State DERA program, separate from the VW EMT. Under the State DERA program, retrofitting school buses with emission control and idle reduction technologies has been strongly encouraged over the last 10 years. In addition, under the State DERA program, school buses may be replaced with new, lower-emitting diesel-powered school buses, resulting in much more cost-effective NOx reduction of up to 96%.

2. **Paraphrased Comment:** *One commenter supported allocating funds to new diesel vehicles, stating that while the future will be electric vehicles in part, the industry and heavy duty commercial trucking market is not there yet. The commenter encourages working with the private sector and manufacturers who are on the ground and who can make an immediate impact by deploying new diesel vehicles. Considerations should be made regarding vocation and idling hours. The commenter suggests that those upgrades from old diesel to new diesel vehicles are changes that can be made within a 6-9-month period and most likely to benefit smaller communities.*

Response: ANR acknowledges this comment and agrees that Class 4-8 heavy duty all-electric truck technology is not widely deployed nor do all-electric options exist for all vocations in the United States at this time. For this reason and in consideration of balancing cost-effective reduction of NOx emissions and adoption of all-electric or other NOx mitigating alternatively fueled vehicles/equipment, the BMP does not further narrow the already narrow list of eligible mitigation actions provided under the EMT. Under the BMP, funding is allocated to electric bus and truck pilot programs as well as reserving funding for future use to reduce NOx emissions through diesel and alternatively fueled replacements/repowers. It is important to note that the Vermont Legislature included language in the FY19 Appropriations Bill which limits the use of Vermont's VW EMT funds to support only all-electric replacements/repowers for FY 2019.

3. **Paraphrased Comments:** *Multiple comments were received supporting the allocation of funding to the DERA Option to allow for the funding of idle reduction technology projects for all fleets including ambulances and emergency vehicles.*

Response: ANR recognizes that idle reduction technologies are important tools that all fleets can use to reduce NOx and other air pollutants in Vermont. Vehicle idling harms human health, pollutes the air, wastes fuel and money, and causes excess engine wear. The BMP includes an allocation of funding for the DERA Option, which allows for additional types of diesel emissions reduction projects not currently eligible under the VW EMT, such as the application of idle reduction technologies.

4. **Paraphrased Comment:** *One commenter recommended that if replacement/repower projects remain eligible for replacement with new diesel-powered engines or vehicles, then require these projects to be funded solely under the DERA Option as this would require the replacement to occur*

off-cycle (earlier than planned), ensuring diesel investment would be used to catalyze a project that wouldn't happen otherwise, thereby maximizing NOx reductions.

Response: ANR acknowledges the comment and recognizes that early attrition can help to maximize NOx reductions. The Agency supports incentivizing replacement of older, more heavily polluting vehicles and equipment earlier than would have normally occurred, thus accelerating the turnover of dirtier diesel vehicles and equipment, which tend to have a long useful life. One of the priorities listed within the BMP includes prioritizing projects that demonstrate that the replacement/repower if funded would occur earlier than it normally would have. However, due to the unpredictable future of the DERA program, which is subject to Congressional reauthorization and federal budgeting, the Agency has not made the eligibility of these projects contingent upon the existence of the DERA program. As allowed under the VW EMT, the BMP continues to permit eligible replacements/repowers with new diesel-powered engines and vehicles to occur.

5. **Paraphrased Comments:** *ANR received multiple comments recommending prioritizing electric vehicles/engine replacements and electric vehicle charging infrastructure over new diesel replacements. Several commenters insisted on the removal of new diesel from consideration for this funding, since existing diesel engines are already on track to be replaced with newer, cleaner diesel, using the limited VW Settlement funds to hasten the purchase of an existing technology would mean putting the money toward a shift that would have happened on its own – it doesn't spur transformation. Multiple commenters totally opposed spending any of the VW settlement money on fossil fuel-powered projects.*

Response: Although the BMP does not explicitly prioritize electric vehicles/engine replacements over new diesel replacements, the funding allocations have been restructured to allow for more electric vehicles/engine replacements. For example, Vermont is allocating approximately \$2 million to an electric bus pilot program to be implemented in fiscal year 2019. Approximately, \$4.5 million will be reserved for use at the successful conclusion of the pilot program to further the adoption of electric buses in Vermont. The amount set aside in this reserve will be revisited at the end of the pilot program to determine if other types of technologies, including combustion, should be considered given the model year restrictions associated with eligible projects.

Given that Class 4-8 heavy duty all-electric truck technology is not widely deployed nor do all-electric options exist for all vocations in the United States at this time, ANR is not precluding new diesel-powered replacements/repowers as originally eligible under the VW EMT. Recognizing the competing interests for the best use of the VW EMT Fund, the BMP strives to balance cost effective reduction of NOx emissions and adoption of all-electric or other NOx mitigating alternatively fueled vehicles/equipment. Specifically, the BMP does not further narrow the already narrow list of eligible mitigation actions provided under the EMT to allow for the opportunity to support both competing goals. Therefore, the BMP allocates \$1 million for potential Class 4-8 heavy duty electric truck pilot program.

The funding allocation for Electric Vehicle Supply Equipment (EVSE) remains the same at 15% or \$2.8 million, which is the maximum allowed under the VW EMT.

CATEGORY 7: NON-ROAD VEHICLES AND EQUIPMENT

1. **Paraphrased Comment:** *One commenter suggested replacing diesels with 100% electric will eliminate yard truck emissions and improve air quality, given that yard trucks typically operate 10-15 mph, diesels may emit far more NOx than currently estimated, along with other criteria pollutants.*

Response: Under the VW EMT, yard truck replacements/repowers are eligible for funding within the eligible mitigation action category of “Forklifts and Port Cargo Handling Equipment”; however, based on the assumption that there is no port cargo handling equipment in Vermont, no funds within the BMP are allocated for this type of project. It is important to note that this BMP is a living document and will continue to be updated over the life of the EMT. Funding priorities are subject to change based on public input, air quality or other relevant data, the level of interest from project applicants in various sectors, and other applicable factors.

2. **Paraphrased Comment:** *One commenter recommended eliminating all proposals to support off-road diesel vehicles, because supporting off-road upgrades would be excessively targeted to a specific location and would have no broad effect or visibility statewide.*

Response: Eligible non-road equipment including forklifts and airport ground support equipment may only operate in certain areas; however, these areas are more likely to receive a disproportionate quantity of air pollution from diesel fleets such as but not limited to rail yards, airports, terminals, and depots, which are often located in over-burdened and under-resourced communities. Targeting investments in these locations can maximize health benefits, especially to those populations most vulnerable to the health impacts of air pollution – youngest, oldest, compromised respiratory and cardiovascular systems. Therefore, VW EMT funds will remain available for the replacement/repower of forklifts and airport ground support equipment as detailed in the BMP.

