

**H.487 Testimony**  
**Vermont Energy Investment Corporation**  
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**March 17, 2017**

My name is Jennifer Wallace-Brodeur. I am the transportation efficiency director at the Vermont Energy Investment Corporation. Before starting, I'd like to clarify that I work for and am here representing VEIC, not Efficiency Vermont. Efficiency Vermont is one of several programs under the VEIC umbrella. I am part of the Consulting Division for VEIC, which advances market leading strategies for energy efficiency, renewables, and transportation for clients across the country and even internationally.

Our transportation consulting work includes administration of the Drive Electric Vermont program, which is a stakeholder-driven initiative to increase consumer adoption of electric vehicles. We also are working to advance heavy duty electric vehicles. In MA we are working with the Department of Energy Resources to demonstrate electric school buses in four school districts and we are implementing electric school bus workshops for education and utility stakeholders across the Northeast. We are also working with transit providers and VTtrans to explore deployment of electric transit buses in Vermont. We worked with bus manufacturer BYD to loan a bus to Vermont, which is currently being tried out in Advance Transit territory and is next going to UVM, GMT, and Rutland.

Lastly, the National Association of State Energy Officials contracted with VEIC to develop a model VW settlement mitigation plan for state energy offices. This toolkit is intended to serve as a resource as states develop their beneficiary mitigation plan under the environmental mitigation trust. It provides an overview of each eligible mitigation action, the pros and cons of different fuel options, estimates of expected NO<sub>x</sub> reductions, strategic considerations for state plans; and case studies of successful implementation of technologies.

Today I'm planning to provide an overview of the VW settlement; describe how it could benefit Vermont; and suggest ways in which we can prioritize projects.

I'd first like to thank Representatives Burke and Chestnut-Tangerman for introducing this bill. And thank you to Chairman Carr and the committee for inviting me to testify.

VEIC believes that if fully leveraged, **the VW settlement is a once in a lifetime opportunity** to advance Vermont's energy and climate goals, improve health, and strengthen the Vermont economy. We support H.487 as a good articulation of this opportunity and believe it is important for the legislature to provide direction on the use of these funds.

**You may or may not be familiar with the settlement so I will provide some background on the basic details.**

- In June of 2016, the U.S. Environmental Protection Agency reached an historic settlement with Volkswagen for installing software (also known as defeat devices) in diesel vehicles that led to the release of thousands of tons of nitrogen oxide or NO<sub>x</sub> emissions in excess of regulated limits. NO<sub>x</sub> is a poisonous, highly reactive gas emitted by vehicles. The settlement consists of three parts:
  - \$10 billion to a vehicle buyback and modification program for affected consumers
  - \$2 billion for national investment by VW for Zero Emissions Vehicle infrastructure and a brand-neutral campaign raising awareness of zero emission vehicles

- \$2.7 billion to an Environmental Mitigation Trust to be used by states to reduce NO<sub>x</sub> emissions
- Vermont will receive a total allocation of over \$18.5 million, which is the total amount for both 2 liter and 3 liter engine violations.
- The settlement outlines 10 mitigation actions eligible under the trust, which generally focus on reducing NO<sub>x</sub> emissions through the repower or replacement of older heavy duty diesel vehicles with newer, cleaner vehicles including electric vehicles.
  - Up to fifteen percent of the funds can be used for electric vehicle charging infrastructure
  - Another fifteen percent can be used to administer the plan.
- The next important milestone in the process is to name a national trustee. We aren't certain when this will happen, but expect it in next couple of months. Once this happens it sets the clock for formal filing of state beneficiaries and development of plan. However, we don't need to wait until the trustee is selected to identify a state beneficiary: many states have already named their beneficiary and started to prepare draft plans

**What all this means is a very exciting opportunity for Vermont and much needed funds to advance some of our state priorities.**

Reducing NO<sub>x</sub> emissions is the primary purpose of the VW settlement and states must articulate how they will achieve reductions in their state plans. With that said, states will have a lot of latitude in the activities they advance within their plan. We feel strongly that any plan should leverage VW funds to advance state goals, particularly when it comes to the impact of energy use and emissions from the transportation sector.

- Let's start with Vermont's Energy and climate Goals:
  - Transportation sector consumes more energy than any other sector (34% of total energy use in Vermont)
  - Comprehensive Energy Plan calls for an increase in the share of renewable energy in all transportation to 10% by 2025 and 80% by 2050.
  - Transportation sector is largest source of carbon emissions in Vermont.
  - State statute calls for a 50% reduction in GHG emissions by 2028 and 75% reduction by 2050. [10 V.S.A. 578(a) (2005)]

**It will be impossible to meet either our climate or energy goals without a dramatic increase in transportation electrification. And fortunately, the VW settlement provides much needed funding to help accelerate transportation electrification.**

- Health
  - In addition to NO<sub>x</sub>, diesel exhaust contains other pollutants that pose health risks. Diesel exhaust is classified as a group 1 carcinogen by the World Health Organization meaning that exposure to diesel exhaust is linked with lung cancer in humans.
  - Diesel exhaust also causes early death, heart attacks, strokes, congestive and heart failure. It exacerbates asthma, chronic obstructive pulmonary disease, and may cause developmental and reproductive harm.
  - A study conducted by researchers at MIT attribute 52,800 premature deaths in the U.S. each year due to on-road pollution.

Last but not least the funds can help support the Vermont economy and put money in Vermonters pockets.

