

NGVAMERICA

Natural Gas Vehicles for America

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March 12, 2018

Mr. Tommy Wells
Director
DC Department of Energy and Environment
1200 First Street NE
Washington, DC 20002

RE: NGVAmerica Comments on the District of Columbia Mitigation Plan for Using the Funding from the Volkswagen Environmental Mitigation Trust

Dear Director Wells:

Natural Gas Vehicles for America (NGVAmerica), the national trade association for the natural gas vehicle industry, respectfully submits the following comments on how the District of Columbia (DC or District) Department of Energy and Environment (DOEE) can best use the Environmental Mitigation Trust (EMT or Trust) funds (\$8.1 million) that the District will receive as part of the Volkswagen (VW) diesel emission settlement.

As shown in our VW Comment Letter submitted on May 10, 2017 (attached), NGVAmerica believes that natural gas vehicles (both LNG and CNG) offer the best solutions for the projects that will address the goals of the EMT, to reduce the most nitrogen oxide (NOx) for the least cost. Please see the diesel, electric vehicle and natural gas vehicle comparisons on the attached NGVA VW Flyer for heavy duty trucks, transit buses, refuse trucks and school buses.

The DC DOEE states that its DC VW Mitigation Plan's (Plan) primary goals are as follows:

- Positively impact the **health** of District residents by reducing emissions from diesel engines
- Ensure **all communities** receive the same degree of protection from environmental and health hazards, prioritized for areas of most need and disadvantaged communities
- Prioritize funds to drive the great possible emissions reductions by **catalyzing the adoption of zero-emission and alternative fuel vehicles**

Given the District's focus on achieving the greatest emissions reductions and growing the use of alternative fuel vehicles, it is difficult to understand the large portions of funding going to diesel technology and electric vehicles when natural gas vehicle (NGV) engines provide the lowest NOx reductions for the cost, especially if the near zero engines are deployed. The DOEE Plan shows that natural gas reduces the most emissions for the funds spent (page 26), and these results will show greater NGV emissions reductions and accurate diesel reductions if the most current tools are used for calculations. Natural gas locomotives will outperform on emissions over diesel locomotives (especially when "in use" idling and at low speeds), and natural gas transit buses are far more proven and provide virtually equivalent emissions reductions to electric transit buses.

The VW EMT funds provide an extraordinary opportunity for District of Columbia to cost-effectively accelerate the transition to cleaner vehicles and lower emissions. Commercially available natural gas vehicles offer the best solutions today for addressing the goals of the EMT, delivering the most nitrogen oxide emission reductions for the least cost. If renewable natural gas (RNG) is used, life cycle greenhouse gas emissions from NGVs are reduced further. Using low NOx NGVs today allows District of Columbia to accelerate achievement of clean air for its people now, while complementing its transition to zero emissions applications in the future.

Advocating the increasing use of NGVs where they benefit most.
For the economy. For the environment. For health. For security. **For America.**

Current State and DC Beneficiary Mitigation Plans

Eighteen states and the District have released draft VW Mitigation Plans and NGVAmerica has reviewed these plans and offered comments. NGVAmerica believes the Colorado Plan provides an excellent model for other states and DC that wish to segment their funding, maximize the use of alternative fuels, and provide parity among alternative fuels (https://www.colorado.gov/pacific/sites/default/files/AP_VW_Beneficiary_Mitigation_Plan.pdf).

In allocating its funds, Colorado did not pick a preferred alternative fuel (diesel is excluded except for fleets of 9 or less trucks) and provides a relative parity for funding for the various fuels through its choice of percentage funding by fuel type. The \$18M set aside by Colorado for Alt Fuel Trucks/School and Shuttle Buses funds all alternative fuels at 40% of the vehicle cost for government and public entities, while private vehicles are funded at 25% of the vehicle cost (not the 75% allowed for EVs because that would result in fewer vehicles and less NOx reductions, and there are other sources for EV funding).