CATEGORY 8: IDEAS ABOUT PROJECT PRIORITIZATION

1. **Paraphrased Comment:** *Several commenters made suggestions about how ANR should prioritize projects for funding, including the following:*
 - a. *Use funds to enhance planned and current investments, enabling cost-effective investment in more zero-emission vehicle technologies;*
 - b. *Target older, higher emitting, diesel vehicles for retirement or repower;*
 - c. *Leverage other public funding to combine with VW funds to amplify investment impacts of projects;*
 - d. *Pursue opportunities that enhance EV purchasing power through coordination with other states or entities on purchases or bidding process, or through bulk or grouped projects;*
 - e. *Prioritize projects that help meet existing state energy and climate goals;*
 - f. *Prioritize projects that will benefit those disproportionately impacted by poor air quality, such as communities located near congested areas, school bus unloading and loading areas, communities with high rates of asthma, and the populations more susceptible to health problems from transportation such as elderly persons, low-income communities, and children;*

- g. Prioritize project in areas where rates of disease caused and/or exacerbated by air pollution are highest;*
- h. Prioritize projects that build on Vermont's air-quality successes;*
- i. Prioritize projects that support no or reduced idling of motor vehicles;*
- j. Prioritize projects that eliminate market barriers (ease of research and information for those looking to purchase clean vehicles and take advantage of incentives);*
- k. Prioritize on-road over non-road vehicle and equipment projects;*
- l. Allow functionally similar-to-similar replacement projects;*
- m. Don't prioritize entities with experience in implementing diesel reduction projects;*
- n. Prioritize projects that can be implemented within 18 months, but don't make this a requirement for funding;*
- o. Prioritize projects from one sector to achieve significant and noticeable results;*
- p. Prioritize alternative fuel vehicle projects that focus on maximizing NOx reduction for the funds spent.;*
- q. Provide more funds from the Trust (larger cost share) for medium and heavy-duty engines that deliver a greater NOx reduction than currently required for new vehicles and engines (meet a more stringent standard);*
- r. Prioritize funding technologies that have demonstrated the ability to deliver actual lower in-use emissions when operated in real-world conditions;*
- s. Prioritize funding for commercially available products that are ready to use;*
- t. Prioritize funding for clean vehicles rather than fueling infrastructure;*
- u. Balance funds distribution between public and private fleets;*
- v. Fund more projects in the early years of the Trust to maximize the NOx reduction benefits; and*
- w. Prioritize projects that spread funds throughout the state in urban and rural communities to make projects visible throughout the state.*

Response: Project funding priorities have been developed from the overall goals of the BMP to inform project qualification criteria and the ultimate project selection criteria that will be used to rank projects in the event that there is competition for available funding. While eligible projects and certain qualification criteria are defined in the VW EMT Agreement, ANR will use project priorities to aide in the selection of projects that meet the specific needs that are unique to Vermont and important to Vermonters.

Many of the priorities suggested in the public comments are included in the final list of project priorities in the BMP. Similarly, some priorities that commenters suggest should not be included remain off the list. Some of the proposed priorities have been removed or modified.

- a. Projects that target the replacement of older, higher emitted diesel vehicles will not necessarily be prioritized, as ANR has found that newer vehicles, while still not meeting today's engine standards, will likely have a higher remaining useful life. Therefore, replacing these vehicles would ultimately yield a greater overall emissions benefit.
 - b. While there is no specific priority for group or regional projects, Vermont is already participating in a regional planning effort to strategically site EVSE in locations that benefit motorists traveling in and through New England states. Also, group projects will be allowed under the VW EMT agreement and will be explored by ANR if there is interest and these projects are feasible.
 - c. In response to comments received, ANR added a priority that will favor projects that commit to sustainability measured above and beyond what is required in the VW EMT or other control measures such as fleet idle reduction.
 - d. While not listed as a specific priority, ANR plans to allocate more funding towards the replacement of on-road vehicles versus non-road mobile sources as interest and eligibility allows.
 - e. While we don't specifically prioritize projects by sector in the list of priorities, ANR is allocating a significant portion of funding to heavy duty electrification projects, most notably bus replacements.
 - f. While the way that the eligible project categories are structured automatically puts ANR in the position of promoting "cleaner" technologies, we are specifically prioritizing the maximum funds allowed (15%) for electric vehicle charging infrastructure. This priority is a result of the large NOx emission contribution of on-road light-duty vehicles. Electric vehicle charging will serve light duty vehicles, thus helping to reduce NOx emissions from this sector.
 - g. ANR's ability to balance funding between public and private projects will largely depend on interest levels from those two groups. Whether or not a public entity will receive funding over a private entity, or vice versa, will depend largely on the project meeting the other prioritization factors.
2. **Paraphrased Comment:** *One commenter recommended modification of proposed funding priorities for selecting and funding eligible mitigation actions to include both projects **and** programs. Projects and programs both constitute eligible mitigation actions that should be subjected to the same selection criteria and prioritization as described in the BMP.*

Response: ANR, along with its interagency partners, is exploring opportunities for programs to be funded, as well as discrete projects. If a funding opportunity for a program becomes available, it will be subject to the goals and priorities that are outlined in the BMP.

CATEGORY 9: COST BENEFIT CONSIDERATIONS

1. **Paraphrased Comment:** *One commenter suggested that ANR consider and allow use of available emissions calculation tools, including AFLEET, which is better for alternative fuel emissions estimates.*

Response: ANR has explored the use of the EPA Diesel Emissions Quantifier (DEQ) as well as the Argonne National Laboratory AFLEET tool for calculating emissions reductions from proposed projects. Both the DEQ and AFLEET models use emission rates from the EPA MOtor Vehicle Emissions Simulator (MOVES) model, however the DEQ does not contain default data for several of the alternative fuels, including Compressed Natural Gas (CNG) or Propane (LPG). Due to this

limitation in the DEQ, the AFLEET tool, or at least the percent emission reductions from this tool for the alternative fossil fuels, will be used to estimate the emissions reductions for applicable projects.