- Almost 80% of the cost of a gallon of diesel immediately leaves the local economy.
- In 2014, Vermonters spent \$1.38 billion on petroleum-based fuel for transportation. Electrifying the light-duty transportation sector could keep more than \$500 million in the Vermont economy each year.
- Vermont's electricity is among the cleanest in the nation and has the lowest NOx emissions of any state. Building on this clean energy foundation keeps money in state, inspires innovation and creates jobs.
- And according to analysis conducted by the VEIC transportation group for Efficiency Vermont, transportation accounts for more than half of the energy spending in Vermont households.

### **So how should we approach the Vermont state plan?**

To develop a plan that works for Vermont, it will be important to engage stakeholders to identify the criteria to be used in selecting and funding eligible projects. Here are some initial thoughts on what we think will be important to consider:

- **NOx Reduction:** this is the primary purpose of settlement activities, but there is flexibility in amount of NOx reduction and how states reduce NOx.
- **Target actions to disproportionately impacted communities:** states must describe how their action mitigates the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions. States that don't have specified non-attainment areas can identify vulnerable communities through examination of air quality in microenvironments. Additionally, identifying populations most vulnerable to negative health impacts from emissions and targeting mitigation actions in those populations may help address this requirement.
- **Align with state goals:** as I mentioned earlier, it's critical that we evaluate the extent to which mitigation activities advance state goals for environment, health, and economic development
- **Market transformation:** catalyze market for clean transportation. Electric school buses and transit buses for example are proven technologies, but the market is nascent. The settlement could be a catalyst to advance these and other technologies, and driving down prices in the future.
- **Reduce our dependence on imported fossil fuel.**
- **Maximize investment in electric vehicle charging:** up to 15% of funds may be used for this purpose and this could help offset Vermont's greatest source of NOx emissions, which is cars.
- **Economic impact of projects:** how do they save money for taxpayers, ratepayers, and support the local economy.
- **Maximize Vermont's funds by creative use of cost share and combining with other funding,** such as Tier III programs and other existing state programs.

Some states, like CT and VA have already developed draft plans. Numerous states have named their beneficiary and started engaging stakeholders and the public on plan components: These include CO, MD, TN, MI, WA, IA, OR.

- Broad range of criteria are being used to develop plans including the considerations I mentioned above as well as geographic distribution of projects; distribution among private and public

sector projects; distribution of sales of VWs; addressing non-attainment areas (not an issue in VT).

- Maximizing the up to 15% allocation for electric vehicle charging infrastructure appears to be a priority among many states.
- And on the other end of the spectrum, Texas and Maine are considering not accepting VW settlement funds. More money for Vermont!

As I have stated, the VW settlement provides a rare opportunity for Vermont to advance its climate and energy goals, support the local economy, and improve health. It's imperative that we do everything we can to leverage these funds to benefit all Vermonters. VEIC is committed to working with all stakeholders to support and provide the expertise needed to develop a strong plan for Vermont.

## Background Info

### Cost Effectiveness:

There is nothing in the mitigation settlement that specifically calls out cost-effectiveness. One could infer that the goal of the settlement to reduce NO<sub>x</sub> emissions implies that states should try to maximize the amount of NO<sub>x</sub> reduced with the available funds. Within the confines of the ten eligible mitigation actions, the plan gives states a great deal of latitude in developing their plans.

Here are the details of what a beneficiary would need to submit a funding request to the Trustee:

- A detailed description of the proposed Eligible Mitigation Action, including its community and air quality benefits;
- An estimate of the NO<sub>x</sub> reductions anticipated as a result of the proposed Eligible Mitigation Action;
- A project management plan for the proposed Eligible Mitigation Action, including a detailed budget and an implementation and expenditure timeline;
- A certification that all vendors were or will be selected in accordance with applicable state public contracting laws;
- For each proposed expenditure exceeding \$25,000, detailed cost estimates from selected or potential vendors;
- A detailed description of how the Beneficiary will oversee the proposed Eligible Mitigation Action
- A description of any cost share requirement to be placed upon the owner of each NO<sub>x</sub> source proposed to be mitigated;
- A description of how the Beneficiary complied with subparagraph 4.2.8 (Certifying Entity will provide a copy of this Agreement with Attachments to the U.S. Department of the Interior, the U.S. Department of Agriculture, and any other Federal agency that has custody, control or management of land within or contiguous to the territorial boundaries of the Certifying Entity)
- A description of how the Eligible Mitigation Action mitigates the impacts of NO<sub>x</sub> emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions; and
- A detailed plan for reporting on Eligible Mitigation Action implementation.
- DERA Option. To the extent a Beneficiary intends to avail itself of the DERA Option described in Appendix D-2, that Beneficiary may use its DERA proposal as its funding request for those Eligible Mitigation Actions funded through the DERA Option.
- *Joint Application. Two or more Beneficiaries may submit a joint request for Eligible Mitigation Action funds. Joint applicants shall specify the amount of requested funding that shall be debited against each requesting Beneficiary's allocation.*
- Publication of Funding Requests. The Trustee shall post each funding request on the Trust's public-facing website upon receipt.
- Approval of Funding Requests. The Trustee shall approve any funding request that meets the requirements of this Agreement and its Attachments, and furthers the purposes of this Trust.

**Fuel Types:**

Clean diesel

Propane

All-electric and hybrid-electric

Natural Gas

**Vehicle Types:**

Class 8 local freight trucks and port drayage trucks (eligible large trucks)

Class 4-8 school bus, shuttle bus or transit bus

Freigh switchers

Ferries and Tug

Ocean going Vessels Shorepower

Class 4-7 local freight trucks (medium trucks)

Airport ground support equipment

Forklifts and port cargo handling equipment

**Other eligible activities:**

EVSE

DERA Option – can use DERA plan as state mitigation plan