March 6, 2017

Bureau of Air Management Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106

Comments on the Draft Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D

Thank you for the opportunity to submit written comments on the draft Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D ("Proposed Plan"). On behalf of the undersigned organizations and our members, we write to identify key priorities that we support for allocating Connecticut's share of the VW Mitigation Trust Funds. We appreciate the state's leadership in developing the plan in advance of Volkswagen naming a trustee and in facilitating a transparent public process.

There are many positive aspects of the Proposed Plan that the undersigned organizations support. First, we fully endorse DEEP's proposal to allocate 15% of the Environmental Mitigation Trust ("Trust") funds, the maximum allowed, to the development of electric vehicle supply equipment ("EVSE").¹ As DEEP illustrates in the Proposed Plan, non-diesel light duty vehicles make up nearly 45% of mobile NOx emissions in the state.² NOx emissions react with other pollutants to form ground level ozone, which has been demonstrated to impair lung function and produce many respiratory symptoms. Connecticut's eight counties all received failing grades for high ozone days from the American Lung Association.³ Increasing charging infrastructure will help bolster adoption of electric vehicles ("EVs"), which produce no tailpipe NOx emissions, by providing a charging network that supports long-range and local driving and visibly promotes EVs across the state.

This coalition also supports DEEP's plan to pursue eligible mitigation projects that maximize the funding for EVSE.⁴ Beyond allocating the entire 15% allowed for EVSE, DEEP should also leverage EVSE from other eligible projects funded through the Trust. For example, charging stations installed for electric transit buses could be open to public charging when buses are in use. We appreciate DEEP's decision not to limit the scope of eligible projects in the Proposed Plan, but we encourage DEEP to invest the majority of the Trust funds on zero-emission buses to maximize this opportunity to leverage infrastructure while achieving maximum emissions reduction.

We support DEEP's giving funding priority to projects in environmental justice communities and would like to see investment maximized in urban areas that have suffered the greatest health impacts from pollution. Zero-emission buses will have a positive impact on air quality in these priority communities due to their frequent operation.

 ¹ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, pages 9 and 18.
² See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 6.
³ See: "State of the Air 2016" American Lung Association, page 64.

http://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2016-full.pdf ⁴ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 8.

We urge Connecticut not to adopt the narrow NOx-per-dollar cost-effectiveness funding priority suggested in the Proposed Plan.⁵ Such a criterion would be inconsistent with the structure of the Volkswagen settlement—NOx cost efficacy has already been factored into developing the list of eligible categories, and thus it is not an appropriate metric for further distinguishing between the eligible mitigation actions.⁶ Moreover, adopting an overly restrictive NOx-per-dollar cost-efficacy test could be counterproductive to Connecticut's broader environmental, public health, and climate goals, as it ignores the other air quality and climate benefits of the investments. For example, replacement of older diesel vehicles with newer models may provide robust short-term NOx reductions per dollar, but may be incompatible with the deeper NOx and greenhouse gas reductions that will be necessary for Connecticut to achieve.

To the extent that costs and benefits are considered, we recommend it should be done holistically, considering the full range of lifecycle benefits and costs of alternative uses of the mitigation trust funds. For example, while electric transit buses have a higher purchase price than diesel buses, recent analysis has shown that their lifecycle costs are about \$165,000 less due to lower fuel, operation, and maintenance costs⁷—these savings only grow as environmental, climate, and public health benefits are considered. These savings are passed on to taxpayers, who in turn reinvest in the local economy.

In addition to cost savings, investment in zero emission vehicles and non-road equipment instead of diesel or alternative fuel upgrades provides the added benefit of helping to achieve the state's greenhouse gas (GHG) emissions mandates. Connecticut is required by the Global Warming Solutions Act to reduce GHG emissions in the state to 10% below 1990 levels by 2020 and 80% below 2001 levels by 2050. Yet, GHG emissions in the state have risen 7.5% from a low in 2012, largely due to increased vehicle use.⁸ As electrification is the only option across the eligible mitigation projects that results in both zero NOx and GHG tailpipe emissions, we support DEEP giving funding priority to zero emission vehicle projects based on consistency with state energy and environmental goals.⁹ Further, to ensure that these benefits are captured in the Proposed Plan, we suggest the addition of another bullet to section VI. A. Environmental Benefits.¹⁰ The new bullet would state that "Replacement or repowering of any eligible vehicle or non-road equipment with an all-electric model or engine will provide 100% reduction in tailpipe NOx emissions."