2. **Paraphrased Comment:** *Multiple commenters suggested the use of life-cycle emissions estimates in project emissions reduction calculations, instead of just upfront costs.*

Response: ANR is currently considering the different possibilities and appropriate uses for lifecycle emissions in the project specific emissions reduction calculations. Lifecycle emissions analyses generally refer to a Well-to-Wheels (WTW) analyses, where emissions are estimated for each stage of the production, transport and use of a particular fuel. Although we agree that lifecycle emissions calculations are important, there are several issues of note in the discussion of these emissions, including spatial distribution of the emissions and the amount of data and level of detail required to generate an accurate emission estimate. In terms of the spatial distribution of the emissions associated with the lifecycle analysis, it is not entirely clear that the use of upstream emissions estimates is appropriate for criteria air pollutants. Criteria air pollutants, such as NO_x, tend to be fairly localized and dependent upon where they are produced, as well as on meteorology and chemical interactions in the atmosphere, so their impact on the air quality of Vermont is difficult to quantify. The Argonne National Laboratory AFLEET tool (informed by the GREET Life-cycle model) does contain default values to calculate these emissions, however as stated by the AFLEET 2017 User's Guide "by default AFLEET's air pollutant calculations have been for vehicle operation only."⁵ AFLEET 2017 does contain air pollutant calculations for upstream emissions, however it is still unclear as to the actual air quality and human health impact of these emissions in terms of spatial distribution. The second issue with lifecycle emissions is the amount of data required to accurately estimate upstream emissions. To produce an accurate estimate of a full fuel lifecycle, a large amount of information is required detailing everything from how the particular fuel was extracted, refined, transported, dispensed, to when it is finally combusted. Although the GREET tool is very robust, and contains much of this information as default values, we do not have the data available to confirm the accuracy of, or to modify, this default information. It is possible to simply accept the default GREET model values, however the totals produced may not be meaningful. It should also be noted that the AFLEET tool does not currently contain emissions estimates associated with vehicle production for heavy duty vehicles, which would be the only sector applicable to the VW EMT. ANR agrees that lifecycle emissions are important to consider, however we are still in the process of determining the best and most appropriate way to incorporate them into our emissions analysis.

Another issue related to lifecycle is the total cost of ownership. This issue is mainly raised in the context of electric alternatives versus their new diesel counterparts. ANR acknowledges that the per mile fuel and maintenance costs of an electric vehicle are likely to be less than those of a comparable new diesel vehicle, but at least for electric school buses, these savings will likely not make up the cost difference between the vehicle technologies over the life of the vehicle⁶. Since these savings are realized over the lifetime of the vehicle after purchase, and are not reflected in the purchase price of the vehicle, these savings do not replenish the funds available for projects.

⁵ AFLEET User's Guide: https://greet.es.anl.gov/afleet_tool

⁶ VEIC Electric School Bus Feasibility Study (2016): <https://www.veic.org/docs/resourcelibrary/veic-electric-school-bus-feasibility-study.pdf>

Therefore, ANR believes it is not appropriate to consider these savings in the cost benefit analysis of a project.

3. **Paraphrased Comment:** *Two commenters suggested the use of a holistic approach for emissions benefits calculations, including co-benefits and consideration of additional state environmental goals, instead of a narrow cost per pound NOx reduction value.*

Response: ANR agrees that the co-benefits associated with a project are important and will incorporate these benefits into the project ranking criteria, however, the overall purpose of the VW funds is to reduce NOx emissions in the most cost-effective way possible. Many of the additional state goals, especially relating to air quality, are not at odds with the goal of the most cost-effective NOx reduction. Often the most cost-effective NOx reduction technology is currently a replacement with a new diesel or other alternative fossil fuel engine, due to the high up-front purchase price of electric vehicle technology. These new fossil fuel-based engines are certified to much stricter emissions standards than their old diesel counterparts and the emissions reductions are generally very high for most model years. However, to help achieve as many co-benefits as possible, the critical goal of cost-effective NOx reduction goal listed in the BMP will be balanced with an additional BMP goal geared towards catalyzing the electric vehicle market in the state. ANR will implement several electric school and transit bus pilot projects to evaluate the viability of the technology and the market in Vermont, with a reserve of 5 million dollars for additional replacements if and when the pilot projects prove successful. These pilot projects will serve both to evaluate the viability of these electric technologies and to extend the timeline slightly with the hope that the high purchase prices for these vehicles will come down, making them more cost competitive with their diesel or alternative fossil fuel counterparts. Piloting these electric vehicle technologies while not excluding fossil fuel vehicle replacements will set the stage for greater future co-benefits with a focus on meeting the State's energy efficiency, climate, and fossil fuel reduction goals, while balancing cost-effective NOx reduction and public health objectives.

4. **Paraphrased Comment:** *One commenter suggested that all vehicles that meet CARB low NOx standards or have zero tailpipe emissions should be given equal funding percentages.*

Response: ANR acknowledges the significant emissions reductions achieved by replacing an eligible diesel engine with a CARB certified low NOx engine. Cost effective NOx reduction is one of the primary goals of the BMP document and will be prioritized in conjunction with demonstrating the viability of heavy duty electric vehicles in the state. Alternatively fueled (non-electric) vehicles are being considered as eligible replacement options in the freight truck category and will likely have an edge over electric models in cost effectiveness due to the currently high purchase price of many electric models. Because electric technologies are in many cases prohibitively expensive at the present time, and one of the primary goals of the BMP and the state is to determine the viability of these technologies in Vermont, the funding percentages will remain at the same levels specified in the Consent Decree document.

CATEGORY 10: POPULATIONS DISPROPORTIONATELY IMPACTED BY AIR POLLUTION

1. **Paraphrased Comment:** *One commenter recommended that ANR prioritize investments that would expand the access of low-income communities to clean transportation, such as electric transit buses and electric school buses. Opportunities should be evaluated to leverage VW Settlement funds to improve public transit in transit-dependent communities through the acquisition of electric buses. Low-income communities are also more likely to live in areas with higher NOx emissions, so targeting those areas will have broad environmental, public health, and justice effects.*

Response: The BMP includes a combination of funding priorities for projects that address the commenter's suggested prioritization of investments, including:

- Prioritizing projects that support the market development and demonstrate the feasibility of all-electric or NOx mitigating alternatively fueled vehicles and equipment;
 - Prioritizing projects that affect public transportation and result in increased ridership and/or expanded routes and schedule;
 - Prioritizing projects that include a cost share above and beyond the minimum required or leverage other third-party funding;
 - Prioritizing projects in areas that receive a disproportionate quantity of air pollution from diesel fleets; and
 - Prioritizing projects that target investments in locations that maximize health benefits, especially to those populations most vulnerable to the health impacts of air pollution – youngest, oldest, compromised respiratory and cardiovascular systems – and over-burdened and under-resourced communities.
2. **Paraphrased Comment:** *One commenter recommended prioritization of investments that benefit those most impacted and identified the need to identify other areas with concentrated air quality issues that could also benefit. For example, to help address health disparities in Vermont, funds could be targeted to communities where rates of disease caused and/or exacerbated by air pollution are highest (Franklin/ Grand Isle - high rates of chronic obstructive pulmonary disease (COPD), Rutland/Washington - asthma, and Franklin - heart disease and stroke).*

Response: The BMP does prioritize project proposals that target investments in locations that maximize health benefits, especially to those populations most vulnerable to the health impacts of air pollution – youngest, oldest, compromised respiratory and cardiovascular systems – and over-burdened and under-resourced communities. ANR is working with the Department of Health on this priority.