Additional Options for Vehicle Scrappage

NGVAmerica also recommends that DOE consider the following vehicle scrappage options in the Plan:

- Increase the options for scrappage beyond a strict replacement of a current fleet vehicle (e.g., allow a fleet to acquire an older vehicle from another fleet or allow a fleet to exchange one of its newer vehicles for another fleet's older vehicle that is then scrapped)
- Since the Trust does not specify the fuel of the scrappage vehicle, allow natural gas vehicles that meet the year criteria to be scrapped and replaced with new NGVs

Use the Most Current Emissions and Cost Benefit Calculation Tools – HDVEC created for VW Projects

The Argonne National Laboratory's AFLEET tool should be used to calculate vehicle / fuel type emissions since this tool has recently been updated to include current data on all vehicles and fuels including in-use emissions data. The AFLEET Tool 2017 updates include:

- Added low-NOx engine option for CNG and LNG heavy-duty vehicles
- Added diesel in-use emissions multiplier sensitivity case
- Added Idle Reduction Calculator to estimate the idling petroleum use, emissions, and costs for light-duty and heavy-duty vehicles
- Added well-to-pump air pollutants and vehicle cycle petroleum use, GHGs, and air pollutants
- Added more renewable fuel options
- AFLEET Tool spreadsheet and user manual at: http://greet.es.anl.gov/afleet_tool and tool link is: <http://www.afdc.energy.gov/tools>

ANL has also just released a new vehicle emissions calculator (HDVEC) to provide VW officials and fleet managers with an accurate tool to gauge emissions reductions across various medium- and heavy-duty vehicle project options affiliated with the Volkswagen Environmental Mitigation Trust Settlement. The HDVEC tool is available at: <http://afleet-web.es.anl.gov/hdv-emissions-calculator/>.

The DOE Plan states that it used the AFLEET and EPA Diesel Emissions Quantifier (DEQ) Tools in preparing its emissions comparisons. If the AFLEET tool was the latest version released in mid-2017, then it is current. The DEQ tool is not current in its underlying assumptions and data for today's engines and in-use emissions, therefore NGVAmerica recommends that DOE use the HDVEC tool since the data is current, easy to use and was created for VW projects.

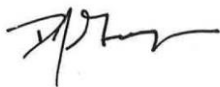
Summary of NGVAmerica's Recommendations for EMT Funding

- ✓ 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**
- ✓ Provide a larger incentive and greater overall funding for medium- and heavy-duty engines that deliver **greater NOx reductions than currently required** for new vehicles and engines
- ✓ Target funding for technologies that have demonstrated the ability to deliver actual **lower in-use emissions** when operated in real-world conditions
- ✓ Provide the **highest level of funding to applications that produce the largest share of NOx emissions** (in most regions this means prioritizing for short-haul, regional-haul and refuse trucks)
- ✓ Prioritize funding for **commercially available products that are ready for use**
- ✓ Prioritize funding for **clean vehicles rather than fueling infrastructure**
- ✓ **Scale funding to incentivize the cleanest engines available** – at a minimum, provide parity among alternative fuels by following a version of the Colorado VW Plan that funds non-diesel alternative vehicles in the private sector at 25% of the cost of the vehicle and public sector vehicles at 40%
- ✓ Ensure that funding incentivizes adoption by **both public and private fleets**
- ✓ Prioritize projects that include **partnerships that provide a match** such as a CNG or LNG station being built in locations that will receive the VW funding
- ✓ **Accelerate the funding** in the early years to maximize the NOx reduction benefits
- ✓ Use vehicles emissions measurement tools that reflect current technologies and performance under real world operation duty cycles – **Argonne National Laboratory's AFLEET tool and HDVEC tools** are the most current tools available

Compared to other alternative fuels and to diesel vehicles, natural gas vehicles that are commercially available today, offer the best solution for addressing the goals of the EMT. The DOE recognizes the value of cost effective NOx reductions that NGVs provide, and that these emission reductions can be realized today while District of Columbia prepares for a zero emission vehicle future.

NGVAmerica welcomes the opportunity to provide further information and analysis on the economic and environmental benefits of natural gas vehicles in District of Columbia. Please contact Jeff Clarke, NGVAmerica General Counsel & Regulatory Affairs Director at 202.824.7364 (jclarke@NGVAmerica.org), or Sherrie Mellow, NGVAmerica State Government Advocacy Director at 303.883.5121 (smellow@NGVAmerica.org) to set up a meeting and for additional information.

Sincerely,



Daniel J. Gage
President