

Puget Sound Clean Air Agency

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December 15, 2017

Brett Rude
Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

RE: ECY draft mitigation plan under VW settlement

Dear Mr. Rude:

Thank you for the opportunity to provide comments on the Department of Ecology's draft mitigation plan for implementing Washington's share of the VW Environmental Mitigation Trust. As the local air agency serving more than half of the state's population, and as the jurisdiction with more than half of the affected diesel vehicles, we have a keen interest in the implementation of this unique opportunity to achieve significant reductions in nitrogen oxides, along with toxic diesel particulate matter and greenhouse gases, in our region and throughout the state.

Reducing diesel emissions within our jurisdiction is a priority under our 7-year strategic plan, particularly from sources related to ports and goods movement, so we were pleased to see significant allocations to sources in those sectors in the Department's draft plan. Further, our priority efforts to reduce exposures in areas we designated as highly impacted by transportation-related emissions are well-complemented by the types of projects outlined in this draft. As a result, we are pleased to see recognition of how much low income households and communities of color frequently suffer disproportionate impacts from air pollution. Like other organizations and agencies seeking to resolve disparities in environmental exposure to pollutants, it is heartening to see the inclusion of environmental justice screening tools, such as Washington Tracking Network and our own Highly Impacted Communities analysis, to consider beneficial impacts of projects in disproportionately impacted communities.

General:

- In alignment with the state's stated priority for projects that will "[a]chieve substantial additional emission reductions – beyond what would already occur, absent trust funding," we recommend that the state require documentation from project proponents to demonstrate that the proposed project is in addition to any currently planned actions. That requirement could be imposed only at or above a certain funding level (e.g., projects over \$1M) to ensure that significant portions of the state's mitigation funds are clearly spent on demonstrated additional reductions. This will be particularly important in light of laudable pre-existing public commitments by various public transit agencies to fully electrify their fleets in the near future – mitigation funds should not be used to offset these agencies' already planned expenditures.

- Regarding the Principle “Maximize air quality co-benefits beyond nitrogen oxide reductions”:
 - We request that this principle explicitly indicate climate, as the current version is vague and may exclude climate co-benefits. We request the principle be revised as follows:
 - “Maximize air quality co-benefits beyond nitrogen dioxide reduction, especially benefits from expected criteria air pollutant and greenhouse gas reductions.”
- We recommend that the mitigation plan state explicitly that the State will pursue alternative fuels (non-diesel) and advanced technologies that are the most cost-effective for the emissions reduced for all project categories. The state’s principle of maximizing public health benefits with these funds requires solutions that generate the most emission reductions per dollar spent, thus all fuels need to be explored (including cleaner diesel engines if they are the only available options). To wit, the only “fuel” currently mentioned throughout the funding allocation table is electrification, but for many applications, including school buses and heavy-duty Class 8 trucks, an electric vehicle isn’t the most cost effective way to reduce NOx and DPM. For some categories, an electric replacement isn’t currently available, and alternative fuel versions are still in early development (e.g., locomotive engines).

On-Road, Heavy-Duty Vehicles:

- As an example of our earlier comment regarding the state selecting cost-effective, fuel-agnostic solutions for each target sector, paying the incremental cost of electric school buses (~\$275,000 more per bus) would cost 26 times as much as paying the incremental cost of the same number of propane-fueled buses (~\$11,000 more per bus), but the criteria pollution reduction from each bus replacement is nearly the same regardless of the “fuel” type.
 - A replacement with a propane bus reduces NOx by 0.104 tons/year and PM by 0.007 tons/year; a replacement with an electric bus reduces NOx by 0.110 tons/year and PM by 0.008 tons/year. Thus, a propane replacement achieves nearly the same emission reductions of criteria pollutants at a fraction of the cost per bus. However, an electric replacement bus produces more than twice the CO2 emission reductions of a propane replacement so the greenhouse gas co-benefits of the two replacement options differ significantly.
- Electric Class 8 trucks are not yet market ready so a cost comparison wouldn’t be meaningful. They will, however, be substantially more expensive than a 2017+ diesel truck or a factory-built LNG-fueled truck.

Non-Road Equipment:

- We concur with the low maximum allocation to this category.
- Airport GSE electrification is already happening and will continue to happen at major airports by major carriers (which will provide significant NOx & PM reductions without using VW funding). We recommend having only a low incentive level for this eligible project type so that funds aren’t used to fund replacements that would happen without incentives.

Locomotives:

- We recommend increasing the maximum allocation to \$15M for this category and ensuring that private rail companies are eligible.
- These are expensive engine replacement projects that will not happen on private locomotives without substantial public investment. Freight yards, which typically use the oldest locomotives, are disproportionately located near communities of color and economically disadvantaged communities and most yards are operated by private rail companies. To effectively reduce emissions from this

sector, and resultant exposure by disadvantaged communities, Ecology will need to allocate additional funding for locomotive engine upgrades.

Marine Vessels:

- We concur with the funding allocation for this category.
- Although outside the scope of the comments on this draft mitigation plan, we recommend that the State explore alternative funding mechanisms for ferry electrification in addition to using VW funding, based on the significant fuel savings that results, and that the State set a goal of electrifying as many ferries as feasible within the vessels' remaining useful lifespans.
- Full electrification of large ferries using VW funds provides large emission reductions with quick returns on the investments through significant fuel cost savings; those savings can then be invested in other emission-reducing projects throughout the state that would be free of the constraints of the settlement agreement. For example, the state could establish a revolving-loan fund for diesel- and GHG-emission-reduction projects, maximizing the impact of the VW settlement dollars. A revolving loan fund cannot be established using the VW settlement directly, but it could be established using the funds the State saves by buying less diesel fuel for ferries.
- Electrifying ferries would also demonstrate WA's leadership and innovation.
- With respect to the referenced feasibility study of electrifying Washington State Ferries' Jumbo Mark II Class vessels, we recommend that WSF retrofit these ferries with the Increment 4 proposal, which would have all onboard operations on battery power with a single diesel generator for backup purposes only. This option has the shortest payback period (4 years), and by far the greatest fuel savings and greenhouse gas emissions reductions of any alternative in the study.
- We recommend that hybridization be considered only for vessels for which a full electrification effort isn't cost-effective.

Light-Duty, Zero-Emission Vehicle Supply Equipment:

- We concur with allocating the maximum amount of 15% of the settlement funds.

DERA:

- The proposed maximum allocation seems high enough to cover the anticipated match for state DERA allocations from EPA at a maximum match level. If DERA funding is increased significantly, we recommend increasing this allocation so that the state is always maxing out its DERA match.

Thank you again for the opportunity to provide feedback on this mitigation plan. We appreciate the Department's efforts to draft a plan that has strong promise to reduce exposures in disproportionately impacted communities, along with reducing greenhouse gas pollution in Washington State. We look forward to working with you through program design and implementation to ensure that the benefits of these investments are maximized equitably.

Sincerely,



Craig Kenworthy
Executive Director

jwc