3. **Paraphrased Comment:** *One comment recommended that priority be given for projects at freight facilities located in disproportionately impacted communities. Funding projects in these locations will result in dramatically reduced emissions in disadvantaged communities, potentially much larger than current calculations estimate.*

Response: The BMP does prioritize project proposals that target investments in locations that maximize health benefits, especially to those populations most vulnerable to the health impacts of air pollution – youngest, oldest, compromised respiratory and cardiovascular systems – and over-burdened and under-resourced communities, which would include freight facilities.

CATEGORY 11: COST SHARE RECOMMENDATIONS

1. **Paraphrased Comment:** *One commenter stated that government entities should not have to provide any cost-share towards eligible projects because of the constrained budgets of towns and school districts.*

Response: While the VW EMT Agreement does allow for government entities to receive funding of up to 100% of the cost of an eligible project, ANR's experience administering previous, similar grant programs suggests that eligible project applicants that are required to contribute some percentage of cost share will be more invested in a successful outcome of the project. In addition, requiring some cost share will allow more projects to be completed with Vermont's EMT allocation. Therefore, ANR anticipates requiring some level of cost share, depending on the eligible project type, for each eligible project applicant.

2. **Paraphrased Comment:** *One commenter stated that all electric projects, including EVSE, should be funded with Trust funds paying the maximum allowable cost-share (75% for non-government entities, and 100% for government entities) to accelerate deployments of heavy-duty electric vehicles. Also, maximum funding levels should be set using percentages rather than fixed dollar amounts due to the variability in expense in deploying electric vehicles and EVSE.*

Response: See response to comment above. To help balance maximizing cost effective NOx reductions with other goals such as accelerating deployment of electric vehicles, ANR has set aside funds for an electric bus pilot program that would fund eligible projects beyond the cost of a traditional combustion replacement. This is important considering that all-electric replacement projects will likely be the least cost-effective option. ANR also anticipates that there will be other funding available for electric projects that can be used to leverage the VW funds and make projects more cost-effective.

3. **Paraphrased Comment:** *Two commenters stated that Vermont should consider funding alternative fuel projects at lower cost-shares than the maximum allowed in Appendix D-2 of the Mitigation Trust Agreement. This would result in more vehicles replaced and greater NOx reduction. Also, this would encourage project applicants to leverage other public and private investment.*

Response: See responses to comments above. ANR agrees that cost-shares should be tailored to encourage leveraged funding and that the VW funds should be expended in the most cost-effective way possible to allow for the greatest NOx emissions reduction per project.

4. **Paraphrased Comment:** *One commenter stated that the cost-shares decided upon should be based on the cost of the vehicles today, and not what they are anticipated to cost in the future.*

Response: See responses to comments above. ANR plans, through its electric bus pilot program, to fund eligible all-electric projects beyond what the cost of a traditional combustion replacement and does not plan at this time to design cost share requirements with consideration of future cost of all-electric technologies.

CATEGORY 12: CO-BENEFITS OF NOX REDUCTION

1. **Paraphrased Comment:** *One commenter suggested that emissions of GHGs should be prioritized equally with diesel air contaminants, as reducing GHG emissions will reduce other contaminants, but this is not true for reducing diesel contaminants and GHG reductions.*

Response: ANR agrees with the importance of reducing GHG emissions in the state and is implementing several electric school and transit bus pilot projects, proposing several electric truck pilot projects, as well as allocating the full 15% allowable for the installation of EVSE for light-duty vehicles, with the potential for additional funding for electric projects based on the success of the pilot projects. These electrification projects will reduce fossil fuel use and help to curb the GHG emissions from mobile sources in the state. These electrification projects and emphasis on GHG reductions will be balanced with the additional BMP goal of maximizing NOx reductions with Vermont's allocation of VW EMT funds.

2. **Paraphrased Comment:** *One commenter asked that reducing fossil fuel use be of equal priority with air quality improvement.*

Response: Reducing fossil fuel use is a co-benefit of the majority of eligible projects in the VW EMT and listed in the BMP. The greatest reductions in fossil fuel use stem from electrification of the transportation sector, and ANR is implementing several electric school and transit bus pilot projects, as well as suggesting several electric freight truck pilot projects, and allocating the maximum amount to the installation of EVSE to help drive the transition of the light-duty vehicle fleet. Significant additional funds will then be allocated to electrification projects depending upon the success of the pilot projects, and the applications submitted. These electrification projects are a priority as illustrated in the BMP and will be balanced and complemented by projects that provide more cost-effective NOx reductions and fossil fuel reductions through fuel efficiency improvements.

3. **Paraphrased Comment:** *One commenter asked that priority be given to projects that help meet existing state renewable energy, ZEV Action Plan, and GHG goals.*

Response: One major focus and goal of the BMP document is assessing the feasibility of electric vehicle technologies in Vermont, and so ANR is implementing several electric school and transit bus pilot projects, proposing electric freight truck pilot projects, and allocating the maximum 15% of the funds to the installation of EVSE. Additional projects will then be funded based on the success of these pilot projects and submitted applications. These vehicle electrification and EVSE projects will help to meet the state renewable energy goals for the transportation sector, as outlined in the Comprehensive Energy Plan, as well as the ZEV Action Plan and GHG goals. The electrification projects will be complemented by additional projects which achieve more cost-effective NOx reductions, as outlined in the BMP.

CATEGORY 13: THIRD-PARTY MANAGEMENT OF TRUST FUNDS

1. **Paraphrased Comment:** *One commenter stated that the VW Trust funds allocated to Vermont should not be managed by a third-party for-profit entity due to the limited nature of the funds.*

Instead, the commenter recommends that ANR consider project proposals and allocate the Trust funds directly.

Response: While ANR has experience in administering the types of projects allowed to be funded under its Diesel Emission Reduction Act grant program, it does not at this time have the appropriate expertise and resources to administer funds for all types of projects, particularly the all-electric heavy-duty replacement projects. ANR does plan to use the administrative funding reserve as cost-effectively as possible. If a 3rd party is utilized to administer certain categories of eligible projects in the early years of the VW EMT, ANR will select the 3rd party through a competitive bid process.

ANR plans to administer funding for other traditional types of eligible projects and non-road electric projects as resources allow. Although ANR can expend administrative funds as part of its VW EMT allocation, there are currently no plans to utilize this allowance by adding human resources to ANR to help expend eligible project funds. Given that there are no other available human resources at ANR to do this work, it is not known when and how these types of projects would be administered.

CATEGORY 14: MISCELLANEOUS

1. **Paraphrased Comment:** *One commenter stated their opposition to spending the VW funds on any off-road motor vehicle replacement projects because these projects are more likely to be limited geographically to discrete urban areas within Vermont and would not be as visible as other all-electric replacement projects eligible under the Trust.*

Response: Funding allocations, goals, and priorities explained in the BMP are in many ways a reflection of each mobile source sector's contribution to NOx emissions in Vermont. Given that eligible non-road mobile sources contribute approximately 26% to NOx emission in the state, ANR finds it appropriate to balance funding towards non-road projects with other projects in the on-road sectors to equitably distribute emissions benefits. Also, non-road technologies are widespread across Vermont in different types of communities, both rural and urban. While these projects may not be as visible as on-road projects, they are anticipated to positively impact Vermont's ability to achieve its goal of cost-effective NOx reduction in the BMP.