In the same vein, it is important that DEEP acknowledge the local economic benefits that zero emission vehicles and their associated infrastructure will bring to the state. While DEEP recognizes that eligible mitigation projects may result in "increased sales of both diesel vehicles and non-road equipment and other eligible equipment,"¹¹ it does not explicitly recognize that

 ⁵ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, pages 7 and 17.
⁶ See: DOJ Response to Comments on the Proposed Settlement, page 17 (Sept. 30, 2016)

⁷ See: "From Deceit to Transformation: How Connecticut Can Leverage Volkswagen Settlement Funds to Accelerate Progress to a Clean Transportation System" ConnPIRG, page 14. http://connpirg.org/sites/pirg/files/reports/ConnPIRG%20Final%20Paper.pdf.

⁸ See: "Updated Greenhouse Gas Emissions Inventory for Connecticut: Recent Increases and Underlying Factors" Acadia Center <u>http://acadiacenter.org/document/updated-greenhouse-gas-emissions-inventory-for-connecticut/</u>.

 ⁹ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 7.
¹⁰ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 17.
¹¹ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 17.

sales of electric vehicles and non-road equipment, EVSE, and fuel cells, will generate state tax revenue and support local businesses—there are local car dealerships selling EVs, Connecticut companies manufacturing hydrogen fuel cell technologies, and at least one Connecticut-based company producing EV charging stations. We request that DEEP revise the language in this section on "Energy and Economic Benefits" to be more inclusive of technologies beyond diesel upgrades.

The undersigned also recommend that the Proposed Plan be amended to remove the commitment to giving funding priority to entities with experience in implementing diesel reduction projects.¹² While our organizations understand that experience with these projects can be valuable, it would be counterproductive for funding to be limited to only established entities. For example, if DEEP also adopts the funding priority of having transformative projects that consider environmental justice goals (among others), then prioritizing established applicants could be antithetical to this outcome by limiting projects to traditional ideas and demographic groups. Further, as new technologies emerge and new companies develop to support them, it would be unfortunate to limit the competitiveness of these proposals because of inexperience.

Our organizations appreciate the analytical work that went into developing the emissions charts in the report. However, we would like to see the most recent data used. It appears that older data on GHG emissions is used in Figure 2 than in the NOx emissions charts in Figures 1, 3, 4, and 5. We suggest that the GHG emissions figure be updated using DEEP's "2013 Connecticut Greenhouse Gas Emissions Inventory."¹³

Finally, we are pleased that DEEP has recognized the potential benefits that EVs and associated infrastructure may bring to the grid and local electric distribution system.¹⁴ There are multiple load management benefits that EVs and their associated infrastructure can generate, including integration of variable generation and use of off-peak resources.¹⁵ The state should consider these benefits in their planning efforts, especially as the Trust funds enable greater adoption of these technologies.

Thank you for the opportunity to provide these comments. We look forward to engaging with you on future versions of the State of Connecticut Mitigation Plan, DEEP's actions to deploy the Trust funds, and other actions related to the Volkswagen Settlement.

Respectfully submitted,

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http://www.ct.gov/deep/lib/deep/climatechange/2012_ghg_inventory_2015/ct_2013_ghg_inventory.pdf

 ¹² See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 7.
¹³ See: "2013 Connecticut Greenhouse Gas Emissions Inventory" Connecticut Department of Energy and Environmental Protection

 ¹⁴ See: "Proposed State of Connecticut Mitigation Plan under the Volkswagen 2.0L Partial Consent Decree, Appendix D" Connecticut Department of Energy and Environmental Protection, page 17-18.
¹⁵ See e.g. Electric Vehicles as Distributed Energy Resources, Rocky Mountain Institute (June 2016), available at <u>http://www.rmi.org/Content/Files/RMI_Electric_Vehicles_as_DERs_Final_V2.pdf</u>

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