2. **Paraphrased Comment:** *One commenter stated that the eligible administrative costs allowed under the Mitigation Trust Agreement should be used to create a program for the funding of electric and alternative fueled vehicles to ensure a streamlined approach to a complex process.*

Response: Vermont is planning to implement an electric bus pilot program in FY19 to be run in a stream-lined way by a third-party that has expertise in the deployment of electric heavy-duty vehicle technology.

3. **Paraphrased Comment:** *Two commenters stated that the BMP should align itself with other state goals and programs, for example the State Comprehensive Energy Plan or the Zero-Emission Vehicle Action Plan.*

Response: The BMP prioritizes projects that align with other state goals and plans.

4. **Paraphrased Comment:** *One commenter stated that the legislature be given time to take testimony and provide recommendations on the use of the funds.*

Response: ANR and other agencies have worked with the legislature during the 2017-2018 session to ensure that they are informed of ANR's goals and process, and that their input is integrated into the BMP.

5. **Paraphrased Comment:** *One commenter stated that the BMP should focus specifically on one sector to achieve the greatest results and make a noticeable impact.*

Response: See comment above regarding non-road mobile sources. ANR is taking a balanced approach to funding eligible projects to ensure that all sectors that contribute to NOx emissions are addressed in the BMP and so that many different types of Vermont communities can benefit from air quality improvements.

6. **Paraphrased Comment:** *One commenter stated that all components of an eligible project, including acquisition, charging and infrastructure, should be eligible for funding by the Trust and to also develop a funding structure that allows for multiple contracts to be included under one project umbrella.*

Response: ANR is planning to allow all the listed project components to be eligible for funding, as permitted by the VW EMT Agreement.

7. **Paraphrased Comment:** *One commenter stated that technical assistance should be provided to applicants and fund recipients to make sure that those that do not have the capacity to advance technical projects do not lose the opportunity to participate. State staff should be dedicated solely to the administration of funding projects under the Trust and that new staff be hired if necessary.*

Response: ANR is planning to offer technical assistance for those applying for funds, especially for more complex and innovative projects.

8. **Paraphrased Comment:** *Two commenters stated that ANR should collaborate with other state agencies that have experience in awarding grants for EVSE projects and other projects, such as ACCD and the Clean Energy Development Fund.*

Response: ANR is working closely with several agencies that have expertise relevant to eligible projects. These agencies include the Agency of Commerce and Community Development (in implementing the EVSE funding), the Agency of Transportation, the Department of Public Service (which houses the CEDF), the Department of Health, and the Department of Buildings and General Services.

9. **Paraphrased Comment:** *One commenter stated that ANR should define "port" as used in Appendix D-2 as terminals which move cargo or are clustered at inland transportation hubs in disadvantaged communities.*

Response: ANR does not anticipate that Vermont has any "ports" as defined in the VW EMT Agreement or as interpreted in this comment.

10. **Paraphrased Comment:** *One commenter recommended that ANR consider the merits of supporting their (the electric utility's) Tier III program to install up to 20 EVSE annually over the next three years.*

Response: ANR, in partnership with ACCD, has not ruled out funding EVSE programs, such as the one suggested in this comment. EVSE projects funded will depend on competitive selection criteria,

which have yet to be finalized by the Interagency team (referenced above) working on EVSE deployment in Vermont.

CATEGORY 15: NOT ELIGIBLE

ANR received several comments that contained recommendations for projects, actions, or prioritization that are not eligible under the terms of the VW EMT Agreement and therefore may not be implemented using VW EMT Funds. These projects include:

- *Allowing a fleet to acquire an older vehicle from another fleet or allowing a fleet to exchange one of its newer vehicles for another fleet's older vehicle that is then scrapped;*
- *Funding incentives for weatherization projects or solar projects for town buildings, schools, and low-income Vermonters;*
- *Making funding available to provide public housing assistance;*
- *Funding a monitor for gas and particulate emissions;*
- *Development of a liquified natural gas fueling station on Interstate-89;*
- *Development of a hydrogen generation plant and fueling station in Vermont;*
- *Creating a revolving, no-interest loan program for local government with limited resources;*
- *Paving roads in Vermont; and*
- *Lowering the property tax burden.*

NEXT STEPS

This Responsiveness Summary includes a summary of the written and verbal comments and responses, and comment form responses that ANR received during its approximately 45-day comment period for the Draft BMP. These comments have been taken into consideration as ANR finalized the BMP for submittal to the VW EMT Trustee, as required by the VW EMT Agreement.

Funding from the VW EMT will be made available to Vermont 30 days after the BMP is accepted by the VW Trustee. The ANR Interagency VW Mitigation Working Group will continue its work to develop Requests for Proposals to fund individual projects and programs that align with the BMP. Requests for proposals and/or information will be made available to the public to give notice of funding opportunities. ANR will maintain and periodically update the Vermont VW EMT website (<http://dec.vermont.gov/air-quality/vw>) with new information and funding opportunities.

It is important to note that the BMP is a living document and will continue to be updated over the life of the VW EMT. Funding priorities are subject to change based on public input, air quality or other data, interest from project proponents, and other applicable factors. Funding priorities are not necessarily project selection criteria but will be used to shape the project prioritization and selection criteria that will be used to decide which projects to fund from Vermont's allocation of the VW EMT.

APPENDIX A: SUMMARY OF ONLINE PUBLIC COMMENT FORM RESPONSES

ANR provided an online public comment form with 23 questions to solicit specific feedback on proposed project priorities and other areas of consideration in finalizing the BMP. We received 64 separate comment form submittals via the online form. The responses ANR received are paraphrased below.

1. If you own or operate a vehicle/piece of equipment that would be eligible for replacement/repowering, what are your preferences, considerations, and constraints for choosing between a new electric, diesel, or alternatively fueled vehicle?

Two respondents stated that they would prefer to apply for electric or alternatively fueled vehicles. The majority of respondents did not think this question was applicable to them because they did not own or operate a piece of equipment that would be eligible for replacement, or the comments they provided were not applicable to the scope of the VW EMT and the list of eligible mitigation actions.

2. If you own or operate a vehicle/piece of equipment that would be eligible for replacement/repowering, what type(s) of project(s) do you plan to apply for? See list of eligible projects here.

Unfortunately, most respondents did not own or operate a piece of equipment that would be eligible for replacement. Three respondents, all town Energy or City officials, commented that they plan to apply for replacement of current buses with electric school or shuttle buses, and possible medium duty electric trucks.

3. Should Vermont utilize the services of a third party to assist applicants with application development and feasibility issues, or to manage a portion of eligible project funding? What types of eligible projects should be managed by a third party?

Several respondents commented that a third party should be considered to manage projects that require expertise on the state of the technology available, and technical knowledge that will be necessary to complete an electric or alternative fuels project application, like electric school buses. One respondent commented that municipalities likely don't have the type of expertise that will be necessary to plan for and implement electric or alternative fuel projects, and a third party could be used to assist in those instances. One respondent commented that ANR should recuse itself from the management of the funds if it plans to apply for funding. One respondent commented that a third party could help in determining the best locations to site electric vehicle supply equipment (EVSE).

Several respondents commented that a third party should not be used to administer the VW EMT funds, and that ANR should instead work with existing state entities, like the Clean Energy Development Fund (CEDF) and Agency of Commerce and Community Development (ACCD) to manage projects and keep costs to 7.5% of total project costs. Two respondents commented that ANR should hire limited service positions to help administer the VW EMT funds. Many respondents commented that third parties are too expensive and that the state could manage the funds more cost effectively.

4. How should Vermont calculate the emissions benefits/cost effectiveness of a project?

Several respondents proposed ideas in response to this question. Answers included are those that responded to the question asked.

- *Metric tons of CO2 equivalent avoided over the lifetime of the equipment per dollar requested;*
- *Cost per ton of particulate matter and/or carbon;*
- *Consider emissions of vehicles versus rider miles for transit buses;*
- *Calculate the benefits/cost effectiveness of any given project by including the air quality and health benefits, not just the environmental and economic costs;*
- *Compare the total life-cycle cost, including capital, operating, and “environmental” costs of carbon emissions, of the vehicle to be replaced with the replacement vehicle over a specified period (maybe 20 years);*
- *Calculate benefits/ cost effectiveness of a project over the anticipated lifetime of the project;*
- *Consider NOx reductions, health impacts, and broader societal costs including benefits from reduction greenhouse gas (GHG) emissions;*
- *Consider costs and benefits on a lifecycle basis, including reductions in NOx and climate change-causing emissions, and upfront purchase and lifecycle costs of fuel and maintenance;*
- *Consider expected lifetime CO2 output;*
- *Estimate the changes in vehicle-miles, vehicle-hours and vehicle-trips for different classes of vehicles, and develop a model that quantifies how the project will affect the quantity and mix of air pollution emissions and then apply an appropriate dollar value per unit of emissions;*
- *Complete a literature review to determine best method;*
- *Focus solely on tailpipe emissions and choose “cleanest” vehicles possible;*
- *Deduct savings of the estimated remaining service life of the retired diesel from the lifetime emissions from the newer diesel replacement;*
- *Conduct tailpipe emissions testing;*
- *Reduction in diesel fuel should be valued far above any marginal increase in electrical usage that would result from an increase in electric vehicles;*
- *Consider fiscal responsibility and balance that with environmental impact; and*
- *Only fund projects that would require the use of no fossil fuels.*

5. How, if at all, should Vermont prioritize the replacement or repower of eligible projects that, if funded, would occur earlier than they would have without funding?

Several respondents proposed ideas in response to this question. Answers included are those that responded to the question asked.

One respondent suggested that Vermont prioritize emissions reductions that would not have been achieved without the VW funds.

One respondent suggested that project be prioritized based on how many vulnerable people will benefit from the improved air quality.

Several respondents suggested that Vermont consider speed of implementation and highest emissions reductions.

Two respondents suggested that Vermont consider cost-effectiveness.

One respondent suggested that Vermont consider state energy goal attainment.

Two respondents suggested that Vermont prioritize school buses, then transit buses, then state owned vehicles.

One respondent suggested that Vermont prioritize projects that would yield the greatest air quality benefits.

6. How, if at all, should Vermont prioritize projects in eligible project categories that are limited to vehicles in certain model year ranges?

Many respondents declined to answer this question. Answers included here are those that responded to the question asked.

Several respondents suggested that Vermont prioritize the oldest/dirtiest vehicles for replacement first.

Two respondents suggested that funding priorities should align with the model year requirements to ensure that the window of eligible vehicles does not close during the life of the VW EMT.

One respondent suggested that Vermont should consider annual VMT and life cycle emissions.

One respondent suggested that frequency of use of the vehicle to be replaced should be considered.

One respondent suggested replacing the newer engine model years first, since the older vehicles would be retired soon anyway.

7. For eligible transit bus replacement or repower projects, how should Vermont prioritize these projects? For example, should Vermont prioritize projects that result in increased ridership, expanded routes, different schedules, and/or other factors?

Several respondents suggested that Vermont prioritize transit bus projects that increase ridership. In urban areas, priority should be given to projects that will increase ridership served by zero-emission technologies.

One respondent suggested that Vermont prioritize replacing older transit buses first.

One respondent suggested replacing fleets within routes that already exist to achieve emission reductions.

Several respondents suggested replacing buses that achieve long-term NOx and greenhouse gas reductions and allow for electrification of transit buses to realize the associated cost savings and expand routes and the transit fleet in general.

One respondent suggested that Vermont prioritize electric bus technology that is mature and readily available for larger buses (i.e. 35+ foot models) currently operated by three Vermont transit agencies: Green Mountain Transit, Advance Transit, and Marble Valley. These projects will have the added benefit of operating in more urban environments, which are more impacted by vehicle emissions or relatively poor air quality. The respondent also recommends that Vermont carve out a portion of funding to go towards electric cutaways (smaller buses) which operate in most of Vermont's rural transit service. This technology is not widely available now, but this is likely to change in the next few years. Setting aside money will allow time for the technology to develop and ensure that all Vermonters have the benefit of cleaner electric buses.

Two respondents suggested that priority be given to projects that would help rural/low-income communities have better access to public transit.

Several respondents suggested that transit bus replacements in urban areas should be prioritized because of the public health benefits that would be realized.

One respondent suggested considering the amount of emissions reductions that would be achieved per rider of the subject transit route.

8. In areas of Vermont where people are exposed to a disproportionate amount of air pollution, which of these areas should Vermont prioritize? For example, near-roads, school bus, etc.?

Several respondents suggested that Vermont consider the proximity of the public to areas with high concentrations of vehicle and stationary source emissions.

One respondent suggested that Vermont consider replacing vehicles that travel on roads with historically heavy truck traffic but that also serve an industry with environmental co-benefits (e.g. compost haulers).

Two respondents suggested that projects be prioritized in areas with high rates of disease caused or exacerbated by air pollution. Franklin and Grand Isle counties have high rates of COPD, heart disease and stroke and Rutland and Washington counties have high rates of asthma.

Several respondents suggested that areas where school bus loading, unloading and idling occurs should be prioritized.

One respondent suggested focusing on workplace areas where exposure to air emissions is high.

One respondent suggested that school bus should not be considered in this analysis because school buses are not available to the general public. Instead priority should be given to areas with high population density that are exposed to poor air quality.

One respondent suggested focusing on areas with low-income Vermonters.

One respondent suggested that Vermont should focus more on climate change than reducing pollution in areas with high population density.

9. What is the maximum amount of time that Vermont should consider acceptable for implementation of eligible projects? Should the timeframe be different for different types of eligible projects?

Many respondents declined to answer this question. Answers include:

- Three years;
- Two years;
- One year;
- 18 months for municipalities only;
- Longer time considerations for more complex and technical projects;
- “Good” projects should not have a time limit;
- The implementation timeframe should be left to the applicant, including project milestones that must be met for the project to be fully funded; and
- 5-10 years.

10. How should Vermont prioritize projects with verified or leveraged funding? Specifically, what types of leveraged funding should be acceptable and/or prioritized?

Many respondents declined to answer this question.

Two respondents suggested that projects with leveraged funding should be prioritized, and that both cash and in-kind contributions be accepted.

Two commenters suggested that project be required to provide some degree of cost share, with more points given to projects with higher cost share or leveraged funding.

One commenter suggested that an applicant’s inability to use leveraged funding should not be a barrier to project funding. Some applicants may not have access, or the expertise to access, additional funding.

Two commenters suggested that projects with leveraged funding should not outrank projects that do not provide as much of a pollution reduction as a project without leveraged funding.

One commenter suggested that projects that use leveraged funding that has been provided by a Vermont entity should be prioritized.

11. How should Vermont consider an eligible project applicant’s experience, existing administrative/programmatic structure, technical expertise, and/or existing infrastructure necessary to ensure successful deployment of a project?

Many respondents declined to answer this question.

Several respondents suggested that applicants demonstrate some level of capability to carry out a proposed project.

One respondent suggested that applicants should provide evidence of successfully executing projects of a similar nature in the past, the number of years they have been implementing such projects, and team credentials.

One respondent suggested that municipalities should be presumed to have the expertise necessary to deploy and maintain the equipment that replaces existing equipment.

One respondent suggested that applicants with a demonstrated ability to deploy capital projects and manage grant funds be given priority.

Three respondents suggested that applicants be able to meet the requirements of an RFP. No other qualifications should apply. Technical support should be provided to applicants, if needed.

12. For eligible electric heavy-duty replacement or repower projects or light-duty electric vehicle supply equipment, how should project applicants be required to demonstrate coordination with local electric utilities? Should these types of project be required to show that electric charging will be managed to promote affordability of electricity and not add to peak demand?

Almost all respondents suggested that some degree of coordination with the utilities would be beneficial, including ensuring that a project does not impact peak demand, evidence of an agreement between the utility and project applicant, a demonstration of coordination with the utility,

One respondent suggested that applicants should not need to provide a plan showing how charging will be managed.

One respondent suggested that charging from renewable sources be prioritized, while another suggested that applicants simply be required to state whether they plan to use on-site renewable generation.

One respondent suggested that no coordination with the utility be required.

13. For eligible electric heavy-duty replacement or repower projects or light-duty electric vehicle supply equipment, how should project applicants demonstrate that electric vehicles will be powered by the cleanest available energy sources?

Many respondents suggested that this should not be a consideration because Vermont already has a “low carbon” or “clean” or “renewable” or “lowest NOx” electricity supply.

One respondent suggested that applicants who propose diesel projects should be required to demonstrate that the lifecycle emissions of the project will be lower than a comparable electric vehicle.

One respondent suggested that projects should only be powered by wind, solar, or hydro every source.

One respondent suggested that applicants should present a detailed plan showing where electricity is sourced.

14. How should Vermont measure the life-cycle emissions from proposed eligible projects?

Many respondents agreed with the concept of using life-cycle emissions as a method for prioritizing projects but did not provide suggestions on how these emissions should be quantified.

Several respondents suggested that Vermont use existing, peer reviewed, life cycle emissions assessments to develop a measurement tool. This calculation should not be the responsibility of the applicant.

One respondent suggested that Vermont consider the emissions associated with the production of the replacement vehicle itself.

15. How should Vermont consider eligible project feasibility or a project's ability to actually result in the net emissions benefit if deployed as described in the project application?

One respondent suggested that applicants be required to provide a detailed plan and timeline of expected emissions reductions and also provide supporting evidence for implementation feasibility.

Several respondents suggested an applicant be required to anticipate and report annual VMT, and the expected period of use for the vehicle/equipment in years.

One respondent suggested that an applicant must assess emissions reductions by showing dollar per unit of emissions and emissions reduced.

Several respondents suggested that Vermont consider an applicant's history as to knowledge, commitment, and ability to follow through with, and meet project milestones, on a past project.

16. The intent of the Environmental Mitigation Trust is the reduction of diesel air contaminants, including NOx and particulate matter, however Vermont is also seeking to achieve greenhouse gas reductions in funding eligible projects. How should Vermont evaluate greenhouse gas emission reductions as a co-benefit of a project?

Many respondents agreed that reducing GHG emissions is an important co-benefit to consider but did not provide suggestions on how these reductions should be evaluated as a co-benefit.

One respondent suggested considering both CO₂ reductions and NOx reductions in the project evaluation process.

One respondent suggested prioritizing investment in agricultural and forestry vehicles tied to GHG sequestration and reduced fuel consumption from land management practices.

One respondent suggested that Vermont should prioritize projects that support state goals, maintain the National Ambient Air Quality Standards, and protect communities. Also, particulate matter (PM) reduction should be a priority given that NOx converts to PM in the environment.

One respondent suggested that electric vehicles have no associated criteria pollutants because emissions from electricity generating units, from which the electricity to charge the vehicle is sourced, is treated.

Three respondents suggested that Vermont only fund projects that achieve reductions in GHG emissions as well as reductions in NOx and PM.

One respondent reiterated that life-cycle GHG emissions should be considered to prioritize projects.

Several respondents suggested that reducing GHG emissions should be given top priority over other pollutants.

17. Should Vermont limit the amount of cost share for an eligible heavy-duty electric replacement project to the amount that the technology is expected to cost in 5 years (given the fact that electric technology costs are expected to be lower in the future)? 10 years? Why or why not?

Many respondents suggested that limiting the amount of cost share to expected future costs is not appropriate given the perspective that VW EMT funds are meant to transform the electric vehicle market.

Two respondents suggested that cost share be limited to what applicants would have paid for a traditional replacement vehicle in their normal course of business, in cases where an all-electric replacement option is being pursued by the applicant.

One respondents suggested that Vermont apply the highest contribution allowable to support alternative fuel, electric, and idle reduction projects. Conversely, diesel projects, if eligible at all, should be subject to the highest cost share possible, using the smallest amount of settlement funding.

One respondent suggested that limiting cost share until technologies “mature” is appropriate.

One respondent suggested that a cost share incentive could be graduated over time, decreasing over a 5-year period.

18. Considering that Vermont’s allocation of the Trust will be \$18.7 million, and that Vermont is eligible to spend up to 15% of its allocation of light-duty EVSE, and another 15% on administration of the funds, what percentage of funds should Vermont spend on (project categories listed).

Many respondents commented again on project prioritization but did not provide the requested feedback in the terms of percentage of allocation. Also, many respondents suggested that funds be allocated to categories of projects that are not eligible under the VW EMT, or at percentages that exceed the maximum allowed by the VW EMT.

One respondent suggested that the funds be allocated as follows: School Buses 55%, Heavy duty diesel replacement/repower 20%, Electric forklifts 5%, Light Duty EVSE 10%, Administration 10%.

Three respondents suggested that the funds be allocated as follows: Light duty EVSE - 15%, Administration - 7.5%, Heavy duty electric - 77.5%.

One respondent suggested that some of funds be used to fund DERA idle-reduction projects.

One respondent suggested that 85% of the mitigation funds should be spent to create an electric school bus pilot program, especially for schools who acquire most of their electricity from clean sources, and schools who manage their own bussing (thus saving taxpayers money).

One respondent suggested that 20% of the funds be spent towards heavy-duty electric trucks (replacement/repower), 40% towards EVSE⁷, 15% towards administration costs, 5% towards electric forklifts, 10% towards electric ground-support equipment, and 10% towards other DERA eligible projects.

One respondent suggested that 100% of the funds go towards the purchase of electric transit and school buses.

One respondent suggested that 60% of the funds go towards replacing older school buses.

⁷ The Trust Agreement only allows 15% to be allocated to light-duty EVSE projects.

One respondent suggested that 15% of the funds go towards light-duty EVSE, 15% towards administrative costs, and that the remaining 70% go towards school bus replacements.

One respondent suggested that 60% of the funds be spent on the replacement of existing heavy-duty vehicles with electric models, 10% on new diesel or alternative fuel powered heavy-duty replacements, 15% on light duty EVSE, and 15% on administrative costs.

Two respondents suggested that 100% of the funds go towards purchasing new electric school buses.

One respondent suggested that 70% of the funds go towards the purchase of electric school and transit buses, 15% towards light duty EVSE, 5% towards administrative costs, and 10% towards idle reduction projects under DERA.

One respondent suggested that 70% of the funds go towards the purchase of heavy duty electric vehicles, 15% towards electric forklifts, and 15% towards electric airport ground support equipment.

One respondent suggested that 85% of the funds go towards the purchase of heavy duty electric vehicles, and 15% towards administrative costs.

One respondent suggested that 56% of the funds go towards the purchase of heavy duty electric vehicles, 5% towards ferry/tug projects, 15% towards light-duty EVSE, 12% toward administrative costs, 5% towards freight switchers, 3% towards electric forklifts, and 4% towards electric airport ground support equipment.

One respondent suggested that 40% of the funds go towards the purchase of heavy duty electric vehicles, 20% towards ferry/tugboat projects, and 10% towards electric airport ground support equipment.

One respondent suggested that 85% of the funds go towards the purchase of heavy duty electric vehicles, and 15% go towards light duty EVSE, with administrative costs coming out of the heavy-duty projects to maximize funding for EVSE projects.

One respondent suggested that 30% of the funds go towards the purchase of heavy duty electric vehicle, 20% towards new heavy-duty diesel or alternative fuel vehicles, 10% towards ferry/tugboat projects, 10% towards light duty EVSE projects, 10% towards administrative costs, 5% towards freight switcher projects, 5% towards electric forklifts, 5% towards electric ground support equipment, and 5% towards eligible DERA projects.

19. Once Vermont is certified as a beneficiary (expected early 2018), it will have access to 1/3 of its funding allocation in the first year of the Trust (\$6.23 million), 2/3 available in the second year, and then the full allocation in the third year. How should Vermont prioritize projects funded in the first year of the Trust given the availability of funding?

One respondent suggested that Vermont prioritize projects in the agricultural and solid waste management sectors, and also state and municipal trucks and buses.

One respondent suggested that Vermont prioritize the purchase of electric school buses, but only if the technology is ready to be deployed in Vermont.

One respondent suggested that Vermont prioritize projects that are ready to be implemented in the first year.

Three respondents suggested that Vermont prioritize funding light-duty EVSE and an electric transit and school bus pilot project.

One respondent suggested that Vermont prioritize funding light duty EVSE projects and a variety of vehicle projects including new alternative fueled vehicles, electric vehicles, and idle reduction projects.

One respondent suggested that Vermont prioritize funding light duty EVSE.

Several respondents suggested that Vermont prioritize the replacement of school transit buses.

One respondent suggested that projects using proven technology with well-established benefits should be funded first, as well as light duty EVSE projects.

One respondent suggested that projects that will yield the greatest reductions of CO₂ and air pollutants should be funded first.

Two respondents suggested that bus replacements and electric vehicle projects be funded first.

One respondent suggested that projects should be funded on a first come first served basis.

Several respondents suggested that projects that will yield the greatest emission reductions should be funded first.

20. Should Vermont require government entities to provide some percentage of project cost share? If so, how much?

Several respondents suggested that government entities should provide some percentage of project cost share, but in many cases did not indicate how much cost share is appropriate and said it depends on the emissions reductions that will be achieved and what a government entity can afford. Some respondents suggested a cost share range from 1% to 50%, a cost share equal to the cost of a traditional replacement three years ago for electric projects, and a cost share that will remove barriers to deploying new technology.

Many respondents suggested that a cost share helps project applicants take ownership of a project and therefore the project is likely to be more successful.

Two respondents suggested that government entities not be required to provide a cost share.

21. How should Vermont prioritize projects that align with state energy, environmental, and economic development goals?

Most respondents agreed that prioritizing projects that meet all three of these goals is important. Some respondents did not agree that meeting economic goals is as important, however some pointed out that protecting public health can achieve both environmental and economic goals because when public health improves as a result of a cleaner environment, health care costs go down.

22. Should Vermont require projects to meet a minimum size to be eligible for funding? If so, what should the minimum project size be and why?

Many respondents suggested that some minimum project threshold should be established to ensure that administrative costs can be kept low, but that different minimum thresholds could apply to different types of projects or applicants. Some respondents did not think there should be a minimum size to ensure that as many applicants as possible will have access to the funds.

Two respondents specifically suggested that projects that are leveraging other funding or taking advantage of bulk pricing opportunities should be given priority.

One respondent suggested that instead of setting a minimum funding threshold, a minimum “environmental benefit” should be applied to determine if a project is eligible.

23. Any other comments that you’d like to submit on the draft Beneficiary Mitigation Plan?

Additional comments received on the online form have been included in the responses to the other comments categories below.